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Abstract Book

Oral abstracts

Concurrent session: Arts, humanities, social sciences

O-001

Research misconduct in non-empirical research – are there types of misconduct analogous to fabrication and falsification?

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Objective: To provide an analysis of how the concept of 'research misconduct' applies to the production of work in theoretical disciplines, specifically whether there are types of misconduct analogous to fabrication and falsification?
Method: Conceptual analysis with the use of real world exemplars of potential misconduct.
Results: (a) There are types of misconduct where identical forms of actions/behaviour can be found in the empirical sciences and in theoretical work, e.g. plagiarism, authorship and referee misconduct, misrepresentation of prior work, and undisclosed significant conflicts of interest.
(b) There are analogues to the two 'big Fs' of research misconduct, i.e. fabrication and falsification of data, in theoretical disciplines ('F-analogues'). The core wrong making feature of the two Fs are best analysed as 'deliberate deception in order to convince the reader to accept a claim, when that claim is in reality not supported by the "evidence" presented'. There are forms of deliberate deception in theoretical work that instantiate a very closely related wrong making feature, i.e. 'deliberate deception in order to convince the reader to accept a claim, when that claim is in reality not supported by the "argument" presented.'
In my own field of research, applied philosophical ethics it is possible to identify at least four F-analogues, i.e. deliberate 1) cherry picking of empirical premises, 2) elision of key terms, 3) using 'thick' concepts as if they were 'thin', and 4) suppressing embarrassing implications. Examples will be presented of each. (c) Two possible counterargument to the claim that there are F-analogues in theoretical work will be briefly considered. One is based on the claim that some types of published academic work are better described as advocacy or contributions to policy debates than as reporting research and that the category of research misconduct therefore does not or cannot apply to such work. Another counterargument points out that whereas the Fs can be unequivocally proven to be deliberate in many circumstances, deficiencies in theoretical work can be due to non-deliberate sloppiness and lack of care. Both counterarguments will be briefly refuted.
Conclusion: There are types of misconduct in research in theoretical disciplines that is analogous to fabrication and falsification. Four specific F-analogues have been identified.

O-002

Questionable research practices in the humanities. Evidence from a comprehensive focus group and survey study (the PRINT project)

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Objective: So far, Questionable Research Practices (QRPs) have primarily been studied with a focus on the quantitative parts of Psychology, Medicine, Natural Sciences etc. In this presentation, we focus on QRPs within the Humanities, which so far have been understudied with respect to QRPs. We will present results from the PRINT project (Practices, Perceptions, and Patterns of Research Integrity: https://osf.io/rf4bn/) in order to answer the following research questions:
- Which QRPs are considered the most severe within the Humanities by the researchers working within these disciplines?
- Which QRPs are the most prevalent within the Humanities by the researchers working within these disciplines?

Method: The presentation is based on evidence from a focus group study among Danish researchers (22 focus groups, completed December 2017) and a survey study (to be completed by December 2018) among all Danish researchers plus researchers from ten universities across the UK, USA, Croatia and Austria. Total sample for the survey: approximately 55,000.

Results: Our preliminary analysis of the results from the focus group study shows that there are huge differences between the Humanities and the other scientific main areas' understanding and experience of what is and is not a QRP as well as of the understanding of the seriousness and prevalence of the different QRPs. We asked the participants in the discipline divided focus groups to rank a fixed set of eight QRPs according to seriousness and prevalence. We further asked them to think of other QRPs within their fields of research. We ended up with very different QRPs within the different main areas of science but we also saw differences between the different disciplines within the Humanities. We expect that the survey will show similar results and shed more light on these differences.
Conclusion: Our presentation will help us gain a deeper understanding of the nature and character of QRPs within the Humanities that up until now have been understudied.

O-003

Possibility of redefining fabrication and falsification in humanities

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Objective: The purpose of this paper is to extend and enrich the notions of fabrication and falsification so that we can properly deal with certain kinds of research misconducts in humanities. By locating fabrication and falsification properly within the context of humanities, I want to show the way to make the efforts to promote research integrity, which have been driven manly by natural science disciplines (especially biomedical science disciplines), truly interdisciplinary.
Method: The method of the paper is largely theoretical and speculative, using some actual and imaginary cases. Cases included are: the case of Castaneda, purposive mistranslation of texts in less known language; purposive misleading partial quotation from hard-to-access text; purposive misinterpretation of hard-to –understand text.
result: When we compare the structure of empirical studies (including both natural and social sciences) and humanities, the role played by data in empirical studies is roughly played by certain kind of written texts, which is often called primary texts or primary source. Some of the improper uses of primary texts have analogous effects as fabrications and falsifications of data in empirical studies. The reason why this has been overlooked is that primary texts used in humanities are usually publicly accessible. However, physical accessibility does not imply content-wise accessibility. Another reason why this category of misconduct has been overlooked is that it is easily confused with plagiarism-type misconduct. However, epistemically negative effects of improper use of primary texts are closer to those of fabrication and falsification in empirical studies than to plagiarism.
Conclusion: Calling some improper uses of primary texts 'fabrications' and 'falsifications' reveals some essential features of research misconducts in humanities. In particular, seriousness of improper treatments of textual sources is highlighted by classifying such bad scholarship in humanities as research misconduct.

O-004

Interdisciplinary approach as a solution to address the emerging issues of academic integrity in behavioral and social sciences in Pakistan

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Objective: Pakistani context of academia is different than other countries. The focus on research in higher education in Pakistan is a recent phenomenon. It is found that academic disciplines work in isolation and an approach of interdisciplinary collaboration, interaction and integration is missing in the disciplines included in the Faculty of Behavioral and Social Sciences (FBSS). On the other hand various disciplines falling in the domain of FBSS offer similarities both in theory and research. The lack of interdisciplinary approach in FBSS in Pakistan has made the emerging challenges of academic integrity more complex and challenging. This study was conducted to find how academic interdisciplinary approach can be used to address the issues of replication, reproducibility, research waste, non embedment of research with education, industry & government mistrust, mismanagement of research misconduct and innovation impact lacking in order to ensure academic integrity in FBSS.
Method: Qualitative in depth interviews were used as research method. Total twenty interviews of academicians belonging to different academic departments of FBSS of public and private sector universities were conducted. Sample was selected through purposive sampling.
Results: It is found that there is a lack of an approach towards interdisciplinary interaction and collaboration in Pakistani academia that is creating hurdles to ensure academic integrity in Pakistani Universities especially in the subjects of FBSS. It is also found that issue of research reproducibility and replication is low at the level of faculty and senior researchers but it is high at the level of students. Research waste was identified as a very serious issue.
There is no central repository for researchers to find the past and current research work. The challenges posed by big data and other emerging trends in research demand allocation of more resources that is only possible through interdisciplinary collaboration. Participants declared presence of orthodoxy, lack of resources, absence of policies and hesitation from stakeholders as main hindrances to achieve goal of interdisciplinary collaboration in FBSS in Pakistan.
Conclusion: It is concluded that interdisciplinary approach can be helpful to ensure more academic integrity in FBSS by addressing the issues of replication, reproducibility and research waste.

O-005

The humanities virtues project: bringing a virtue-based approach to responsible conduct of research training to the humanities

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We will present what we have learned while implementing our virtue-based approach to responsible conduct of research (RCR) training in a new domain—the humanities. Adapting a successful program in science to the needs of other researchers informs the creation of a university-wide research culture in which all disciplines flourish. We are running workshops for graduate students from the College of Arts and Letters using the model we pioneered in the Scientific Virtues Toolbox as a template. Workshop dialogue is structured by prompts that articulate values inherent in humanities research and how those relate to character traits that guide responsible conduct. We anticipate both overlap and difference between the values and character traits espoused by scientists and humanists. For instance, many humanists seek to identify and express truths about the world, but the ways they understand those truths vary from discipline to discipline. This is reflected in the different research methods used, but also in the ways RCR concerns manifest in the daily activities of scholars and researchers in fields ranging from physics to theatre. While results from a pilot workshop we ran in May of 2018 suggest this is true, more data is needed. We are running multiple workshops in the coming semesters, with graduate students from across the College of Arts and Letters, which should give us additional insight into the similarities and differences not just between scientists and humanists, but also among the different disciplines in the humanities. This insight will help us develop further aspects of a larger RCR curriculum that can be tailored to the needs of specific disciplines as well as broadened to address larger concerns at the college and university level. We will present our approach and the results of this full pilot data set. A comprehensive approach to research integrity and RCR that spans both the sciences and the humanities can be grounded in what it means to be an excellent researcher in a given field, rather than a series of rules or guidelines.

Concurrent session: Attitudes 1

O-006

The 'Singapore Statement on Research Integrity' and academics' perceptions of responsible research conduct

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Objective: The main aim of the current study is to investigate academic researchers' perceptions of the relative importance of the individual responsibilities contained in the 'Singapore Statement on Research Integrity'. The study also explores their perceptions of the effect of research integrity enablers (codes of conduct, staff training, mentoring and peer pressure) on responsible conduct of research.
Method: The study involves a global online survey of current university staff members engaged in academic research. To establish the hierarchy of researcher responsibilities, the choice-based Best-Worst Scaling (BWS) research method is employed. The BWS data are also used in a latent class analysis to identify homogeneous sub-groups of researchers.
Results: The survey data are expected to be available towards the end of October 2018. This will provide ample time to have results ready for presentation at the WCRI in June 2019. Those results will comprise, firstly, an overview of the overall sample-wide relative importance of the research responsibilities. For instance, the results may reveal that the responsibilities are perceived to be of equal importance, i.e. the Singapore Statement represents a balanced set of responsibilities. On the other hand, some responsibilities may be perceived to be more important than others which may demand targeted university intervention involving the use of effective research integrity enablers.
In addition, the latent class analysis will reveal whether the above results are affected by academic background (for instance, research discipline and career stage) or by academics' perceptions of research integrity enablers (codes of conduct, staff training, mentoring and peer pressure).
Conclusion: The insights from the current study will help advance our understanding of integrity in academic research. To shed further light on these findings, in particular when a hierarchy of importance is established, there will be a need for further research, quite possibly qualitative in nature, to identify the underlying reasons.

O-007

Academic capitalism, self-efficacy, and the change of attitude towards scientific misconduct: surveys on Chinese PhD graduates

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The paper described Chinese PhD graduates' attitude towards scientific misconduct, their evaluation on the occurrence rate of misconduct, their knowledge about scientific integrity and the channels to acquire the knowledge, as well as the changes of above-mentioned indicators during the last 10 years. The paper is based on data of two national surveys on PhD graduates in China. The 2007 survey randomly sampled 3000 graduates in 14 universities, with 1903 response. The 2016 survey randomly sampled 9289 graduates in 55 universities, with 4018 response. Data showed that the PhD graduates' knowledge about scientific integrity was improving overtime, partly due to the strengthening of education of integrity. Their attitude towards scientific misconduct became stricter. Further analysis on the factors influencing the attitude towards misconduct showed that, academic capitalism played an important role in eroding scientific tradition including integrity. The students who have been working in industry-funded projects tend to take more tolerant attitude toward scientific misconduct. It was also found that the academic self-efficacy could moderate the impact of pressure on the attitude towards misconduct. Attitude of PhD graduates with higher self-efficacy tend to be less affected by the pressure. The policy implications of the study was discussed in the end of the paper.

O-008

Perception of research integrity on Taiwan university campuses: a comparison of administrators, faculties, and students

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Objective: This study aims to understand the changes and differences in perception of university stakeholders group involved in research integrity (RI) at various levels since Taiwan national-level RI educational program was launched in 2014, and since the government authorities have revised their RI-related policies and requirements which mandate universities to set up institutional regulations in 2017.
Method: This study develops a 23-item, 5-Likert scale questionnaire in three aspects (administrative policy/requirement, campus-wide attention/awareness, and personal recognition/efficacy) with high factor-validity and reliability. The questionnaire was sent to five different groups, including Vice Presidents for Academic Affairs (VPAAs) and Vice Presidents for Research (VPRs) in all 173 universities and colleges in Taiwan, as well as sampled RI administrative staff (AS), faculty, and graduate students in those institutions.
Results: This study has collected 116 (67.1%) valid questionnaires from VPAAs, 112 (64.7%) from VPRs, 160 from AS, 301 from faculty, and 933 from graduate students. The results indicate that, first, senior administrators (VPAAs and VPRs) and junior administrators (ASs) have very high perception across the three aspects. On the contrary, faculty and graduate students have lower perceptions of administrative policy/requirement and campus-wide attention/awareness. Second, the results suggest that all five groups demonstrated they have high recognition of RI issues and high efficacy to practice RI at an individual level. Third, the results also indicate that senior administrators have stronger senses of administrative policy/requirement and self-recognition/efficacy than those of junior administrators, faculty, and students. Similarly, they also have higher perceptions of campus-wide attention and awareness than those of faculty and students.
Conclusion: University administrators, especial those senior ones, have fully perceived the change in the three studied aspects in the past three or more years. This result is promising because they are the key persons to respond to new governmental regulations and requirements, and they play important leading roles in the promotion of RI on campuses. However, faculty and students may not strongly sense the changes. Therefore, administrators need to continue the promotion of RI on campus with the ultimate goal of the impact of cultural change in fostering good research.

O-009

Research integrity of PhD-candidates in the Scandinavian countries. Results from 6 years of surveys

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Objective: This study is based on results from six years of surveys of knowledge, attitudes, and practices of PhD-students at faculties of medicine in the Scandinavian countries (Norway, Sweden, and Denmark). The aim of the study is to provide an important overview of the main trends and insight into challenges of addressing scientific misconduct in order for us better to target our efforts at improving research integrity.
Methods: A survey in three parts, studying knowledge, attitudes, and practices, has been applied in the Scandinavian countries 2010, 2014, 2016, 2017, and 2018. The data are analysed with descriptive statistics. Descriptive analyses and non-parametric methods are applied as data do not follow a normal distribution. The study is reported to the Norwegian Data Protection Official for Research. Participation was voluntary and it is not possible to identify individuals from the results.
Results: Response rate varied between institutions and with time (53-98%). The average response rate was over 75%. Overall, about 10% of PhDs reported that they knew of people in their close research community who had committed serious forms of scientific dishonesty. A small percentage of PhDs indicated that they themselves committed such acts. While a small fraction of the candidates had experienced pressure to commit serious forms of dishonesty, nearly a third of respondents had experienced unethical pressure with respect to authorship. Every eight respondent had experienced unethical pressure with respect to other forms of dishonesty and every ninth had experienced the consequences of some form of scientific dishonesty. Every fifth respondents believed that one or more actions, that are generally considered to be scientifically fraudulent, were not wrong. The studies show small variations between the institutions and countries. In general the authorship problems are increasing, the willingness to use of statistical analysis methods to get significant results or to engage in dishonesty to expedite publications is stable.
Conclusions: The study gives a unique overview of the main trends and valuable insight into challenges with addressing scientific misconduct. This provides important information for targeting our efforts in order to improve research integrity.

O-010

Opinion towards research integrity from researchers in Thailand: a cross-sectional survey

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Objective: Although the issue of "research integrity" is regarded as fundamental, fostering its awareness might have received understated attention in Thailand. As the preliminary data toward this issue is needed, we, therefore, conducted a survey with the objectives to measure the degree of importance in this issue.
Method: The survey was derived based on fourteen responsibilities stated in Singapore statement. In each responsibility, the respondents were requested to mark the importance in 4 points Likert scale. Moreover, there were queries regard research processes and potential stakeholders of research integrity. This survey was performed during July – September 2018, either via a form of printout or Google-form questionnaire.
Result: Over 250 respondents answered the questionnaires. All these responses will be statistical analyzed. Thereafter the data will be presented in this WCRI 2019 conference. The survey result is subject to the opinion of Thai researchers, since a printout questionnaire was distributed in various scientific forums, i.e. ethic trainings. Furthermore, a link of Google-form questionnaire was sent to a pool of Human Ethic Committee via e-mail. The opinions derived from these questionnaires would contribute to a set of Thai researchers. There were three main sections in this survey. First, the opinions toward the importance of fourteen responsibilities according to Singapore statement were asked. Second, 4 points Likert scale was adopted as significances of three research processes, i.e. upstream, midstream, and downstream. Finally, the respondents were requested to indicate, as if at their workplace, which divisions should oversee works related to research integrity.
Conclusion: The opinions derived from this survey will represent the current situation regards attitude toward issue of research integrity in Thailand. It can be implying of how this issue is perceived among Thai researchers. Any research policy concerning implementation of research integrity in Thailand can be judged favorably by results from this survey.

Concurrent session: Principles and codes 1

O-011

Ensuring value in research international funders' collaboration and development forum guiding principles

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Background: The Ensuring Value in Research Funders' development and collaboration forum is an informal group of around 30 funders, organisations that represent funders or organisations that set R&D policy.
Objectives: The purpose is to work together and with our respective research communities to share current and develop new approaches to reduce waste and increase the value of health related research.
Method: Through informal discussion this work has led to the agreement of 10 guiding principles that collectively ensure:
- justifiable research priorities
- robust research design, conduct and analysis
- regulation and management of research conduct is proportionate to risks
- all information on research methods and findings accessible and all reports are complete and usable

Results: These guiding principles are intended to guide health-related research funders as they conduct their organizational activities in order to increase the relevance, quality, transparency, integrity and value of the research they fund. This in turn will have implications for the academic community around the world.
We will present the guiding principles, examples of how funders are working towards them, and the implications for the academic community.

O-012

Between virtue ethics and professionalisation: varieties of self-regulation among scientific codes of conduct in Europe

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Objectives: Accusations of research misconduct have in the past decade increasingly led to scientists defending themselves in courts of law. This raises questions about the proper method of self-regulatory procedures, whether they can clash with legal rights, and whether there is consistent application across Europe.
Methods: We collected national-level guidelines of 32 European countries, together with the European Code of Conduct (ECC). Since seven countries lack a national-level guideline, this yielded 26 documents (N=26). We submitted each document to comparative textual analysis.
Results: We found codes of conduct to operate with two models of self-regulation: the professionalism model and the virtue-based model. The professionalism model of self-regulation emphasizes individual responsibility for incompetence and outright misconduct, and allows for retributive punishment. It is modelled on liberal professions such as medicine or law. By contrast, virtue-based self-regulation seeks to prevent and respond to cases of research misconduct through cultivating research virtues and ethical awareness of scientists (e.g. through training in research integrity). We measured the two models along three dimensions: (1) Scope of intent: Can an individual commit misconduct without intending to, for instance through negligence (i.e., incompetence through ignorance of correct procedures); (2) Indirect culpability: Can one scientist be held responsible for another's fraudulent research (e.g., supervisors for supervisees; co-authors)? (3) Consequences: Do disciplinary actions potentially include retributive measures, e.g., barring the scientists from applying for funding? 'Yes' answers to all three questions indicate a professionalism model; 'no' answers indicate a virtue-based model. Preliminary analysis suggests that (a) a majority of national guidelines largely adhere to the virtue-based model, (b) but inconsistently, and (c) a minority adhere largely to a professional model (e.g., Austria, Poland). By time of the WCRI conference, exact results will be available.

Discussion and Conclusion: One can observe a disparity in models of self-regulation among scientific codes of conduct in Europe, potentially leading to very different treatment of cases of misconduct. We discuss how the virtue-based model is weak when it comes to enforcement; at the same time, we suggest how adopting the professionalism model would require a more careful consideration of the legal rights of individual scientists.

O-013

Strengthening research integrity in Australia

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Objective: To present the National Health and Medical Research Council's (NHMRC's) approach to strengthening research integrity in Australia.
Method/Results: NHMRC is Australia's leading body for supporting health and medical research, for developing health advice and for providing advice on ethical behaviour. NHMRC is committed to promoting the highest standards of research quality and integrity.
NHMRC works closely with the Australian Research Council (ARC) and Universities Australia (UA) to achieve this goal. This includes the development of the framework for the responsible conduct of research in Australia, which applies to all research disciplines and to all institutions.
The Australian Code for the Responsible Conduct of Research, 2018 (the Code) is a crucial part of this framework. The Code presents eight principles of responsible research and 29 responsibilities for researchers and institutions.
Implementation of the Code is supported by a range of guides. The Guide to Managing and Investigating Potential Breaches of the Code, 2018 (the Investigation Guide) describes processes for managing and investigating potential breaches of the Code that are procedurally fair. We will present an overview of the following:
• progress made by the sector to transition from the previous 2007 Code and implement the 2018 Code and Investigation Guide
• development of additional guides to support the Code
• revisions to other key documents for consistency with the Code.
NHMRC is also working with the sector to identify ways to strengthen the management of research integrity in Australia and to develop an evidence base for the development of new initiatives, such as consideration of the role of the Australian Research Integrity Committee. The findings from this work will also be presented.
Conclusion: NHMRC, with the ARC and UA, employs several strategies to strengthen research integrity in Australia. The regular review of key documents and processes allows the guidance to remain relevant and practical. Key to this work is the cultural and legal context within which Australian research institutions operate.

O-014

Sharing information on the responsible conduct of research: a Canadian perspective

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The goal of this research is to develop best practices for information sharing about allegations and findings related to the responsible conduct of research (RCR) in Canada. Administrators who manage RCR processes are expected to maintain confidentiality of all affected parties, including complainants, respondents and witnesses. However, these same administrators understand that some confidential information must be shared, for example, "on a need to know" basis with other administrators at their own or other institutions. Moreover, there is the thorny issue of balancing privacy rights for individuals against society's right to know which scholars or institutions have behaved fraudulently. Local institutional policies remain largely silent on the issue.
An 8 member subgroup of the RCR Forum developed an on line survey, in English and French, to determine the content of policies and procedures at Canadian institutions as to how they share information about allegations and findings related to the responsible conduct of research. The "RCR Forum" is an informal group established by the Canadian Secretariat on Responsible Conduct of Research and is open to RCR contacts at all Canadian institutions eligible to administer federal research funding. The survey will be completed by the person at each institution who has primary responsibility for the administration of the institution's RCR policy.

Individual respondents and institutions are not the focus of this survey; no data is being requested about the identity of individuals or institutions. Survey data will be aggregated to form a summary of current practices in Canada. The survey is extensively reviewed and pretested and will be sent to institutions in Fall of 2018. Data collection will end in December 2018, allowing ample opportunity for data analysis and derivation of conclusions in advance of the conference.
Based on our anecdotal observations of Canadian institutions' responsible conduct of research policies, we anticipate that most will be silent on what information should be shared, by whom, in which venue, and for how long. Systematically summarizing the information will allow us to identify gaps, to extract best practices for the Canadian research community and to contribute to the international discussion on RCR information sharing.

O-015

Practicing the Danish code of conduct for research integrity
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Since 2014, universities and university colleges in Denmark have been working with a document called the Danish Code of Conduct for Research Integrity, which was published by the Ministry of Higher Education through consultation with Universities, Research Councils, and Research Institutes. This presentation reports on the range of ways the document has been taken up. It presents contrasting forms of institutionalisation, and distinct relationships to research that emerge from established and emergent research cultures. It also uses ethnographic research from different faculties to illustrate how disciplinary divergences emerge when discussing integrity in research, and longitudinal in depth follow ups with PhD students who take these courses.

Concurrent session: Plagiarism

O-016

Perceptions of plagiarism by biomedical researchers: an online survey in Europe and China
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Objective: Plagiarism is considered as serious research misconduct, together with data fabrication and falsification. However, little is known about biomedical researchers' views on plagiarism.
Moreover, it has been argued – based on limited empirical evidence – that perceptions of plagiarism depend on cultural and other determinants. We explored, by means of an online survey, how plagiarism is perceived by biomedical researchers in Europe and China. Methods:
We collected work e-mail addresses of biomedical researchers identified through the websites of 13 reputable universities in Europe and 33 reputable universities in China, and invited them to participate in an online anonymous survey. Our questionnaire was designed to assess respondents' views about plagiarism, by asking whether they considered specific practices as plagiarism. We analyzed the responses to these questions and if respondents from China and Europe responded differently.
Results: We obtained valid responses from 204 researchers based in China (response rate 2.1%) and 826 researchers based in Europe (response rate 5.6%). Copying text from someone else's publication without crediting the source, using idea(s) from someone else's publication without crediting the source and republishing one's own work in another language without crediting the source were considered as plagiarism by 98%, 67% and 64%, respectively. About one-third of the respondents reported to have been unsure whether they had been plagiarizing.
In general, respondents based in Europe and China shared similar perceptions regarding most practices. Respondents based in Europe were more likely than those based in China to doubt whether they had been plagiarizing or not.

Conclusion: Our findings indicate that nearly all biomedical researchers understand (and disapprove of) the most obvious forms of plagiarism, but uncertainties and doubts were apparent for many aspects, even among this potentially highly selected sample of respondents. We conclude that biomedical researchers need clearer working definitions of plagiarism in order to deal with grey zones. In general, no great disagreement existed between respondents in China and Europe.

O-017

Reviewing the prevalence of visual plagiarism within visual arts tertiary education in south east Asia

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Objective: Extensive research has been conducted surrounding the topic of text-based plagiarism in tertiary education, with corresponding clearly defined rules to avoid text-based plagiarism; however, far less scholarly material exists concerning the extent of visual plagiarism and lesser still, pertaining to visual plagiarism within tertiary visual arts education. This study reviews the existing literature, investigating ethical considerations specific to visual arts students and considers if cultural perspectives and/or societal values influence students' perceptions of what constitutes visual plagiarism.
Method: By utilising both a positivistic and interpretive phenomenological epistemology this project intends to approach data finding and analysis in a broad sense. Data collected via three initial focus groups to be held for students, faculty and academic support staff will subsequently advise creation of quantitative surveys and more in-depth, semi-structured interviews. Thus, enabling a deeper understanding of subjects' rationale and facilitating the creation of bespoke solutions.
Results: This project hypothesises that a prototype online platform for disseminating information on visual plagiarism will result in increased awareness of issues pertaining to visual plagiarism for students, faculty and academic support staff alike. Thereby, decreasing occurrences of visual plagiarism amongst students and increasing faculty's ability to accurately detect and appropriately respond to visual plagiarism.
The initial focus group phase of this research (to be conducted between January 2019 and April 2019) intends to determine the extent of the issue at Nanyang Technological University and highlight gaps and/or discrepancies in knowledge. In doing so, a framework for information dissemination can be constructed and utilised to facilitate the design and production of the aforementioned prototype anti-plagiarism platform.
Conclusion: Current research indicates that a lack in clarity of terms, a lack of applicable policy and a lack of internationally accepted best practice for both faculty and students are all contributing factors to an ambiguous notion of visual plagiarism within tertiary visual arts education. It is the intention of this project to address these issues in an attempt to define a transparent exposition of visual plagiarism and in doing so increase the academic integrity of all those who engage in art and design research within Nanyang Technological University.

O-018

Managing plagiarism and academic fraud in higher degree programmes

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Issues of research integrity related to students' assignments, projects, thesis and dissertations are important factors for the credibility of tertiary institutions. The New Zealand Qualifications Authority (2017) notes that high quality tertiary education providers should "have good processes in place to ensure that cheating is detected and will not allow students to pass assessments where they have not met the required standard". So the question then becomes, what measures are effective to "ensure that cheating is detected"? This presentation will outline processes that have been established to assist in preventing plagiarism and academic fraud in both a postgraduate and master's programme. These processes have evolved as the demographics of students has changed. Background details will be given to add some context to the overall issues. This will be followed by specific steps that have been employed in dealing with these problems. The final discussion will be focused on how these processes have helped to substantially reduce plagiarism and academic fraud within these programmes. Specific examples will be used to help illustrate the major points in the presentation. The topic of special interest that this presentation most closely relates to from the conference theme, New Challenges for Research Integrity, is managing research misconduct. It is hoped participants will have a better understanding of how to deal with issues of plagiarism and academic fraud within their own institutions.

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This presentation is not based on a research project but is rather a process developed over a two-year period to assist in dealing with student plagiarism and academic fraud. The presentation will give the audience a chance to reflect on how tertiary institutions can implement strategies to help deal with some of these issues.

O-019

A breakdown in communication: journal reactions to information about plagiarism and duplicate publications

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Objective: To investigate how scientific journals react to information about published plagiarisms or duplicate publications.
Method: 162 cases of plagiarism, duplicate publication or text recycling in open access biomedical publications were identified using text-matching software. The cases were selected from a large body of potentially problematic papers. They were manually verified and thoroughly documented. One or both journals were informed of the situation. This was done non-anonymously by e-mail between December 2014 and July 2016 including the documentation. If no reaction was forthcoming, reminders were sent. Since reactions can take time to be published, the problematic publications were examined at least one year later to see if there was any expression of concern, correction, or retraction visible to readers.
Results: Although the Committee on Publication Ethics has published a process for journals to follow when dealing with such concerns, there were numerous deviations from this process, including many extremely troubling reactions. One problem was finding an appropriate email address for expressing concerns, and even these sometimes bounced. Although some journal editors responded within hours, others were no longer affiliated with the journal in question, and approximately one third of the emails were never answered. Two editors had a serious conflict-of-interest, as they were co-authors of the paper in question.
Most troubling was the breach of confidentiality that occurred in numerous cases. Some editors forwarded the informing email to the corresponding author, others included the informer's email address in the correspondence. Most seriously, the informer's name was published in four different retraction notices available in PubMed Central without their knowledge or permission.
Additionally, this investigation resulted in visible actions including retractions in about half of the cases. However, about half again of these were not complete. That would mean that the article itself was marked and a notice was published, with both actions being mirrored back to PubMed Central.
Conclusion: Overall, a breakdown in communication between informants, authors, editors, and readers has been identified. Researchers who evaluate the number of retractions published should be aware of the fact that not all problems identified are communicated appropriately to readers.

Concurrent session: Behaviour

O-020

What traits of character do exemplary scientists value? Results from the scientific virtues survey

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We will present the quantitative results of a national survey showing what exemplary scientists take to be the central guiding purpose of science and the most important character traits for doing it well. When virtue ethics has been applied to science previously, it has mostly been in terms of how general human virtues may be relevant in science. Pennock's alternative approach, which starts with a narrower notion of vocational virtues, however, focuses on character traits as they relate directly to the central, guiding purpose of different vocations. For the practice of science, this approach suggests that there are particular virtues, from veracity and curiosity to objectivity and skepticism, that should be given special weight for fostering excellence and ethics in scientific practice. To see how whether this philosophical account was borne out in practice, we interviewed over 600 exemplary scientists and collected written responses from 500 more, from a random sample of exemplary researchers drawn from population of honorees and Fellows of professional scientific societies. We asked for their considered judgments about the possible value of various character virtues for doing exemplary research. Our 5-year study revealed a hidden moral structure to science; we found a surprising agreement that virtues such as honesty and curiosity are central for science together with a variety of related traits that a confirmatory factor analysis show form a coherent set of values. These empirical results, in combination with the vocational virtue theoretical framework, provide a strong foundation for the new scientific virtues approach to RCR training. Scientists have a remarkably unified view about the central, guiding purpose of their vocation and the importance of particular character traits for conducting exemplary research. These data provide a new view of scientific culture and lend support to Pennock's virtue-ethics approach to science ethics and responsible conduct of research.

O-021

A Cross-national, cross-field study of researcher personality and questionable research practices

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Objective: In understanding the causes of questionable research practices (QRPs) past studies have focused on contextual factors (e.g., publication pressure). Recently, however, a number of recent studies have shown that – even taking context into account – researchers with particular personality traits are consistently more likely engage in QRPs. These recent studies have focused on narrow fields (e.g., biomedicine), narrow professional categories (e.g., graduate students) or specific countries (e.g., the Netherlands). Here, our objective is to provide the first cross-national, cross-field assessment of the impact of personality variation on QRPs.
Method: In October 2018, the "Practices, Perceptions and Patterns of Research Integrity" (PRINT) project fielded a pre-registered survey (LINK XXXX) to all researchers above the PhD-level at 18 universities (approximately 55,000 researchers) in Denmark, Croatia, Austria, United Kingdom and United States. Each researcher answered 10 questions about their propensity to engage in QRPs (on, e.g., lack of transparency, selective citing and selective use of information). In addition, they completed the well-validated Ten Item Personality Inventory that assesses individual variation across the "Big Five" personality dimensions (O - openness, C -conscientiousness, E- extraversion, A - agreeableness and N- neuroticism). Data collection will conclude in December 2018.

Results: We will form a formative index of people's tendency to engage in QRPs and correlate it with the Big Five personality variation within and across the fields of natural sciences, medical sciences, social sciences and humanities. We hypothesize QRPs to be associated with all five personality dimensions: Creativity (high in O), lack of care (low in C), status-seeking (high in E), anti-sociality (high in A) and stress (high in N) should all positively predict engagement in QRPs. In addition, we will statistically control for and investigate the independent impact of other individual-level attributes such as gender, career stage, field and research integrity training. Furthermore, we will investigate the extent to which exposure to research integrity training can attenuate the role of personality characteristics in motivating QRPs.
Conclusion: Overall, we present the first cross-national, cross-field investigation of how researcher personality motivates QRPs.

O-022

The QUEST Center in Berlin – a laboratory for behavior change in academic biomedicine
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Objective: There is a world wide quest to reduce waste and increase value in biomedical research. Since 2017, the QUEST (Quality-Ethics-Open-Science-Translation) Center at the Berlin Institute of Health aims at maximizing the quality, reproducibility, generalizability, and validity of Europe's largest university hospital and school (Charité) and a large biomedical research institute (Max Delbrück Center).
Method: To create an awareness of the need to rethink biomedical research and to initiate and sustain culture change in academic biomedicine, with a team of dedicated experts and specialists, QUEST is conducting large scale behavior change interventions (Michie, Implementation Science 2011, 6:42) by fostering 1) capability (through education & services), 2) motivation (through incentives & education), and 3) opportunity (through services) to increase research value. At the same time, we are identifying measures for improving research practice and obtaining evidence for the impact of our activities through meta research. QUEST reaches around 7000 researchers, clinicians, and PhD students.
Results: We have focused on 1) Quality assurance by promoting compliance of preclinical and clinical research with standards and guidelines on design, conduct, analysis and reporting; 2) Education & training through implementation of resources on experimental and study design, methods to reduce bias, and new modes of publishing; 3) Open Science by helping scientists to improve the accessibility and transparency of their research and its results through open access and open data; 4) Incentives by developing and implementing new systems (awards, calls, funding, responsible metrics) for assessing and rewarding research performance and value of researchers and recruitment; 5) Services, for example by providing a toolbox which contains helpful tools, programs and online platforms to facilitate the reproducibility of a research project on all stages, or offering an electronic laboratory notebook for all researchers; 6) Evidence based bioethics and health policy which addresses practice-oriented questions in close cooperation with relevant stakeholder groups (e.g. researchers, regulatory agencies, patient organizations).
Conclusions: We demonstrate feasibility of systematically implementing and validating structured measures to improve the quality and value of translational research in academic biomedicine. Further details at https://www.bihealth.org/en/quest-center/mission-approaches/.

O-023

Funding research on research: addressing the need for greater relevance, scientific quality, integrity and efficiency in academic research
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Objective: There are many theories about factors that influence the science system, however remarkably little research has been done. With the national Fostering Responsible Research Practices (FRRP) programme knowledge can be obtained that contributes to responsible science across all disciplines. This knowledge can improve scientific practices and enhance confidence in science and the applicability of its results.
Methods: After consultation with stakeholders, a programme writing committee designed a programme consisting of four subprogrammes: 1) an open call, 2) an inventory of Dutch initiatives on research integrity, 3) a life cycle of research projects, and 4) a national survey among Dutch researchers.

Results: Within the open call of the FRRP programme ten research projects are financially supported. Three examples are: 1) Researcher allegiance: researchers who are convinced a specific treatment is superior to other treatments. This project examines questions like what is research allegiance, how does it work and how can the impact on the outcomes of trials be reduced. 2) Responsible researchers. This project describes the profile of researchers in terms of propensity to foster responsible conduct in research. After comparing this profile with existing academic incentive and reward systems policy recommendations will be made. 3) The peer review system. This project assesses the effectiveness of adjustments made by scientific journals to improve peer review's ability to detect misconduct and error.
The other three subprogrammes each support one project. One project identifies all Dutch responsible research practices-related initiatives and shares best practices using a toolbox. Another project examines what constitutes good research practices, and what constitutes a threat to such practices. This analysis will be done within five disciplines. The last project estimates the prevalence of detrimental research practices in each field, reasons for such practices and a picture of the role of all those involved in academic research.
Conclusion: The FFRP programme has made a start improving our understanding and utilize that understanding to strengthen responsible research practices. However, to improve relevance, scientific quality, integrity and efficiency it is essential to obtain more knowledge. Funding agencies and governments play an important role in this and should invest in responsible science.

O-024

Selecting replication studies for funding – a small window of opportunity
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Objective: The Replication studies programme was set up in 2017 by the Netherlands Organisation for Scientific Research (NWO) and the Netherlands Organisation for Health Research and Development (ZonMw). The primary challenge in this programme is to determine which studies should be selected for replication.
Method: The main criteria to select studies are:
1. The proposed type of replication
2. the importance to the field of research, defined as 'cornerstone value'
3. quality of the study and exactness of the replication

Results: The programme is open to 2 types of replication research:
1. Replication with existing data (reproduction): repeated analysis with the same research question and using datasets from the original study.
2. Replication with new data: new data collection with the same research protocol as the original study.

The programme is not open for conceptual replications, investigating the original research question using new methods. Reproduction and replication account for approximately 25% respectively 75% of applications.
Cornerstone value is a measure for the urgency of replication. Research has cornerstone value if it has substantial consequences, providing incentive to assess whether the results of the original study are reproducible. In practice this means research that has been frequently cited, has caused intensive post-publication debate or has far-reaching consequences in theory, policy, education and/or healthcare. Applicants have to show that the replication will provide added value to the field. After evaluating over 140 applications these factors often have been decisive in the funding decisions.
Important measures of research quality are the exactness of the replication, as close to the original as possible, including availability of the original data and/or research protocol. A rigorous sample size justification is required as well as independence from the original authors. Other assessment criteria are knowledge dissemination plans, quality of the research team and budget justification.
Conclusion: The Dutch programme for Replication studies provides a small window of opportunity for applicants. In this window the original study must have had a proven impact, but the applicants also need to show that replication will provide additional benefits. This balance should ensure relevance of replications and also prevent research waste.

Concurrent session: Medical

O-025

The public sector's role in vaccine development: a case study of the ebola vaccine

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Objective: The 2014-2015 Ebola epidemic in West Africa revealed a need for fundamental reform not only of global health governance, but also governance of knowledge production. In this research, we explore the stalled development of a promising experimental Ebola vaccine known as "rVSV-ZEBOV" prior to the 2014-2015 Ebola epidemic.
Method: Using internal government documents obtained through an access to information request, we trace rVSV-ZEBOV's discovery by researchers at Canada's National Microbiology Laboratory through to its patenting and licensing to a biotech company in the United States in 2010.
Results: According to government documentation, the company failed to make any progress toward a phase 1 clinical trial until after the outset of the Ebola outbreak. The development of rVSV-ZEBOV, from sponsoring early stage research through to carrying out clinical trials during the epidemic, was instead the result of the combined efforts of the Canadian government, its researchers, and other publicly funded institutions.
Conclusion: This case study underscores the need for greater transparency in the patenting and licensing process, coupled with stronger enforcement of commercialization agreements. Further, the case study of rVSV-ZEBOV shows that an alternative approach to generating knowledge and developing interventions, such as open science, is required in order to fully realize the public sector's contribution to improved global health.

O-026

Annotating cinical trial publications to assess consort adherence: a feasibility study

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Objective: Reporting guidelines have been proposed to increase research transparency and can reveal key research variables that indicate lack of reproducibility. The CONSORT reporting guideline, developed for randomized controlled trials (RCTs), consists of a 25-item checklist and a flow diagram. A text mining tool that can locate statements corresponding to CONSORT checklist items and give alerts when they are missing would benefit journal editors, peer/systematic reviewers, and others in critically appraising RCTs. Annotated text corpora are needed to develop such tools. The goal of this pilot study is to assess the feasibility of annotating sentences from RCT articles with the relevant CONSORT checklist items.
Method: Using a RCT search strategy that maximizes sensitivity and precision, we retrieved from PubMed Central RCT articles from 10 journals (including BMJ, Lancet, and Gastroenterology) and randomly selected 30 articles (published in 2010-2017). Preliminary annotation instructions as well as examples from CONSORT documentation were provided to six annotators. Annotation consisted in labeling each sentence with any relevant CONSORT categories. Each article was annotated by two annotators, and then adjudicated by one of the first two authors (HK, GR). At the sentence level, we calculated pairwise inter-annotator agreement using MASI, an agreement measure for multi-label classification (range: 0-1). We also calculated percentage agreement at the article level.
Results: So far, we have fully annotated and adjudicated 10 articles. Median sentence-level MASI was 0.57 (inter-quartile range (IQR): 0.52-0.66). Median percentage agreement at the article level was 0.86 (IQR: 0.83-0.90). Considering full-text only, agreement was highest for Methods sentences (MASI=0.58 [IQR:0.57-0.66]) and lowest for Introduction sentences (MASI=0.50 [IQR:0.25-0.76]). Annotators agreed most on Sample Size Determination, and least on Background. Trial Stopping was the least annotated item, while Background and Outcomes were among those that were annotated in all articles.

Conclusion: For the purpose of assessing CONSORT adherence, not all CONSORT items seem equally important to recognize with text mining. Some items are broadly conceived and their inclusion can generally be assumed (e.g., Background), while others are applicable in rare cases (e.g., Trial Stopping), or may not require sophisticated text mining (e.g., Identification as randomized in title). It seems reasonable to categorize CONSORT items as "high", "medium", and "low" priority in terms of methodological rigor and reproducibility and focus on high priority items using text mining.

O-027

A high journal impact factor is associated with more changes in pre-registered outcome measures on ClinicalTrials.gov during or after study duration

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Objective: Medical journals have agreed to only publish Randomized Clinical Trials (RCTs) when a study protocol was preregistered in one of the online trial registries. In practice however, these guidelines are easily bypassed; protocols can be uploaded and amended during the study period or even after the study has ended, which allows for conveniently adjusting the protocol to fit the study results. The objective of the current study was to identify protocol changes of primary outcomes on ClinicalTrials.gov for studies with published results in a medical journal, and relate the occurrence of protocol changes to journal impact factor.
Method: For 153,502 RCT publications between 2000 and 2017 the full-text was available. Pre-registration numbers were retrieved from the full-text. Study registration and publication data were automatically retrieved from ClinicalTrials.gov, journal impact factor of the year prior to publication of the specific RCT was retrieved through InCites Journal Citation Reports. Multivariable logistic regression was used to analyse the association between journal impact factor and changed outcome measures, corrected for potential confounders (year of study start, study phase, funding, results posted on ClinicalTrials.gov, medical field of journal).
Results: Among all included trials, 18,871 were registered on ClinicalTrials.gov, and 38% changed outcome measures in their ClinicalTrials.gov protocols: 31% in primary- and 31% in secondary outcomes measures. Changes were made before (3%), during (54%) or after (43%) the course of the clinical trial. Changing of outcome measures was associated with journal impact factor (adjusted odds ratio per 10 impact factor points increase 1.33, 95% CI 1.27 – 1.40).
Conclusion: These results indicate that a substantial proportion of trials modify outcome measures in their ClinicalTrials.gov protocols and that journal policies for mandatory trial pre-registration does not necessarily improve transparency regarding study design.

O-028

Examining the impact of research misconduct, and delays to its correction, on vitamin K reviews and guidelines

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Objective: To investigate the impact of delays to investigation and retraction of randomised controlled trial (RCT) reports informing reviews and guidelines of osteoporosis management with vitamin K.
Method: In 2007, concerns were raised with a journal about 17 RCTs from one research group, including 3 RCTs published in a 2006 systematic review (SR) of vitamin K to prevent fractures. No action was taken by the journal. In 2013, our SR of 33 RCT reports by this group indicated widespread concerns, e.g. data fabrication, honorary authorship and self-plagiarism, but our SR was not published until 2016 after several rejections by journals. By September 2018, 22/33 RCTs had been retracted, and 27 other reports by this group. We investigated the impact of these 3 RCTs of vitamin K on reviews, SRs and guidelines by citation searching in Scopus and Web of Science.

Results: The research group published 10 reviews of vitamin K and fracture between 2003-2014, citing their vitamin K work (median 4.5, range 1-11 times). Their reviews have been cited more than 128 times. Two of the three RCTs in the 2006 SR have been retracted. The 3 RCTs had been cited 177 times by September 2018. The 2006 SR of vitamin K has been cited 202 times. The SR's meta-analysis plot for fracture was the main evidence to support vitamin K for the prevention of fractures in the 2011 Japanese guidelines (replaced in 2015). The SR originally presented an odds ratio of 0.23 (95% CI, 0.12-0.47) for hip fracture, but a recent correction, omitting the 3 RCTs, amends this to 0.30 (95% CI 0.05-1.74). This is still mentioned as a 'large effect' though based on only 3 events and no longer statistically significant. Two subsequent large trials in Japan have failed to demonstrate that vitamin K prevents fractures.
Conclusion: 11 years have passed since concerns were raised. Journals and publishers fail to investigate or are slow to initiate investigations, are unwilling or slow to publish detailed statistical investigations describing concerns, reluctant to flag up expressions of concern or retract articles. These all worsen the impact of research misconduct.

O-029

Assessment and prediction of questionable research practices in 163,000 randomized clinical trials
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Objective: To assess and predict questionable research practices (QRPs) in publications of RCTs.
Method: Full-text articles of all human RCTs published between 1996 and 2017 in PubMed were gathered, and additional relevant variables using different machine learning and language processing tools. QRPs were operationalized in terms of the following outcome measures: (1) risk of bias, determined by RobotReviewer software; (2) selective outcome reporting related to online trial registrations; (3) quality of reporting in terms of the CONSORT statement; (4) statistical power; and (5) statistical rigor. Potential predictors were identified from literature and included author-specific (e.g. gender, number of authors), institution specific (e.g. ranking), publication specific (e.g. source of funding), and journal specific (e.g. impact factor) characteristics. Logistic and linear multivariable regression models are used to identify associations between these characteristics and RRP.
Results: We collected over 163,000 full-text RCT publications from a total of 247,000 available studies of interest (66%). In total, an additional 22 predictors were extracted. Average statistical power was low (median power of 0.10). The proportion of articles with erroneous presentation of p-values was 44%; 9% of these studies presented a p-value below 0.05 where in fact it should have been above 0.05, or vice versa. Of all studies, a total of 18,871 of the included studies were registered on ClinicalTrials.gov; only 24% uploaded their protocol before start of the study, and 31% of studies changed the primary outcome in the registry during or after the study duration. Full data on all variables and multivariable prediction models will be presented at the conference.
Conclusion: This study aims to gain insight into questionable research and publication practices in a large body of over 160,000 full-text RCT publications. The resulting database can be used to improve the methodological and statistical rigor of clinical research.

Concurrent session: Attitudes 2

O-030

The relationship between questionable research practices and the perceptions of working conditions among researchers
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Questionable research practices (QRPs) can have detrimental effects on the trustworthiness of knowledge claims. It is also known that the prevalence of such QRPs is of a non-trivial magnitude, at least in some fields. To address these problems, it is important to understand how researchers perceive the conditions under which they work and the incentives they face. The relationship between the perceptions of researchers and their own behaviours in terms of QRPs is the subject of this study.
From October to December 2018, the "Practices, Perceptions and Patterns of Research Integrity" (PRINT) project fielded a pre-registered survey (https://bit.ly/2NIKRjv) to all post-PhD researchers at 18 universities (approximately 55,000) in Denmark, Croatia, Austria, United Kingdom and United States. We asked respondents about a range of QRPs, including those concerning authorship, reviewing practices and selective use of data, amongst others, in which they may or may not have been involved. The survey also includes sixteen questions about respondents' perceptions about their working conditions: the reward system, peer review processes, publication pressures, institutional management and leadership. These items have been developed on the basis of extensive qualitative research prior to the survey design.
The analysis we will present proceeds as follows. First we will describe the distribution of perceptions working conditions and how they vary according to respondents' field of research. We also examine the correlation between responses to the sixteen perception items and derive a factor-analytic representation of the dimensions underlying them. We investigate the extent to which the factor structure varies for researchers in different research fields. Finally, we present associations between these dimensions and self-reports of QRPs. Thus we can map the saliency of particular types of perceptions about how researchers produce their work, alongside their involvement with different types of QRPs, across diverse research fields.
Conclusion: Existing literature has pointed to many potential reasons for suboptimal research practice. Our results will provide robust empirical evidence about how the structures of research environments in different fields of scientific knowledge production are related to the behaviour of researchers and the extent to which they engage in questionable practices.

O-031

Perceptions and prevalence of questionable research practices across research fields: findings from a large-scale multinational survey

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Objective: We will report findings from a large-scale survey that examine perceptions and prevalence of questionable research practices (QRPs) across all main fields of research. The survey is part of the research project "Practices, Perceptions, and Patterns of Research Integrity" (PRINT) which aims to provide a detailed mapping and improved contextualized understandings of the current state of research practices and integrity. Our survey is the first to examine perceptions and prevalence of QRPs across all fields of research. Contrary, to previous studies, we specifically focus upon the prevalence in the recent research literature and in respondents' own publications. Our aim is to qualify the general understanding of QRPs, their diversity and varying influences within and between fields of research. As such, the survey will provide novel insights to the existing knowledge base on QRPs.
Method: From October to December 2018, a population of 55,000 researchers with a PhD-degree employed at 18 universities across five countries (Denmark, Austria, Croatia, UK and the US) will be contacted via their publicly available e-mail addresses. Nine selected QRP statements are given to each participant. They are asked to estimate perceived prevalence in the recent literature and to report own use of the practice in recent publications. A pool of 25 QRP statements are included in the survey, 10 generic statements eligible to all participants and 15 targeted statements directed to participants according to their to preferred knowledge production mode. Statements are allocated to participants according to rules and random selection. All measurements are on an ordinal scale from 1-In no publications to 7-In all publications.
Results: Data analyses will be done in January to March 2019. We will report perceived and self-reported prevalence estimates. We will also report the prevalence of individual QRPs according to main knowledge production modes, research fields, across countries, and relate prevalence to the career stage. Finally, we will compare own self-reported prevalence with estimations of the prevalence in the recent literature in the respondents' fields of research.

Conclusion: We will discuss our main findings in relation to the existing literature and pay specific attention to limitations in our survey approach including sampling issues.

O-032

Taiwanese and US graduate students' alternative concepts of responsible conduct of research: a comparison study

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Objective: This study shows an inquiry for Taiwanese and U.S. graduate students' understanding and alternative concepts regarding RCR-related issues. Their knowledge and concepts were examined through 10 RCR-related scenario-question sets presented in a two-tier testing format, referring to Responsible Conduct of Research Reasoning Test (RCRRT).
Method: Participants were recruited from two universities in Taiwan and California. They were invited to answer RCRRT through an online survey system. Their academic characteristics were also gathered for further statistical comparisons. A series of t-test and ANOVA was employed to analyze students' performance on the test.
Results: The results indicated that, first, in general, U.S. students performed significantly better on the RCRRT than Taiwanese students. However, if taking a deeper look at each set of scenario-question, either the U.S. or Taiwanese students performed significantly better, respectively in particular sets, than their counterparts. Second, Taiwanese students' RCR alternative concepts mainly focused on the topics related to authorship, piecemeal publication, and the dual-role (e.g., teacher-researcher) in in-class experiments. On the other hand, U.S. students' misunderstanding surrounded the issues regarding duplicate submission and the originality in research. Third, concerning academic characteristics, variables such as gender, academic level (i.e., master's and doctoral), and research discipline (i.e., science, technology, and medicine as well as humanities, social and behavioral sciences) did not lead significant differences on their RCRRT scores. However, the prior RCR training experience of students (i.e., whether they had ever received any RCR instruction before taking the test) played a critical role in their test performance. Specifically, students who had received the training obtained a higher score of the test than those who never had. Finally, detailed descriptions of the alternative concepts that both sides of students were precisely holding will be presented at the conference.
Conclusion: The present study discovers and compares the alternative RCR concepts of students with different academic backgrounds. It would be practical and beneficial for RCR instructors to have a deeper understanding of students' RCR-related misconception which would further result in the development of effective instructional interventions. Suggestions regarding pedagogical development and implications for those interventions will be offered in the presentation.

O-033

Research climate in Nigerian universities: a comparative analysis of two universities with similar mandate
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Research and data misconduct can result in false research reports which is why researchers must be provided organizational environments conducive to high quality research. The objective of this study is to assess the research climate for agricultural research in two Nigerian Universities using the Survey of Organizational Research Climate (SOURCE).1 The sample of 332 is from the staff and students of agriculture in two Universities in Minna and Akure, Nigeria. The data, obtained using the SOURCE questionnaire, were analyzed using descriptive statistics, reliability, exploratory (EFA) and confirmatory (CFA) factor analyses using likert, psych, lavaan packages in R3.5.1. The findings indicated that 44% of the respondents had a PhD, and 80% of the PhD holders were professors. However, 48% of the PhDs had only been in their current status as professors for three or less years. On the basis of the SOURCE subscales, three out of eight of scales had acceptable Cronbach's alpha levels for the pooled data although Minna had four but Akure had only one. The overall alpha for all 32 SOURCE items was very high at 0.890 although Minna's (0.892) was higher than the combined and also than Akure (0.886). The EFA extracted four, three and five factors from the pooled, Minna and Akure respectively but the CFA showed that the extracted had weak associations based on the estimated R2. The results are comparable with published research results. There were no significant differences between mean SOURCE scale scores for Minna vs. Akure. In comparing pooled results to published mean SOURCE scale scores in the U.S. we found no statistically significant mean differences. In addition, 41% of respondents' research works were not reviewed by any committee, while only 36% say their work is reviewed by Institutional Review Board. It was found that 39% of the respondents collaborate in research between peers and colleagues. Among the life-based research groups in agriculture disciplines, the animal and food scientists are the major culprits in terms of non-review of research. A poor research climate, perhaps; although the research process may seem loosely controlled as researchers initiate and conclude research without formal review; this finding may reflect a predominant agriculturally focused research sample (non-human subjects). Research to compare Nigerian results to results from the U.S. SOURCE data repository at NCPRE is also ongoing for this project.

Concurrent session: Principles and codes 2

O-034

Research integrity around the pacific rim: developing the APEC guiding principles for research integrity
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Objective: To develop a consensus set of principles to guide the responsible conduct of research in APEC member economies. An APEC workshop on improving researcher mobility identified an absence of a shared understanding of the principles and importance of research integrity as a potential barrier.
Method: A modified Delphi process was used to develop the APEC Guiding Principles. Briefly, an initial survey was deployed to guide development of a terminology usage map and test definitions of the commonly used words identified as principles of research integrity. Participants were also asked to rank lists of principles, and responsibilities of researchers, institutions, and sponsors of research in order of importance for trustworthy research. A second survey sent to those who completed the first survey will be used to refine the ranked lists. Finally, a consensus workshop will be held to finalise the definitions and select the final principles and responsibilities.
Results: A key challenge in this research was the identification and recruitment of experts in research integrity. Delphi processes rely on input from experts in the field. To address this, we included a self-rating of expertise question in the first survey. This appears to have been interpreted variably by participants. In some cases, known experts ranked themselves below the inclusion threshold, while some regions appear to have a disproportionately high number of experts in research integrity. Additionally, the response rate to the survey varied widely from economy to economy and this complicated the analyses. It is expected that the consensus workshop will be critical for the production of the final usage map, definitions, and the Guiding Principles of Research Integrity themselves.

Conclusion: The Guiding Principles for Research Integrity will be developed by including expertise from APEC member economies. The usage map will clarify what terms are used across APEC to describe the same ideas – this in itself should help to improve researcher mobility. The Guiding Principles will provide a solid and rigorous baseline for institutions, governments or regions. Importantly, the Guiding Principles provide an excellent starting place for developing education and training material that may be deployed across APEC economies.

O-035

Research integrity and research ethics experiences: a comparative study of Croatia, the Netherlands, and Spain

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Objective: To explore stakeholders' experiences of research ethics and research integrity (RE+RI) in Croatia, the Netherlands and Spain.
Method: A purposive mixed stakeholder sample (researchers, editors, RE or RI committee members, policy-makers, and funders, n=59) participated in three focus-group rounds (Oct 2017-Feb 2018). Data were analysed thematically.
Results: Five themes emerged: 1) Laws, policies and guidance; 2) Context; 3) Support; 4) Individual disposition, values, and knowledge; 5) Funding and publishing.
1) All three countries have laws, bodies, and codes governing RE+RI and are subject to EU regulations. However, there are differences in regulatory awareness and commitment to the translation of institutional mission statements and strategies into practice.
2) The socio-political context influences RE+RI practices e.g. the impact of prominent cases on institutional RI efforts in the Netherlands and challenges posed by conflicts of interest and political pressure to RE committees and misconduct investigations in Croatia.
3) There is increasing education on RE+RI, but it is often piecemeal, voluntary, and rarely aimed at senior staff. RE committees play an important supportive role, however their ability to provide appropriate support depends on members' discipline and expertise. In the Netherlands, alternative support structures are developing for disciplines which do not legally require RE approval.
4) An individual researcher's disposition, values, and knowledge are central to their RE+RI practices. However, the perception that RE+RI requirements are an administrative hurdle to overcome hinders real engagement with RE+RI issues.
5) Funder and publisher practices can hinder or promote RE+RI. Funders' criteria for evaluating researchers and RE+RI reporting are influential. For publishers, prioritising novel studies, perpetuating journal impact factor use, relying on unpaid peer-review, and prioritising profit weaken RI, whereas pre-registering and publishing protocols, and requesting raw and metadata strengthen RI.
Conclusion: Although in just three countries, the consultation reveals varied RE+RI experiences of researchers and other stakeholders. The results highlight the need to investigate implicit norms that structure local RE+RI practice in order to understand how more explicit rules are, or are not, applied. There also is a need for more structural support and education. Funders and publishers' practices are important in upholding and fostering RE+RI.

O-036

Revision of the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) white paper on safeguarding good scientific practice – embedding a new culture of research integrity

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Objective: The 1998 DFG recommendations for safeguarding good scientific practice were used by the German research community to initiate and formulate a system of self-regulation that found a general consensus. However, in recent years factors such as the digital turn in the Sciences and Humanities, changes in publishing and legislation, and debate surrounding whistleblowing and predatory publishers have triggered far-reaching change in research practice, prompting the need for a thorough revision of the white paper.
The revised version will address current global issues, will define new standards in research practice and will foster a positive approach to research integrity.

Method: A committee of experts has been discussing the revision of the white paper since August 2018. The issues addressed by three subcommittees from their various perspectives include the following five cross-disciplinary topics: (1.) Research Integrity stakeholders, (2.) International research cooperation, (3.) Relevance of gender and diversity in research, (4.) Quality assurance instruments, and (5.) Transfer of research results to industry and society.
Results: It is anticipated that the revised white paper will be adopted by the DFG's General Assembly in July 2019. The envisioned paradigm shift will move the focus from infringements of good scientific practice to a professional code of ethics for researchers. A key element is continuous quality assurance in working groups and a responsible conduct of research education.
Henceforth, the white paper will be structured according to the research life cycle: planning, implementation and publication. The intention is a clear, subject-/discipline-specific examination of all three phases of research.
Conclusion: The white paper will be general in its application yet concrete enough to enable universities and research institutions to align their internal structures and processes with the recommendations in a spirit of voluntary commitment on the part of the research community.

O-037

Research ethics in Russia: challenges for the Russian Science Foundation
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Russian Science Foundation, Moscow

Objective: To present efforts that Russian Science Foundation (RSF) is making to improve research integrity in Russia with respect to its grant programmes.
Method: We analysed the implementation of 2201 grant agreements concluded by RSF in 2017 and checked with other research funding agencies in Russia for duplication in funding. The results were compared to the similar studies conducted in 2015, 2016 and 2017.
Results: 956 grants (43%) had no problems identified, which is better than 2015 results (35%). The analysis revealed 2099 violations of the essential terms of 1245 grant agreements. This attributes to the webinars for grant recipients to conduct research responsibly as wells as to on-site audits held yearly since 2015. RSF found 46 cases of manipulations when research funds were used for non-research purposes. 28% of 9764 publications reported did not meet quality conditions from the grant agreements. Based on the assessment of grant reports, in 2015-2018 RSF suspended funding of 41 projects, 358 projects received warnings from the RSF Expert Council.
Russian Science Foundation takes multiple precautions to prevent duplicate funding. As a results of cross-checking and screening applications with other research funders, in 2018 RSF identified 45 suspicious pairs of duplicate funding. After manual investigation, one project was closed and 12 projects received warnings. This calls for funding agencies in Russia and abroad to take further steps to nip duplicate awards.
Ethics in review is another concern for the RSF with 1000 honorary foreign reviewers complementing 4000+ Russian reviewers. Annually dozens of reviewers found violating the review guidelines, get expelled from the reviewers pool and banned for new review assignments.
Conclusion: There is a lack of information of research misconduct and fraud in Russia, which may be on rise in recent years due to increased competition for research funds. RSF maintains zero-tolerance for scientific misconduct and is proud building a nation-wide infrastructure to ensure research funds are used ethically. This involves webinars, audit visits and routine training work with grant recipients and peer-reviewers as well as the regular monitoring of grant agreements implementation.

O-038

Scientific integrity requires science to think of itself: the Colombian experience in the design of a policy on ethics of research, bioethics and scientific integrity
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Objective: To describe the Colombian approach for Ethics and Integrity, based on in-depth discussions with members of the scientific and academic community and a series of surveys. Scientific Integrity requires an environment that stimulates the reflection of science about itself: in its social dimension and its epistemological status, as a condition to face uncertainty and the randomness that comes out of the search for truth.

Method: Current Colombian Ethics Policy was designed based on a collective process of exchange of ideas among academics and researchers, called "National Dialogues on Research Ethics." It has been carried out on an annual basis by COLCIENCIAS (Colombia National Science Foundation), since 2013. These Dialogues served as input for a systematic public policy design exercise: using ECLAC´S Systemic Analysis (CEPAL).
The process also included an online survey complete by 834 out of 8,000 researchers in 2016, as well as regional consultations. We are currently implementing this Policy. In the first quarter of 2019, the First Survey, or Baseline, will be applied for subsequent impact analysis after 2023.
Results: The First Survey or Base Line (to be carried out in three moments: 2019, 2012, 2023), which results will be presented in June 2019, include some questions from the Survey conducted in 2016. Particularly, on the following issues, among other behaviors associated with scientific Integrity: declaration of conflict of interest, authorship, management of resources for research.
Conclusion:
The goal of this Colombian Policy is to generate a cultural change, where Scientific Integrity is a topic for all science and technology system actors. To achieve this, it's necessary to involve all stakeholders with well-defined roles and responsibilities, for the promotion of scientific integrity, as part of the ethical and political control of scientific activity. Preventing misconduct requires an environment that stimulates the reflection of science about itself.

Concurrent session: Education

O-039

Integrity reminders – a new approach about research integrity education
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In 2018, the Ethics Committee of Research of the Chinese Academy of Sciences explored to issue the Integrity Reminders to educate authors. In this document, the committee summarized the ten types of misconduct common to the authorship in recent years, based on universally recognized principles in the academic community. With the adoption of a concise style, friendly attitude, the Reminders was welcomed by the researchers. In the future, the Commission plans to identify a theme each year for similar Reminders to educate CAS employees.

O-040

Will games kill off textbooks? Assessing existing research integrity educational resources within the European context
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The state of the art of research integrity (RI) educational materials in existing training programs in Europe seems to be quite unknown. Thus, mapping and analyzing these learning resources is of extreme importance in order to understand how these materials may be implemented to guarantee a better understanding and use of 'good research practices'.
It has been asked to more than 100 different stakeholders, involved (in)directly on RI trainings to participate actively in the collection of existing educational practices. Stakeholders involved in RI European or national funded projects, academic and industry associations are involved through sharing information about their training practices and materials. In addition, educational materials collected and/or developed by RI European consortiums are being analyzed. Even though the analysis is not fully completed yet, significant results have been emerging.

Even though the collection is not fully completed yet, significant results have been emerging. At European level, it is notable how there is no a homogenous approach neither on ways of formatting the training program nor on the topic addressed. Half of the respondents use online teaching programs, often alongside a 'one shot' workshop or face-to-face lectures. Others use a more standardized one-direction teaching approach. Analyzing the contents of the collected material, the topics addressed are mainly related to serious misconduct and authorship issues, without mentioning other issues like conflict of interest, data management, and copyright or peer review process. Moreover, it is notable that two different approaches are used. On the one hand, a more standard scheme in which responsible conduct is lectured using textbooks, guidelines, cases studies and published articles. On the other hand, card games, scenarios, role-playing games, video tutorials and movies are used as a more engaging way of teaching. The outcomes of the research will be ready at the time of the conference.
Unfortunately, the main limitation of the study is linked with the limited willingness of the stakeholders of sharing that kind of the information. However, clearly the 'one shot training' or the solely mention of codes and norms are not enough to improve the level of awareness in researchers.

O-041

Values-based learning modules on responsible conduct of research in undergraduate medical education
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Educational efforts that foster the responsible conduct of research (RCR) are essential for developing ethical health professionals. This work aimed to evaluate the effectiveness of RCR learning modules the instructional design of which were anchored on the core institutional values of a Catholic medical school.
The Hallmarks of Benedictine Education (Association of Benedictine Colleges and Universities , 2007) guided the design of a series of twenty-minute face-to-face large-group, small-group, and individualized learning events on research ethics. This was pilot-tested on a cohort of 130 undergraduate medical students and evaluated using the Kirkpatrick levels framework.
Student reaction (Level 1) to the values-based content and activities of the program was highly positive. Evaluation of learning (Level 2) showed statistically significant differences on pre-test and post-test measures ($t=-21.007$, $p<0.001$), and represented a large-sized effect, $d=3.0$. Results of the ongoing Level 3 evaluation (behavior) will be presented in the conference.
Student reflections on the program emphasized that the Benedictine values that were being imbued were compelling points of reference for ethical research behaviors and that these principles helped make adherence to RCR standards less coercive.
The ongoing work suggests that the patent integration of the institutional values of a Catholic medical school into the medical research curriculum effectively promotes the learning of RCR.

O-042

Educational interventions support adoption of reproducible research practices
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Objective: Transparent presentation of scientific results and the possibility to reproduce the underlying analyses are desiderata of high quality science. Currently, young researchers face demands by funders and journals for increased transparency, but at the same time find themselves lacking technical skills and/or opportunities in their research groups to fulfill these demands. Teaching of appropriate skills and raising awareness is thus one central element towards an implementation of reproducible research practices.
Method: We conducted two educational observational interventions, a seminar course in a psychology department (N=25) and an international summer school (N=40) with biomedical and psychology PhD students where we gave introductory lectures and workshops on reproducible scientific workflows. We measured attitudes on how likely participants thought they were to implement the presented content in their research projects. Importantly, we also tracked if participants actually translated this into practice in their own research.

Results: We conducted a descriptive, qualitative analysis of our results. In both summer school and seminar, a majority of participants planned to implement various parts of reproducible research practices such as pre-registration, open data and code, or version control. In the practical work that followed the seminar, many participants reported half a year later that they actually implemented reproducible research practices in their own work. Notably, over 90% felt that this improved the quality of their scientific work (Toelch U, Ostwald D (2018), PLoS Biol 16(7): e2006022). As the summer school took place in September 2018, data collection on practical implementation is still ongoing.
Conclusion: Educational formats that address transparency and reproducibility in science have the potential to foster implementation of reproducible research practices. However, our current data focusses on short term implementations in a specific population with no proper control group. That is, even though results are encouraging, extrapolating results will require a broader data basis.

O-043

A missing component of research integrity pedagogy: expanding RCR education to include writing scientific prose
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Even in cases in which RCR curricula exceed minimal government or regulatory requirements, they remain out of date, limited and incomplete. Notwithstanding the addition of observational or experimental data to improve our understanding of various forms of best practice or research misconduct, these data alone will be inadequate in the absence of proper attention to what has emerged as a ubiquitous component of empirical research: writing. At the University of Miami, we have begun to include this component (along with a parallel effort to address writing computer code) in our standard RCR curriculum. We have for two years collected data to (i) demonstrate how writing affects other, standard, RCR components and (i) help make clear that writing might be among the causes of reproducibility failure. In particular, we have documented writing support via one-on-one consultations, writing workshops, and assessing course evaluations of specific RCR training sessions for graduate students and post-doctoral researchers. This presentation will make the case that writing is not merely an addition or supplement to the RCR curriculum, but, rather, underpins all aspects of empirical inquiry and therefore should be regarded as a core component of research integrity.

Concurrent session: Management

O-044

Implemeting a culture of integrity: styles in governing research integrity in university environments
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Over the last decade we witnessed a growing concern over issues of research integrity within contemporary research systems. This was triggered by the perception that numbers of "obvious" transgressions of acceptable academic practice were rising, by concerns around the number of retractions of academic papers and obvious flaws in the peer review system, by undue influence of those funding studies on their epistemic outcomes, but also by the recent concerns captured by the label of "reproducibility crisis". Universities have held a special position in this debate, as they not only perform research but also educate the next generation of researchers and knowledge workers. While institutions have responded with codes of conduct and guidelines for good scientific practice, we know much less about how research institution, more specifically universities, handle these issues in practice. In short, this presentation explores how institutions think and act when trying to implement a culture of integrity.
Building on a document analysis of codes of conduct, on the study of procedural implementations as well as on interviews with those responsible for the practical handling of cases of transgression, the presentation aims to show the different models of governance at work and how imaginations of contemporary research are performed through them. Furthermore, it will also be of interesting to reflect the role played by ideals of excellent science and other related institutional realities, which form the "integrity conditions" for researchers. Finally, it will also mean to look at the "geographies of values" that are embedded in the efforts to implement a culture of integrity.

This paper will build on research undertaken in the framework of the project "Borderlands of good scientific practice" funded by the Research Fund of the Austrian National Bank (PI: Ulrike Felt; Project collaborator: Florentine Frantz). The research is carried out at the research platform "Responsible Research and Innovation in Academic Practice" at the University of Vienna. The project studies in detail the integrity practices at work at the individual, collective and institutional levels in the context of Austrian universities.

O-045

Implementation of ombudspersons and improvement of their work: to dos and don'ts

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Objective: Ombudspersons are a keystone for the prevention of scientific misconduct, and their work ensures an appropriate way of dealing with conflicts. However, there is a general lack of concrete criteria and qualification requirements for ombudspersons-to-be, and a deficiency regarding advanced professional training. Basic conditions for exercising this important function are quite diverse and sometimes ambiguous. To strengthen the work of ombudspersons in general and their individual position in each case inside their respective institution, this presentation gives some clues and recommendations for the enhancement of the ombudspersons' sustainable activity for the scientific system – particularly for those institutions without any ombuds-system.
Method: Examination of more than 65 European documents related to regulations of good scientific practice, such as bylaws and statutes of universities, guidelines of scientific associations, codes of conduct and memoranda. Evaluation of non-standardized interviews and conversations with ombudspersons.
Results: None of the examined regulations stipulates any requirements beyond basic demands, such as personal authority, integrity, impartiality, and profound knowledge of academic policies and the higher education area. There are hardly any clear directives concerning personal and/or administrative infrastructure, and the terms of procedure and latitude of ombuds-work are rather diverse. No standards regarding the visibility of the ombudspersons inside their respective institutions and hardly any encouragement for making use of them in a preventative way are defined.
Conclusions: The work of ombudspersons needs to be embedded in an appreciative environment, strengthened by practical assistance and met with an explicit positive attitude. Framework conditions such as appropriate resources, unrestricted independence, freedom from subordination, and deputy regulations must be stipulated and vitalized. Unequivocal descriptions of their latitude, responsibility, and their scope in decision-making are as necessary as definitions of non-optional qualification skills. To achieve strong competences for the elaboration of constructive solutions in often escalating situations, training in conflict management and mediation is indispensable. As especially young scientist appeal to ombudspersons in situations they fear or experience as career-threatening and desperate, ombudspersons are often themselves stressed and feel the burden of their task. Therefore, confidential opportunities for loyal and professional counsel and exchange should be created.

O-046

Managing responsible research? Ideals and evaluations of biomedicine at the institutional, research group and individual level

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The objective of our study is to analyze the similarities and differences between (1) the ideals of research integrity and scientific quality of junior and senior biomedical researchers and (2) the ideals of research integrity and scientific quality as embodied in evaluation practices and instruments of research management.
To achieve this objective, our qualitative study combines the results of three related research projects carried out in Dutch university medical centers. Through a combination of ethnographic observation, two focus groups, thirty semi-structured interviews and extensive document analysis we captured the ideals of good research and good research governance at different levels of one medical center.
We are currently analyzing our observations, interviews and documents to integrate the outcomes of our respective projects. We distinguish three domains in our preliminary results:

(1) Different members of research groups struggle with variable demanding and sometimes conflicting ideals of good scientific work. Biomedical researchers experience a tension between their ideals of responsible research of biomedical scientists and the individualizing and competitive pressures they feel in their everyday practices. Career phase and organizational position seem to influence ideals of research quality and integrity.
(2) At the institutional level we demonstrate a broad shift from an 'excellence' to a 'relevance' frame in research governance and evaluation practices. These attempted changes bring responsible research to the center of attention but equally lead to uncertainty about the evaluation of scientific quality.
(3) Methodologically, Dutch university medical centers provide an interesting site to study the translation of macro level policies and pressures to local knowledge production. As such, they enable us to explore (limits to) the power of research organizations to increase RI. Based on a more thorough analysis of our data – scheduled for the coming six months – we expect to present more detailed results.
Though limited in scope, our rich material shows that responsible research practices in this biomedical research institute are partly shaped by career phase and organizational role and point to research governance as both an embodiment of ideals and a factor of influence on research practices.

O-047

Investigating responsible research in Finland: research integrity barometer 2018 and the 2015-2019 surveys of (in)appropriate feedback

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Objective: The 2016 Finnish Science Barometer shows that the Finnish public continues to trust in science and education. A system of ethical self-regulation has been in place in Finland for 25 years, and the research community voluntarily commits to following research integrity guidelines. The Responsible Research project (www.responsibleresearch.fi) conducts two surveys in order to a) understand how well the self-regulation system works in Finland, and b) to investigate the scope and effects of public feedback on science communication. This paper presents an overview of the findings.
Method: The Research Integrity Barometer 2018 is the first investigation of research misconduct in Finland. It is carried out by the Responsible Research project, the Finnish National Board on Research Integrity TENK, and the University of Vaasa. An e-questionnaire is distributed to all Finnish universities, universities of applied sciences and other research organisations, and the data is analysed quantitatively and qualitatively. The results will be compared with the 2018 findings of the Research Integrity in Norway (RINO) project.
The feedback survey is carried out by the Responsible Research project and the Finnish Committee for Public Information. An online questionnaire, open to all researchers, charts the quantity, quality and sources of feedback that researchers receive when they take part in public discussions. The findings are compared with the previous feedback surveys of 2015 and 2017.
Results: Both surveys will be completed by the spring of 2019. The Research Integrity Barometer 2018 is distributed in late 2018, and a report will be published in early 2019. The feedback survey is carried out in early 2019. The previous surveys suggest that public feedback is largely positive, and that inappropriate feedback has not generally influenced researchers' willingness to take part in public discussion.
Conclusion: After 25 years of a research integrity system based on self-regulation, we investigate this self-regulatory system by carrying out a survey of research misconduct in Finland. In another survey, feedback that researchers receive from the public is interlinked with freedom of expression and public trust in science. Previous findings indicate that inappropriate feedback has generally not deterred Finnish researchers from public participation. These two studies are presented in the context of best practices of responsible research in Finland.

O-048

ENRIO (European Network of Research Integrity Offices): recommendations on how to Investigate research misconduct – a handbook

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Objective: In 2017, the European Code of Conduct for Research Integrity was revised by All European Academies (ALLEA). While the European Code is focused on Research Integrity in a broader sense, this Handbook aims to offer detailed practical recommendations on how to deal with research misconduct and other unacceptable practices in different European settings.
Method: A working group, consisting of members from some twenty countries, has evaluated structures and policies regarding how research misconduct is handled in different European countries. Despite cultural, social, political, technical and legal differences across countries, the working group has agreed on non-binding advice on how to deal with research misconduct.
Results: The Handbook describes some overarching principles. Furthermore, it contains discussions especially regarding diverging policies. Finally, it contains advice and a list of detailed recommendations, best practices or things to consider:
(1) The need for a code of conduct.
(2) The importance of a description or definition of (serious) research misconduct and other unacceptable practices
(3) How to set up or improve a Research Integrity system in different countries. The need for a uniform and robust system for dealing with major and minor breaches of good scientific/research practice. The question of mainly local or national responsibility and division of responsibility.
(4) The importance of dealing with conflicts of interest
(5) Composition and competence of investigation committees. The importance of independency. Ad hoc versus standing committees.
(6) Openness and transparency versus confidentiality
(7) How to receive allegations or concerns including guidance to complainants/whistleblowers
(8) Specifics on how to handle allegations concerning research misconduct/ unacceptable/irresponsible research practices
(9) Appeal or second opinion including the importance of a national oversight body
(10) Sanctions and follow-up after a finding of research misconduct
(11) Dissemination and communication strategy during and after an investigation
(12) Reactions to possible systemic problems revealed by an investigation
(13) How to deal with cross boundary allegations/investigations i.e. involving different persons/institutions within the same countries or across countries.
(14) How to learn from each other especially across countries
Conclusion: It is not advisable to try to harmonize how to deal with research misconduct across Europe via a top-down approach. However soft-harmonization, i.e. recommendations or non-binding advice based on good practice in different countries and or institutions etc., could lead to a step-by-step harmonizing. This will require an interest and willingness in different countries but also requiring constant evaluation and new suggestions for improvements.

Concurrent session: Misconduct

O-049

Own it! Deliberating serious research misconduct at institutions where the misconduct occurred

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Objective: Following a serious and high-profile case of research misconduct, the Duke University School of Medicine (DUSOM) initiated a misconduct deliberation effort whereby the case was introduced to research faculty and staff for open and critical discussion and debate.

Method: As part of a center-wide research integrity program, DUSOM convened five Responsible Conduct of Research (RCR) workshops in which 90 minutes were devoted to structured discussion of a serious misconduct case that recently occurred at DUSOM. Each workshop was introduced by a SOM Dean emphasizing the importance of RCR to the School. The first half of each workshop involved 15-20 minute presentations by subject matter experts on RCR topics. A principle-based framework for identifying ethical transgressions in misconduct cases was provided. The misconduct case was discussed with attendees in groups of 4-8 at round tables. The case was divided into three sections and attendees were asked to read one section at a time, discuss it with other attendees at their table, and report their reactions and recommended action steps. Attendees were asked to complete a satisfaction survey with respect to the workshop content, value, and organization.
Results: Overall, workshops were perceived as useful, engaging, and instructive by attendees. Workshop attendees were particularly receptive to the deliberation of the misconduct case. Many commented that it was important that such cases be openly and constructively discussed in RCR efforts at Duke. Attendees especially valued the "insider" details and perspectives that were provided by faculty and staff who were knowledgeable about the misconduct. In the exit survey, attendees recommended more such case deliberations, more time for questions, and more involvement from their departments and units.
Conclusion: There may be significant benefit to structured deliberation of misconduct cases at the institutions where the misconduct occurred. Risks or drawbacks to such a deliberative process were not observed. However, such processes may have drawbacks such as legal consequences or unforeseen psychological or other effects on some attendees. Further study is needed to investigate the usefulness and best ways of conducting inclusive misconduct deliberations at institutions where the misconduct occurred.

O-050

Lessons from an analysis of 150 recent real life cases of research misconduct
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Objectives: No research institution is immune to research misconduct, questionable research practices or errors. Universities all over the world have to take a position on the demarcation between honest errors and misconduct. Although considerable research has been devoted to research misconduct and adequate handling of this problem, little attention has been paid to the empirical investigation of how cases of misconduct are addressed in real life and which criteria are used to qualify a case as misconduct.
Methods: Twelve European countries were selected, representing three approaches of addressing research misconduct: national commissions with legal mandate, national advisory commissions, and local commissions. We contacted the relevant instances to collect misconduct files. We analyzed their content focusing on criteria used to reach conclusions of misconduct. Information was aggregated at the country level.

Results: We collected 150 real life cases of research misconduct over the last decade. Cases covered each type of regulatory approach. 21 % of cases reported different forms of misconduct. Data analysis revealed gradations in judging misconduct, with intent reserved to the most serious misconduct, as compared to less serious grossly negligent conduct. The most remarkable discrepancy concerned negligence: some organizations take into account in addition to intent, also negligence as misconduct, whereas in other organizations negligence rises to the level of misconduct when it is repeated or occurred in combination with several unaccepted practices. Furthermore, in cases qualified as misconduct, the number of early career and more senior researchers was almost the same. Decisions of the commissions with a legal mandate are final, whereas in other systems a second advice can be requested in case of suspected improper handling within the institution concerned.
Conclusion: Systems addressing misconduct vary widely. Misconduct might not always be concluded in cases when guidelines are not respected by researchers. Guidelines lack a clear distinction between actions that are allowed and actions that are prohibited, in contrast to the law. Research misconduct should be seen within a spectrum between honest error and fraud, rather than categorical, with different gradations in the severity of infringements. This study does not include private-sector research.

O-051

Personalising impersonal science – a narrative-ethical analysis of some integrity issues
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Objective: A specific type of research integrity issues concerns disputes about whether a researcher who generated data but left the project prematurely still deserves (co-)authorship of the publication that is based on the data.
The goal of this paper is to explain such issues in the light of the tension between two contrasting views on science: an 'impersonal' value-neutral one focusing on the methods and results of a scientific 'process', and a 'personalised' value-laden one, focusing on the 'persons' – collaborating researchers - who facilitate this process as responsible agents and want to be acknowledged for their contribution.
Method: The method used originates in the Humanities and may be called 'hermeneutical narrative-ethical analysis', a type of ethical analysis that assumes that many social phenomena in which persons are involved – like research - have the structure of a narrative plot and can therefore be considered as 'stories' with 'characters'. Such stories can be interpreted through hermeneutical analysis that explicates implicit meaning, norms and values that influence the intentions, judgements and actions of the persons involved (the characters in the plot).
Results: The result of a hermeneutical narrative-ethical analysis of some representative cases is the insight that integrity issues of the type mentioned arise at so-called 'narrative plot fractures' where the relation between responsibility, action and its result is disturbed
Conclusion: While processes of scientific research (its method and design) are usually represented in an impersonal value-neutral way, a hermeneutical narrative-ethical analysis shows that implicit meaning, norms and values are at work in how people experience and interpret such processes. Disputes about whether somebody deserves authorship are thereby revealed as conflicts of basic values of integrity such as responsibility and justice as fairness, arising where the narrative plot of research stories fractures.

O-052

Self-reported occurrence and factors associated with research misconduct among HIV researchers in Kenya
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Objectives: Estimate the occurrence and factors associated with self-reported research misconduct (RM) among HIV researchers in Kenya.
Methods: We used a modified Scientific Misconduct Questionnaire-Revised (SMQ-R) tool to estimate the prevalence of RM. The tool assesses perceptions of stakeholders on research misconduct and has been used in Africa. We developed a list of HIV related research approved over the previous 5 years by the three largest research ethics committees (RECs) in Kenya from a database by a National AIDS Control Council Knowledge Sharing Hub called Maisha Maarifa https://nacc.or.ke/2016/05/10/maisha-maarifa-research-hub/. We invited a census sample of 667 principal investigators, co-investigators and research coordinators (with valid addresses) to take the SMQ-R survey as an online self-administered questionnaire. The respondents viewed a written consent document before being asked to complete the survey tool anonymously. The prevalence of self-reported personal experience with RM and associated factors were assessed using Fishers Exact or Chi square tests.
Results: The response rate was 15%, with 100 out of 667 completing the survey after 3 reminders.
Respondents reporting awareness of cases of RM; ever-involvement in any RM; personal ever- involvement in any fabrication, falsification or plagiarism (FFPs) were 52.4%, 68.3% and 35.4%, respectively.
High severity of penalties, (19.1% vs 80.9% p=0.006); high chances of getting caught (18.7% vs 81.3%, p=0.003); strong researchers support of rules and procedures, (48.9% vs 51.1%, p=0.005) and high effectiveness of rules and procedures, (29.8% vs 70.2%, p=0.0001) were associated with reported awareness of incidents of RM.
High researcher understanding of rules and procedures, (52.7% vs 47.3%, p=0.006); high support of rules and procedure, (53.7% vs 46.3%, p=0.046) were associated with ever-involvement in any RM.
More than 5 years in research, (48.3% vs 51.7%, p=0.041); high chances of getting caught, (13.8% vs 86.2%, p=0.003); high researchers support for rules and procedures, (44.8% vs 55.2%, p=0.023)
were associated with ever-involvement in FFPs.

Conclusions: Reports of awareness of cases of RM, personal involvement in any RM and, specifically, FFP were frequent. Experience in research, perception of effectiveness of institutional rules and procedures relevant to RM and perceived severity of related penalties, were associated with these reports.

O-053

Research misconduct in dissertations and scientific publications in Russia

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Objective: Awarding fake academic degrees to all those who wish to use their academic titles to step onto a faster career route is widely spread in Russia. The aim of the Project is to visualize a research misconduct landscape over different scientific fields and universities in Russia, to gain insight into the backgrounds of this phenomenon and indicate ways of its managing.
Method: In order to make a large-scale screening to detect the most dangerous forms of research misconduct over the country a voluntary community so-called "Dissernet" was founded in 2013. Based on the principles of network distribution of labor and the use of modern computer technologies, the Dissernet counteracts illegal fraud and forgery in the field of scientific and educational activities in Russia. Large amount of statistical data is collected.
Results: During five years of running the project more than 8500 largely falsified dissertations were found and made public. Since 2016 the Dissernet has started the Journal Project. The aim of the Journal Project is to investigate misconduct in Russian scientific journals: plagiarism, duplicate publications, gifted and stolen authorship, fake peer-reviews and other violations. By 2018 significant research misconduct in about 5000 journal papers published in recent years in Russia is identified. The collected statistics allow a detail analysis of the phenomenon under study. The project has attracted a broad attention of the media and became very popular in the academic society in Russia.
Conclusion: The collected data help to reconstruct a research misconduct landscape, to fix hot spots where academic fraud is produced abundantly and to give recommendations on how to reduce an overall level of research misconduct in the country.

Concurrent session: Attitudes 3

O-054

Major and minor research misbehaviours according to academic researchers in Amsterdam – a mixed method study

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Objective: First, to assess what researchers consider to be the most detrimental research misbehaviours. Second, to assess how the most detrimental research misbehaviours affect the actual research climate and if so, how severe these are perceived to be.
Method: We sent out an online survey with a list of 60 major and minor misbehaviours (see Bouter et al. 2016) to all academic researchers in Amsterdam as part of the academic research climate in Amsterdam project (www.amsterdamresearchclimate.nl). Participants were asked to score the frequencies of a random selection of 20 of these behaviours and how these behaviours affect the validity of research results. We calculated aggregate level of importance as the product score of frequency and impact and stratified top 5 rankings per academic rank and disciplinary field. In subsequent focus group interviews (12 focus groups with 61 researchers), we used Participatory Ranking Methodology (PRM). We presented participants with the top 5 we found earlier and asked them to add new research misbehaviours that were, in their opinion, equally if not more important. Participants then had to obtain consensus on ranking the survey misbehaviours new misbehaviours on a scale from major to minor impact.

Results: Completion rate was 17%. Insufficient supervision was ranked as most important across disciplinary fields, followed by misbehaviours that indicate sloppy science and failing to publish a valid negative study. Misconduct (falsification, fabrication and plagiarism) was ranked highest on potential impact, but considered as less important due to low perceived frequency. Focus group results are currently analysed using content analysis techniques and will provide a validation and further explanation of the quantitative results. The qualitative data analysis will be available 2019.
Conclusion: Academic researchers consider insufficient supervision, sloppy science and the decreased tendency to publish a study when results are negative the most important misbehaviours. Interestingly, insufficient supervision is consistently ranked most important research misbehaviours across all disciplinary fields. To foster a more responsible research climate, interventions involving mentoring with a focus on consequences for research integrity should be developed.

O-055

Research misconduct among health and life sciences publications: a systematic review of retracted articles from emerging institutions

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Background: Research misconduct is known to produce social, economic and scientific impact. Support for health research in emerging countries has steadily increased resulting in a growing number of scientific publications. However, these achievements have been accompanied by a rise of retracted publication followed by concerns about quality and reliability of such publications. Considering Brazilian role as a leader among emerging countries it's important to understand the phenomena in its context.
Objective: This systematic review aimed to investigate the profile of medical and life science research retractions of authors affiliated to Brazilian academic institutions. Chronological trends between publication and retraction date, reasons for it, citation pattern, study design, number of retracted publications by author and affiliation were assessed. Additionally, quality, availability and accessibility to data regarding retracted papers from the publishers are described.
Methods: Two independent reviewers searched for retracted articles from 2004 till 2017 at PUBMED, Web of Science, BVS, Google Scholar databases. Data was collected from the Retraction Watch website (www.retractionwatch.com). This study was registered at PROSPERO systematic review database (CRD42017071647).
Results: A final sample of 65 articles was retrieved from 55 different journals with reported impact factor ranging from 0 to 32.86. The types of documents found were erratum (1); retracted article (3); retracted article with a retraction notice (5); retraction notice with erratum (3); retraction notice (45). The assessment of Retraction Watch website added 8 articles not identified by the search on the bibliographic databases. Experimental studies (40) and literature reviews (15) accounted for 84.6% of the articles. Within the knowledge area of health and life sciences, Medical Science was the field with the largest number of retractions (34) followed by Biological Sciences (17). Only 43% of the retractions strictly followed COPE guidelines for its publication. Plagiarism was the main reason for retraction (60%). In addition, 63% of the articles received post retraction citation.
Conclusion: The majority of retractions of health and life science retrieved were due to research misconduct. More investigations are needed to comprehend the underlying factors of research misconduct and its increasing manifestation at emerging institutions.

O-056

Measuring researcher allegiance in research on psychosocial interventions

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Objective: One potential source of bias in randomized clinical trials of psychological interventions is researcher allegiance (RA). As it remains unclear as to how RA affects trial outcomes, there is a need in the field for a reliable and valid method for assessing it. The aim of this study was to develop and validate a checklist that can be used to measure RA in published trials in psychotherapy research and beyond.

Method: A comprehensive checklist was developed based on indicators of RA that are commonly used in "the reprint method", which involves the assessment of a publication's introduction and methods sections. As there is not yet a "gold standard" to assess RA, we examined the convergent validity of the RA checklist by asking authors of psychotherapy trials to complete a survey about their experiences and beliefs related to particular psychotherapies. Two raters used the checklist to rate the associated published psychotherapy trials. To examine convergent validity, correlations between the author survey and the RA checklist were calculated. Further, we examined correlations between each of the checklist items and the study effect sizes.
Results: Preliminary results showed that the commonly used indicators of the reprint method do not correlate with authors' survey responses, therefore not confirming the validity of the checklist. Further, the total score from the RA checklist was found to be significantly correlated with trial effect size ($r = 0.35$, $p = 0.01$). When each checklist item was assessed separately, whether or not the author developed the intervention was also found to be significantly correlated with the trial effect size ($r = 0.28$, $p = 0.03$).
Conclusion: In light of preliminary results, the reprint method was not found to validly represent authors' allegiances to psychotherapies for depression. The relationship between the trial effect size and the RA checklist should be interpreted with caution as it may just indicate that manuscripts are written in light of trial results. Rather than rating RA by means of the commonly used reprint method, concrete indicators such as if the author(s) also developed the treatment should be of focus. Final results/conclusions will be available at the time of the conference.

O-057

The perceived FFP-QRP hierarchy – results from a large-scale survey among Norwegian researchers
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Objective: In the literature on research ethics, notions like FFP (Falsification, Fabrication and Plagiarism) and QRP (Questionable Research Practices) belong to the standard vocabulary. Several studies have sought to uncover the extent of these practices, and also the attitudes towards them. Most of these are based on data from rather limited surveys.
Research questions
In this presentation, based on data from a recent, large-scale survey, we analyze Norwegian researchers' attitudes towards FFP and QRP.
- Can a clear hierarchy of FFP and QRP be found, ranked from the most to the least severe breach of scientific integrity?
- Are there clear differences between scientific disciplines regarding their views on FFP and QRP?
Data and Method
Data stem from the Research Integrity in Norway (RINO)-survey, distributed by e-mail to all researchers at Norwegian universities and institutions of research and/or higher learning (N=7291). Data are analyzed by way of standard univariate statistical analysis and by way of variance analysis.
Results: The results indicate a very clear perceived hierarchy severity of FFP and QRP.
- FFP is regarded as a far more severe breaches of scientific integrity than the QRPs. Most researchers regard FFP as very severe breaches of scientific integrity.
- The QRP-hierarchy runs from refusal of co-authorship (most severe) to inclusion of irrelevant citation and to salamisation (least severe).
- The observed difference between the scientific disciplines is much smaller than the observed difference within the disciplines. Even though the standard deviations might vary for some QRP-variables, the overall results point in direction of interdisciplinary consensus.
Conclusion: We find a high degree of consensus regarding FFP. There is also a strong normative consensus regarding QRP, but to a somewhat lesser degree. A clear and distinct hierarchy can be found, running from FFP at the top (most severe) to strategic citations and salamisation at the bottom. Even though differences between disciplines can be found, the variation within disciplines, or intra-variation, is systematically much stronger than the variation between the disciplines (inter-variation).

O-058

Effectiveness of active learning-based responsible conduct of research workshop in improving knowledge, attitude and behaviour among Malaysian researchers

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Objective: The Young Scientists Network-Academy of Sciences Malaysia (YSN-ASM) has established a four-day active learning-based workshop to teach ten responsible conduct of research (RCR) topics. This presentation aims to share experiences and challenges in teaching RCR using the active learning approach as well as its efficacy in improving the RCR knowledge, attitude and behavior of the participants.
Methods: A total of three RCR workshops, participated by about 150 researchers from local universities and research institutes, were conducted in 2018. Anonymous pre- and post-test were administered on the first and last day of the workshop to assess the impact of the workshop on the participants' RCR knowledge, attitudes and behavior.
Results: The overall response from the participants of all the RCR workshop were overwhelmingly positive. Majority of the participants were excited about the format and content of the workshop and expressed interest to be further trained as RCR instructors using the active learning approach. The pre-and post-test revealed an overall improvement on the RCR knowledge after the workshop, particularly on dual use research. In addition, the participants responded differently to behavior questions related to authorship, research misconduct and peer review after the workshop. However, the workshop had no significant impact on RCR attitudes, an observation commonly reported in other studies. The overall success in conducting the active learning-based RCR workshop lies on the ability of the RCR instructors in engaging the participants in various activities that promote ethical reflexivity. One of the major challenges in conducting a successful active learning-based RCR workshop is on how to ensure that every participant engages in the activities.
Conclusion: Our survey shows that the active learning-based RCR educational workshop is effective in shifting knowledge and behavior of the participants towards a more positive outlook. A study will be conducted with this same cohort of participants to evaluate the long-term effectiveness of these RCR workshops. The overall outcome of this research will guide the YSN-ASM RCR Programme to develop sustainable long-term strategies to foster research integrity in Malaysia.

Concurrent session: Prevention 1

O-059

Research misconduct: disease or symptom?

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Objective: Conduct an exploratory study testing the hypothesis that instances of research misconduct occur in the context of multiple lapses of good research practices (GRPs).
Method: Individuals identified as Research Integrity Officers (RIOs) were surveyed for their perceptions about characteristics of individuals or research environments associated with their most recent finding of research misconduct. Using publicly available information, names and e-mail addresses were extracted for the "Research Integrity Officer" or equivalent for each of the 62 members of the Association of American Universities. These individuals were invited by e-mail to complete an online survey.

Results: All 31 respondents (50% response rate) identified themselves as having responsibility or oversight for conducting investigations of research misconduct at their institutions. The number of respondents with firsthand knowledge of a misconduct finding and memory/knowledge of one or more factors covered in the survey was 23. These respondents agreed or strongly agreed with deficits of an average of 4.7 (median=5.0) of the ten listed factors in each of the research misconduct cases. The two factors most frequently cited as absent in these cases of misconduct were researchers who "were open and transparent with each other about their work" (82% of cases) and "felt empowered to speak up if something didn't seem right or they had questions" (78%). Of the 21 respondents with knowledge of a finding of misconduct, 67% reported that in their experience the observed research practices were worse than those in research groups that had not experienced allegations or findings of research misconduct.
Conclusion: The results of this exploratory study are consistent with the proposal that research misconduct occurs in the context of a research environment deficient in GRPs. If correct, it is plausible that fostering an environment of GRP will make it more difficult if not impossible for research misconduct to occur.

O-060

The perceived prevalence, cause, and prevention of research misconduct: results from a survey of faculty at America's Top 100 Universities

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Objective: This study provides a descriptive assessment the perceived prevalence, causes, and prevention of research misconduct (e.g., data fabrication, plagiarism, authorship fraud, data falsification, publishing fraud, and resource mismanagement) among faculty members in the natural, social, and applied science at research-intensive universities in the United States.
Method: The data collection for this study followed a mixed-mode strategy whereby approximately 4,000 randomly selected individuals were administered online surveys and 2,000 randomly selected individuals completed mail questionnaires. The data from both samples were pooled to maximize statistical power.
Results: In terms of dealing with and preventing future misconduct, participants were expressed high levels of support for the use of formal sanctions (both professional and legal), but support was also reported for an integrated approach including sanctions (both formal and informal) and prevention efforts (e.g., ethics training). When it comes to the causes of misconduct, participants most often reported that professional strains and stressors (e.g., pressure to secure external funds and publish in top-tier journals) plays a major role, followed by the low probability of detecting such misbehavior.
Conclusion: University administrators dealing with the problem of research misconduct should consider an integrated approach that features enhanced formal sanctions.

O-061

Research quality development of the Thailand National Science and Technology Development Agency
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Division of R&D Quality Management (RQM) under the National Science and Technology Development Agency (NSTDA), Ministry of Science and Technology (MOST), Thailand, has been established to promote good practices for responsible conduct of research. NSTDA is the S&T hub in collaboration with several leading educational and research institutes and also supports technology transfers to industries.
In an effort to improve the NSTDA research quality, RQM initiated the second study in 2018. We interviewed 152 research staffs (12%), which were randomly sampled, with the questions covering five parts of pre- through post-research processes.
In research preparation, it was found that 97% of respondents designed and planed the whole research before starting their research. About 81% of respondents were aware of standards related of their end products and 89% always maintained their research equipment in good conditions.

In record keeping part, 81% of respondents always recorded their data after finishing the day. Most of them (41%) used electronic files, e.g., Microsoft files because they were more convenient than using an official standard lab notebook (24%) and a general notebook (27%). Interestingly, 52% of respondents had not been trained how to record data properly in a lab notebook. We found that 64% of research staff preferred to use an electronic lab notebook (ELN) in the future and wish to have some features such as using mobile applications, uploading photos/voice records from mobile devices, and transferring data directly to an ELN program.
In the research reproducibility part, we found that 87% of respondents repeated other previously published research and 60% reported at least an occasion of failure to reproduce them. They reported that the following factors might enhance reproducibility: effectively standardized record keeping, expertise in research field, similar quality of research materials, similar research equipment and environment.
In conclusion, this study provides guidelines to improve research quality at NSTDA including offering training courses on good practices of record keeping and developing regulations and policy on this matter. An ELN will be developed in the near future.

O-062

National practices in research integrity in EU member states & associated countries
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To support countries in reforming their research and innovation (R&I) systems, DG Research and Innovation has set up a 'Policy Support Facility' (PSF) under Horizon 2020, aimed at "improving the design, implementation and evaluation of R&I policies". The PSF provides best practice, leading expertise and guidance to Member States (MS) and Associated Countries (on a voluntary basis) through a broad range of services to address their specific needs.
There are three main services offered by the Horizon 2020 PSF to the Member States and Associated Countries. In this case, the focus will be the Mutual learning exercises (MLE) which are demand-oriented, focused on specific R&I topics of interest to several volunteering countries, more hands-on, and translated into a project-based exchange of good practice.
The MLE on Research Integrity focuses on the exchange of practices on how to best design and implement national strategies for promoting research integrity, procedures to tackle cases of research misconduct and positive incentives for the upgrade of the quality of research. This MLE constitutes an opportunity to take stock of current or planned policies and best practices at Member State level and beyond and to share experience among policy-makers and national authorities on the formulation and implementation of policies promoting research integrity and combatting research misconduct.
The MLE facilitates the exchange of national practices, with a focus on the operational, day to day level, intended to promote, improve and spread to all level research integrity practices. The exercise includes the learning between peers around concrete existing examples in the field of research integrity, adopting a hands-on "learning by doing" approach supported by external expertise.
The final aim of the MLE is to support countries in designing, implementing and/or evaluating different policy instruments in relation to the four topics in the field of research integrity identified in the exercise: promoting positive incentives, spreading research integrity culture among stakeholders through communications and dialogue, enhancing training in all stage of the research careers and stimulating processes and structures that support research integrity.
During the conference, we will present the drawing lessons for policy design/implementation/evaluation covering the exercise: practices (both successful and unsuccessful), include a set of concrete operational recommendations, lessons learned and success factors based on robust evidence about the impacts of the measures and the contextual factors that may explain the impacts.

O-063

How to foster integrity with prevention – a European role model
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Objective: Since 2016 a unique prevention project called „Academic Integrity (AKI – Akademische Integrität)“ has been established at the mdw ¬– University of Music and Performing Arts Vienna/Austria. The intention, goals and measures will be presented in order to show how innovative approaches influence the university´s integrity culture successfully – concerning researchers and artists equally.
Method: To address both the artistic and scientific disciplines at the mdw the umbrella term „Academic Integrity“ was chosen as a bridge building method. Because of the university´s heterogeneity a customized prevention project has been created to provide integrity. The measures include a comprehensive information campaign, consulting offers and plagiarism detection.
Results: Depending on the specific discipline and the capacity as a member of the university Academic Integrity is mostly understood in a different way. In order to integrate this topic usefully for all university members a basket full of various approaches and measures is required. It is obvious that the academic staff and the students primarily had to become aware of academic integrity. Therefore three tracks of action were established:
1) Information:
Logo, posters, stickers, interactive materials like a trailer and an online game were created. Now the development of an online certificate – includable in courses – is planned.
2) Consulting:
Together with the academic staff guidelines were established in order to ensure correct academic writing in all steps of a study programme. Specific events which focused on awareness building were organized and various lectures on plagiarism prevention were given.
Concerning the students a low-threshold approach has been deliberately chosen. Because of different levels and cultural differences in quotation awareness raising events were implemented. Now the exploration of the content of courses for academic writing within the study programmes has started.
3) Detection:
A number of measures to combat plagiarism were developed.
Conclusion: The Competence Center for Academic Integrity is available to all members of the university and increases successfully the knowledge and practice of integrity. It is noticeable that the individual components of the prevention strategy intermesh and that the individual pieces of the puzzle slowly give an overall picture. But the topic is not yet exhausted.

Concurrent session: Predators

O-064

Predators at the gates: citations to predatory journals in mainstream scientific literature
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Objective: Determine whether and to what extent articles published in seven predatory journals are being cited in the legitimate scientific literature.
Method: I identified seven journals that had been exposed by four different “sting” operations, each of which had clearly demonstrated that the journal in question will (despite public claims of peer-reviewed rigor) either publish nonsense in return for payment of article-processing charges, or take on as an editor someone with no qualifications. I then searched three major aggregations of scientific content: the Web of Science index, Elsevier’s ScienceDirect journal package, and open access megajournal PLOS One for articles citing these journals. (It is worth noting here that both Elsevier’s journals and PLOS One are indexed in Web of Science, making the search results for those two collections a subset of the Web of Science results.)

Results: Of the seven journals examined, two had never been cited in articles indexed in Web of Science. Of the remaining five journals, one was cited 35 times (two of them in articles published by Elsevier), one 25 times (once by an Elsevier journal), one 45 times (five in Elsevier journals), one once (no Elsevier citations) and one twice (no Elsevier citations). None of the seven predatory journals has yet been cited in a PLOS One article.
Conclusion: In interpreting this data, context is very important: Web of Science claims to index "over 90 million records," while Elsevier's Science Direct includes "over 15 million publications"; in both cases the indexed documents include book chapters as well as journal articles. PLOS One has published roughly 195,500 articles, making its archive a radically smaller data set. Another context in which this data should be considered is that of the predatory journals themselves: one of them has had fully 36% of its published articles cited in the mainstream scholarly literature; another has had 25% of its articles cited. These findings will be discussed, along with a broader discussion of the challenges posed by predatory publishing practices.

O-065

Confronting predatory publishers and conference organizers: a firsthand account
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Objective: To enhance understanding of the practices of deceptive and predatory publishers and conference organizers and the implications of such practices for scientific integrity.
Introduction: Few academics will deny that they have been the target of predatory publisher and conference organizer solicitations. Even fewer will admit to having fallen victim to their appeals. Yet, the tenacity of these publishers and conference organizers suggests that researchers are being lured by these predators, despite potential consequences that may extend far beyond monetary costs.
Methods and Results: This paper presents a firsthand account of the events that followed a deliberate decision to submit an abstract on the deceptive practices of predatory publishers to a questionable academic conference, including the rejection of the accepted abstract immediately following the payment of the conference fee and its reinstatement after a protest to the conference organizer. Included also will be a synopsis of participants' reactions to the subsequent presentation and their accounts of having been named as key proponents of the conference when in fact this was not the case. Surprising was the naivety of participants and their profound lack of knowledge about the potential perils of falling prey to a predator.

Conclusion: The final section of the presentation will include a discussion of the implications of deceptive and predatory publication practices for the advancement of science as well as for individuals who may be inadvertently (or perhaps even knowingly) enticed by such solicitations. In addition, researchers' responsibilities in educating others about this detrimental phenomenon, with a view to upholding scientific integrity, will be addressed.

O-066

Selective citation in biomedical sciences: an overview of six research fields
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Introduction: A central aspect of scientific knowledge development is the citation of previous work. However, only a selection of all potential citations can be presented in each publication. When positive studies are cited more than negative studies this is called citation bias. The current study will summarize the findings of six citation network analyses, in which determinants of selective citation were studied.
Methods: We tested the chance of citation in relation to a number of factors, such as: study outcome, study design, journal impact factor, authority of the author, funding source and self-citation. All relevant publications were identified via a systematic literature search. Specialized software was used to map all potential and all performed citations. We applied random effect logistic regression to assess whether these determinants influence the likelihood of citation. Citation network analyses have been performed on the following fields: the relationship between trans fatty acids and cholesterol, epidemiological studies on bisphenol A, the hygiene hypothesis, epidemiological studies on phthalates, the relationship between swimming in chlorinated water and childhood asthma and the relationship between diesel exposure and lung cancer.

Results: The occurrence and magnitude of citation bias varied between research field. No citation bias was found in the network on diesel and lung cancer. Whereas, in the literature on trans fatty acids and cholesterol, positive studies were three times as likely to be cited compared to negative studies. Journal impact factor, the authority of the author and self-citation are systematically recognized as determinants of citation.
Discussion: In each of the six networks, only a few publications were highly cited, whereas the majority of the publications was cited only a few times. However, the chance of being cited was not always related to the study outcome, but more associated with author-related factors such as authority and self-citation. In interpreting these findings, we should keep in mind that all six presented networks are biomedical research fields, in which no clear consensus has been reached. Overall, we can conclude that citation bias seems to be a field-specific phenomenon.

O-067

The monetary returns of adding false investigators to grant proposals
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Objective: This study examines whether the inclusion of false investigators on grant proposals are effective at deceiving funding agencies by examining whether this action leads to more grant funding, both in the number of grants and in the average amount of those grants, over a five-year time period.
Method: Survey responses were gathered from over 10,000 respondents from medicine, science, engineering, business, and the social sciences on the inclusion of false investigators to NSF, NIH, and other government and non-government grants. Data were also collected on the reasons why the false investigator was added (e.g., mentor, lab director, etc.).
Results: Using regression analysis, results show that when a researcher includes false investigators in their grant proposals they receive more grant dollars over a five-year period. Further analysis will examine whether this is a function of the number of grants submitted (one reason for the inclusion of a false investigator was reciprocity [i.e., I include you and you include me]), the size of the grants submitted, or the probably of a grant being awarded (the primary reason for the inclusion of a false investigator was that the reputation of the false investigator was expected to increase the chances of receiving the grant award). Preliminary results suggest the greater funding comes from the submission of more grants. Further analysis will also examine whether this deception is more rewarding in medicine, science, engineering, business, or the social sciences as all of the disciplines practice the use of false investigators. Finally, the study will also examine whether the rewards tend to go to assistance, associate, or full professors. As we have all the data, it is just a matter of running the tests.
Conclusion: It seems that cheaters receive more funds because they can be included on more grant submissions. Cheating is so common one has to wonder if researchers know this is unethical or if the returns are just too good to pass up. This should be addressed by the Research Integrity community.

O-068

Author misrepresentation of institutional affiliations: exploratory cross-sectional case study on secondary individual data
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Context and objective: University ranking systems and the publish-or-perish dictum, among other factors, are driving universities and researchers around the world to increase their research productivity. Authors frequently report multiple affiliations in published articles. It is not known if the reported institutional affiliations are real affiliations, which is when the universities have contributed substantially to the research conducted and to the published manuscript. We suspect that some institutions might be attempting to game the higher education ranking systems by spuriously pumping up their productivity. This study aims to establish whether there is an empirical basis for author affiliation misrepresentation in authors with multiple institutional affiliations.

Methods: Our study design was an individual secondary data exploratory analysis on Scopus-indexed articles for 2016. We searched search all authors who reported multiple institutional affiliations in which at least one of the affiliations was to a Chilean university. We defined misrepresentation of affiliation as more likely when we could not objectively establish a link between the author and the mentioned institution through institutional websites based on Google searches, our primary outcome. Additionally, we explored the consistency of ORCID ID with the affiliation reported in the article.
Results: We retrieved 24 508 records in the Scopus database that report an affiliation to a Chilean university, of which 4 961 contain an author declaring more than one affiliation. Each author and article can appear more than once in the population. Of the subpopulation of multiple-affiliated authors, there are 2 583 unique authors, publishing 2 921 articles in 1 464 journals, affiliated to 51 Chilean universities. Thirty-eight percent of authors have multiple affiliations in at least one article that was not verifiable, and 40% of articles have at least one author in which it was not possible to verify the reported affiliation to a Chilean university. In 30% of author/article records for that year, we could not corroborate the reported affiliation to a Chilean university.
Conclusion: This is the first study to introduce the concept of misrepresentation of author institutional affiliation and to explore the prevalence of potential misrepresentation. Our study shows a high prevalence of unverifiable reported affiliations to Chilean universities. Manual data extraction from the Scopus database may increase the risk of measurement error. Underestimation or overestimation of study results may occur from information bias.

Concurrent session: Whistleblowers

O-069

Benchmarking research related complaints in Australia – an exercise to increase transparency and build public trust

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Stories about research misconduct appear regularly in the media and are sometimes sensationalised and accompanied by criticism about the way in which institutions have managed matters. These communications have the potential to undermine public and government confidence in an institution's ability to manage complaints and ensure the quality of their research. This can be particularly challenging in countries where little quantitative information is available about the number and type of research related complaints and the outcomes of their management.
Australia has a population of 25 million, a GDP of US$1.2 trillion and forty Universities, seven of which regularly appear in the top 100 global rankings. It has research funding of approximately US$7.6 billion annually from the Australian Federal Government and Gross Investment in R&D of around 2%. Australian Universities work collaboratively in the area of research integrity and consequentially Australia is relatively well positioned to collect benchmarking data about research integrity.
Eight large research intensive Australian Universities engaged in a benchmarking exercise with the aim of comparing the numbers of research related complaints being managed by their research integrity offices, the types of issues being managed and the outcomes of their processes. These institutions attract over two-thirds of national competitive research funding and spend more than US$4.3 billion a year on research, representing a substantial proportion of Australia's research activity.
The benchmarking data collected showed that the number of complaints received by each University was correlated with the number of researchers and research activity in any given institution. While the number of findings of research misconduct was consistent between institutions, there was a greater variation in the number of breaches of the Australian Code for the Responsible Conduct of Research between institutions. Measures applied by Universities in response to breaches varied from counselling or training through to termination of employment.
Benchmarking data provides a valuable tool to enable institutions within Australia to work together to improve management of common issues, such as authorship disputes and plagiarism. Increased transparency around the handling of research integrity complaints in Australia will provide a basis for future benchmarking both within Australia and internationally.

O-070

The "Murky Waters" of questionable research practices

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Objective: Attitudes towards at least some forms of QRP (Questionable Research Practices) vary both within and partly also between scientific disciplines. However, little is known about the sizes and the structures of various subgroups. Assuming that there is an association between attitudes towards FFP and QRP, and the actual conduct of researchers, it is important to uncover clusters of dominant attitudes. Based on data from a recent, large-scale survey, we analyze Norwegian researchers attitudes towards and opinion of a subset QRPs. Three questions are addressed:

- How many subgroups of researchers can we find with respect to attitudes towards QRP?
- How large are the various subgroups?

Data and Method: Data stem from the Research Integrity in Norway (RINO)-survey, distributed to all researchers at Norwegian universities and institutions of research and/or higher learning (N=7291). Data are analyzed by way of latent class analysis, which identifies subgroups based on response profiles across a set of categorical variables. The subgroups are interpreted based on conditional probabilities for evaluating the severity of a subset of binary coded variables on QRPs (severe or not severe breaches of research integrity).

Results:

- There are three main subgroups in the data.
- The largest cluster, 82% of the respondents, regard all the listed QRPs as severe breaches of research intergrity. We can label this group as “the ethical”
- The second largest cluster, 13%, have a much higher probability of regarding gift authorship as a less important breach of research integrity. We label this group as “the generous”
- The smallest cluster, 5%, have higher probabilities of regarding several of the listed QRP-items as less important breaches of research integrity. We label this group “murky QRP-waters”-group.

Conclusion: Most researchers regard QRPs as severe breaches of scientific intergrity, even though a minority regard gift authorship as less problematic than other practices. A small group, 5% of the respondents, have more lenient attitudes towards QRP-items. If attitudes reflect practices, the respondents in this subgroup constitute a group where the risk of committing questionable practices is worrying.

O-071

Perspective of the whistleblower

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This presentation will analyze the role of whistleblowers within the research integrity framework and some of the obstacles that whistleblowers may encounter, with a focus on the United States. The presentation will feature three perspectives: John Thomas of Healy Hafemann Magee, one of the leading attorneys representing whistleblowers in the United States; Ivan Oransky, the co-founder of Retraction Watch and the Center for Scientific Integrity; and a actual whistleblower. John Thomas will focus on the avenues for whistleblowing in the United States and the formal and informal legal channels available, to include actions brought under the False Claims Act, the Whistleblower Protection Act, and other federal and state statutes. Thomas will also discuss defamation and recent countervailing U.S. statutes ("Anti-SLAPP") that restrict the ability to sue for defamation. Thomas will also highlight recent relevant legal cases involving whistleblowers. Ivan Oransky will examine interactions between whistleblowers, their institutions, and the media, to include the common patterns in whistleblowing and the role of institutions and their interactions and relationship with the media. Oransky will also draw on the Retraction Watch database and his organization's effort to obtain, publish and critique reports of institutional investigations into misconduct allegations. Finally, the presentation will feature an whistleblower who has brought a case under the U.S. False Claims Act for falsified scientific research. (The identity of this whistleblower must be withheld at this time because of pending litigation, but will be available several months prior to the WCRI.) Drawing on personal experience, this whistleblower will share their perspective in how they approached the process of raising research misconduct concerns, the practical aspects of the research misconduct system for whistleblowers, and the concerns of retaliation and the "way forward" post-whistleblowing.

O-072

Reflections of a passionate and almost excommunicated scientist

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Objective: Ponder the similarity between finance compliance officers and biomedical methods consultants and implications for the prevention of detrimental research practices.
Method: The justification given for my expulsion from an academic setting made me rethink which skills are valued in contemporary medical science. A personal reflection paper in which I draw upon 30 years of experience as a researcher and (statistical) methods consultant in the biomedical field, a broad literacy on research integrity topics, experiences as a teacher of a research integrity course for PhD students, a co-author of the Dutch research program 'Fostering Responsible Research Practices, as a member of the Medical Ethics Committee of a large University Hospital, as a reviewer for the major medical research funder in The Netherlands and upon the results of two ongoing projects that I lead on improvement of publishing standards and the impact of competitive research funding on the daily work of junior and senior scientists across the humanities, the natural sciences and health sciences in Switzerland and The Netherlands.
Results: I will explain why, in science

- Research teams benefit from power-endowed members who care about methods, not about the results;
- We need more detailed specifications of what we mean by 'better mentoring' of juniors;
- We need to counteract the culture of overstatement of claims and selection of preferred outcomes.

Concurrent session: Retractions

O-073

The impact of published incorrect scientific information on the knowledge production of scientific communities

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Objective: The impact of publications containing incorrect information on the knowledge production of scientific communities has rarely been investigated. The aim of our article is to determine how incorrect knowledge claims are used in the articles citing papers containing such knowledge claims, to determine the extent of its diffusion, and to identify strata of a scientific community in which it is used.
Method: We use a set of 30 papers identified by Byrne and Labbé (2017: 1483-1485) as incorrect because each paper described at least one incorrect nucleotide sequence reagent. We apply citation context analysis (Zhang et al. 2013) with a specific coding scheme to determine how information from the 30 papers was used by the citing papers. We explore the networks of papers citing the 30 papers to determine the extent of diffusion. We position cited and citing papers on overlay maps of these fields to determine the centrality of authors making use of this information.
Results: The ongoing study (to be completed in March 2019) will answer the following questions:
(a) How is knowledge taken from incorrect papers used by the authors who cite them?
(b) How far does the knowledge spread beyond the citing papers, i.e. how frequently are the citing papers themselves being cited?
(c) Do citing authors recognise problems with papers although they had not been retracted at the time?
(d) How are papers, citing papers, and their journals positioned in the core-periphery structure of their scientific communities' knowledge production?
Conclusions: Given that scientific communities are highly stratified in terms of the quantity and quality of scientific contributions as well as the attention being paid to contributions, the impact of incorrect scientific information can be

- negligible because the incorrect information is not used at all, i.e. the publications containing them are overlooked, rarely cited, or cited only perfunctorily;
- circumscribed because the use of incorrect information occurs only in a periphery of the scientific community, which is largely decoupled from the core that advances a community's knowledge; or
- substantial because the incorrect information is used throughout the community and distorts its knowledge production.

O-074

What do we know about reasons for retraction and academic career perspectives?

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Objective: In this study we will explore to what degree the reasons for retraction of literature from the serial literature influences further career trajectories. Combining outcomes of qualitative and quantitative studies, we will investigate whether different reasons for retracting published manuscripts from the journal literature have different effects on academic careers.
Data & methods: The qualitative component consists of material collected in a study in the Netherlands in which academics in different career stages in biomedical research were interviewed on the relation between the way their work is valued and evaluated, and the choices and decisions they make over the course of research projects. Specific attention was placed on how researchers deal with errors and mistakes, and prevalent norms surrounding self-reporting. The quantitative material used in this study results from the H2020 project Printeger, in which data with respect to retractions was collected, in particular with respect to the initiators of retraction as well as the reasons for retraction. This data set is based upon a selection from Web of Science (WoS), to which this information per retracted publications was added. The final source for the study is the CWTS in-house version of WoS, in which we cluster authors by name, a facility that makes it possible to study full careers of academics in the serial literature as covered in WoS. So we know aspects such as academic age, but also elements related to gaps and ruptures in academic careers.

Conclusion & discussion: The purpose of this analysis is to study to what extent the various reasons for retraction, clustered under larger concepts such as FFP and QRP, stand out in comparison to honest errors as reason for retraction, and to what extent this distinction determines academic career trajectories. These results will be related back to issues and concerns expressed by researchers on the local level in the qualitative study, as well as broader discussions on retraction of publications and norms in self-reporting errors and honest mistakes.

O-075

An analysis of retracted articles with African authors or co-authors: possible implications for training and awareness raising

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Objectives: Little is known about the prevalence and possible causes of research misconduct in Africa. Our analysis of retracted articles aims to identify prevailing problems, and identify priorities and approaches to promote research integrity.
Methods: We searched The Retraction Watch Database for retractions involving African authors. For purposes of this abstract, we limited the period to 21 months until September 2018. The full paper will analyse records from the same database over a five-year period.
Author characteristics, such as affiliation, designation and gender, were determined through internet searches. Data were entered and cleaned in excel and analysed in Stata 14.2. Of 55 African countries, 13 featured in the database, for a total of 76 retractions. Five cases were excluded to remove duplicate or problematical entries. Analysis of author characteristics was restricted to 9 per manuscript.
Results: African countries involved in >10% of the retractions were Egypt (31%), South Africa (17%), Tunisia (15.5%) and Algeria (12.7%). Most manuscripts had authors from a single country (43.7%) and were multi-authored (88.7%)
The four most common reasons for retraction were plagiarism (23), duplication of article (16), error in data, results or conclusions (15), and authorship disputes (8). Less common were author misconduct, author unresponsive (4 each), falsification (3), conflict of interest, copyright issues, and journal error (2 each). Almost one-third (31.35%) of authors were women and 77.2% of manuscripts included a senior academic (assistant, associate or full professor) in the team. The majority of authors (253) were involved in only one retraction.
Preliminary findings point to possible cultural, gender or language considerations associated with risks of misconduct and article retractions. Plagiarism was the most common form of misconduct in Arabic countries. Among first authors, proportionally more women than men tended to have articles retracted for plagiarism (7/12 versus 13/47; p=0.051). No other associations were found between forms of misconduct and gender, countries or the seniority.
Conclusion: The analysis of retracted articles provides a unique insight into problems that seem to be more prevalent, also per country, and areas where more focused training or other forms of support might benefit authors from African countries.

O-076

Responses of institutions to wide-ranging concerns about research reported by a group of researchers with multiple retracted publications: a narrative review

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Objective: Beginning in March 2013, we notified journals of concerns about the integrity of 33 clinical trial reports, leading to 12 retractions by early 2017. Beginning in March 2017, we raised concerns about >100 publications with 4 Japanese and US universities of affiliation of the two most prominent members of the research group.
Methods: Concerns included fabrication, falsification, duplicate publication, authorship misconduct, impossible and/or implausible data, implausible productivity, implausible study conduct, uncertain governance and funding, and data errors. By 2/10/2018, 3 institutions had reported on investigations to us. We assessed the quality of each report, the outcomes of each investigation and the institutions' actions after we responded to their reports.

Results: Institution 1 concluded that 14/38 papers investigated should be retracted for misconduct. Of 24 papers found to not 'contain instances of fraud', 9 were already retracted. The 15 remaining papers contained a median (range) 5 (2-8) types of concern. Upon notification of these concerns, Institution 1 launched another investigation.
Institution 2 had found 'improper scientific conduct' by a staff member before we contacted it, but not recommended correction of affected publications. It then investigated 7 publications, and concluded no misconduct, although 'not all authors contributed to the research' and 2 were already retracted for scientific and authorship misconduct. It recommended 2 papers be retracted for mistyping errors. For each of the 4 unretracted publications not flagged for correction, we notified Institution 2 of ≥2 types of concern.
Institution 3 received detailed concerns about 36 publications but investigated only 5, concluding no action was necessary despite acknowledging 'duplicative presentation of data' and 'concerns about the integrity of the body of work… are well-justified'. When we replied that the concerns were inadequately addressed, Institution 3 commenced further inquiry.
Only 1 institutional report is publicly available. We assessed each report as inadequate. Common deficiencies included limited scope, inadequate description of process, insufficient evidence analysed and conclusions/recommendations not reflecting the evidence considered.
Conclusion: Institutional investigations of wide-ranging concerns about publications by researchers with multiple previous retractions were opaque, superficial and did not lead to corrective action even if compromised research integrity was found.

O-077

The views of a group of funders/reviewers about the influence of retractions in the evaluation of grant proposals

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Objective: To explore the views of international funders/reviewers about the influence of the correction of the literature, such as self-correction, in the reward systems of science. We sought to identify possible trends in the perception of a sample of funders/reviewers from the US, Europe and Brazil.
Methods: As part of a research project at the Federal University of Rio de Janeiro, we conducted individual interviews with six funders/reviewers in the following institutions: National Institutes of Health, Northwestern University, European Commission, Health Research Board-Ireland, INSEEC – Business School, and Research Foundation for the State of São Paulo - FAPESP. Part of the interviews were made during the 5th World Conference on Research Integrity , in 2017. The leading questions were as follows: 1) what are the main criteria used at your institution/agency in the evaluation process of grant proposals? 2) in the same context, what is – or should be - the influence of retractions in that process? After transcription of the interviews, the corpora were analyzed using the Leximancer Digital Software for text mining. We obtained conceptual maps to visualize the data, which allowed us to identify recurrent themes and concepts.
Results: The results suggested some consensus among participants that retractions are not (yet) a factor in the evaluation process of grant proposals. Overall, even self-correction of the literature would have a minor role. Another point was that, as retractions are not culturally included as an item in the curriculum of researchers, the evaluation criteria continue to be based on traditional items. Additionally, the fact that retractions are not necessarily related to misconduct would make their role less obvious in this type of evaluation.
Conclusion: Although the publication record of researchers continues to be a factor in the evaluation of grants, the correction of the literature has a minor role, if any, in the process. So far, it remains unclear the extent to which the correction of the literature, particularly retractions, would influence the reward systems of science, particularly funding, at least from the perspective of these participants.

Concurrent session: Prevention 2

O-078

Back to basics: can early communication about good scientific practice help prevent misconduct?

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Objective: In addition to our focus on the knowledge of doctoral candidates and postdocs about official Good Scientific Practice (GSP) regulations and ombudspersons and on their experience with scientific misconduct, we are particularly interested in their knowledge concerning data management, documentation standards and authorship criteria.
Method: We so far handed out questionnaires to all 103 participants who were present at the end of nine consecutive GSP workshops. The workshops were performed in nine universities and research institutions in Central Europe. 99 participants returned the questionnaire. We will continue until we reach 40 workshops and report the full results.
Results: The data we obtained from the nine workshops indicate that the previously obtained rates of involvement in scientific misconduct between 15 and 20 per cent can be reproduced. About half of of the respondents knew about the existence of binding regulations on good scientific practice at their institution, which is slightly more than in the previous survey. The rate of participants who know about the existence of ombudspersons is also a bit higher (29 compared to 26 per cent).
More than two thirds of the participants with a laboratory journal have never been sufficiently instructed in the maintenance of the journal, and a vast majority has never had any proper lab book check. More than half of the respondents were never told who owns their research data, who will store them and for how long, and whether they are allowed to copy their research data and take the copy with them. Only one fifth of the participants has been informed about authorship criteria.
Conclusion: Proper data management, high standards in lab book maintenance and other forms of documentation, and the adherence to authorship criteria are crucial aspects of good scientific practice. Our preliminary data indicate that there is a lack of communication about these issues which gives rise to concern. We assume that a more open and particularly early discussion about these topics will prevent some forms of misconduct in research.

O-079

Testing an active intervention to reduce questionable research practices

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Objective: The purpose of this study is to investigate the effect of a "consistency" intervention on researchers' attitudes towards Questionable Research Practices (QRPs). The intervention consists of a brief writing task designed to leverage researchers' motives to act consistently with their (presumed) general commitment to sound research ethics and research integrity.
Method: Participants in the consistency intervention condition will engage in a brief consistency motive writing task and will then complete a questionnaire. The questionnaire asks participants both to evaluate the ethical defensibility of 15 QRPs commonly perceived as ambiguously unethical (Sacco, Bruton, & Brown, 2018) and to indicate their willingness to engage is these behaviors. Participants in the control condition will complete the same questionnaire after engaging in a brief writing task about fabrication, falsification and plagiarism. Data will be collected from 200 participants (N=200), based on a power analysis to detect medium-sized effects (Cohen's d=0.4, β=0.80). Participants will be recruited from two pools: a pool of active NIH/NSF-funded researchers and a pool of active researchers at University of Mississippi Medical Center. Participants will be given the option of receiving a $10 Amazon e-gift card for participation.

Results: Data collection is ongoing and will be complete by October 2018. Statistical analysis of results should conclude in November 2018. We hypothesize that participants in the intervention condition will find ambiguously ethical QRPs less defensible and will indicate less willingness to engage in them compared to participants in the control condition. We also hypothesize, in line with previous research, that the effect of the intervention will be more pronounced on less experienced and female researchers.
Conclusion: If the main research hypothesis is supported, these findings could lead to the development of novel educational tools for research integrity. This project is supported from funding from U.S. HHS, grant Nos. 1 ORIIR170035-01-00 and 1 ORIIR160021-01-00).

O-080

How 2 survive academia – the self-help guide with evidence based interventions to become a responsible and happy researcher
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Objective: In recent years, several studies have put emphasis on the increasing prevalence of mental problems that exist among scientists. This should be a concern. Not only burn out, depression and other mental health problems can have a detrimental effect on the research process and responsible research practices, it also hinders efficacy and effectiveness of the scientific enterprise and is a heavy financial burden. In this talk, I will present a set of possible, evidence based interventions that can help individual researchers become better equipped to deal with stress in academia and learn how to survive in academia to become responsible and happy researchers.
Methods and Results: Recently, I have published a self-help guide book for researchers entitled "the researcher on the sofa, how to survive in academia". This book helps researchers to become a responsible researcher, enables them to protect them against too much stress and pressure, advice young researchers how to conduct research responsibly and helps them to enjoy the research process, collaborations and academia more. The content is based on evidence from interventions in psychiatry, psychology and responsible conduct of research. Furthermore, its foundation is based on our empirical research (surveys, focus groups and pilot interventions) that have demonstrated that responsible research practices might contribute to a less stressful research climate. It also emphasizes the role of good mentoring that creates an open culture for young researchers and the presentation will elaborate on how to become a PhD student that is prepared to be a good academic and helps more senior academics to become a good role model. I will show that responsible conduct of research has positive effects on individuals and innovative tools that alleviate stress that can ultimately improve and nudge the community towards responsible research and happy researchers.
Conclusion: In this presentation, I will present a set of possible interventions that can help individual scientists become better equipped to deal with stress and mental problems This knowledge will help researchers and policymakers to foster a responsible research climate and prevent negative consequences such as burnout. The ultimate aim of this presentation is to help making science a responsible, fulfilling and happy endeavor.

O-082

Supporting researchers in cases of conflict – how ombudspersons contribute to the prevention of scientific misconduct
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The German Research Ombudsman is the most experienced institution mediating conflicts related to scientific misconduct in Germany. Every researcher associated to the German research system may approach the Ombudsman to get neutral and confidential advice in matters related to research integrity (independent of the research field). Appointed by the German Research Foundation (DFG), the four Ombudsman committee members act voluntarily on a pro bono basis. Since the founding year 1999, inquiry numbers have continuously increased and to date rise above 100 inquiries annually. To meet the high demand for advice related to research integrity questions, the committee is supported by an administrative office located in Berlin, Germany.

Comparable to the task of local ombudspersons at German universities and research institutions, the Ombudsman arbitrates between researchers based on the rules of good scientific practice. While local ombudspersons specifically focus on issues concerning their own institutions, the Ombudsman committee operates nationwide. Contacting the national committee is particularly helpful when whistleblowers suspect a conflict of interest at the local level or when more than one institution is involved in a disagreement. Young academics may seek advice outside of their home institution when they disagree with their supervisors on aspects of good scientific practice. Due to power imbalances, early career researchers are often afraid to openly point to potential misconduct. By also accepting anonymous inquiries, researchers are encouraged to report cases of suspected poor practice or misconduct while being protected from negative repercussions.
What lessons have we learned in twenty years of dealing with allegations of misconduct? On a daily basis, we deal with highly individual cases of conflict between researchers at any career stage. In parallel, we continuously analyze the underlying systemic causes of recurring conflict topics. The presentation will highlight both achievements and challenges, referring to (anonymized) examples of our advisory and mediation practice at the German Research Ombudsman. We will focus on conflicts that typically affect early career researchers and their supervisors and address the role that cultural differences might play in those conflicts. Additionally, highly controversial issues such as the question whether anonymous allegations should be accepted will be discussed.

Concurrent session: Research ethics and research methods

O-083

From RE to RI: exploring the similarities and differences between research integrity and research ethics
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Background: The terms Research Ethics (RE) and Research Integrity (RI) are often used interchangeably, even though RE and RI are distinct fields and most who work in RE and RI are aware that they are not identical.
Objective: To explore the similarities and differences in the understanding of the terms RE and RI held by experts on these topics and working scientists, and to examine how the terms are operationalized in policy and teaching materials.
Method: Thematic analysis of data drawn from multiple sources gathered by researchers associated with the European Project EnTIRE, including transcripts of stakeholder focus groups examining understandings of RE+RI (n=52) done in the Netherlands, Spain and Croatia, European policies and legislation (from 32 European countries), and teaching resources used at European institutions.
Results: Stakeholders offered a diversity of interpretations of RE and RI. Some claimed RI was part of RE and some claimed the opposite. Respondents had differing views of whether RE and RI are distinct areas requiring distinct competencies in practice, support and evaluation. Stakeholders found RI particularly difficult to define, with some referring to the contents of published codes and frameworks, whereas others described it as simply the correct application of the scientific method. By contrast, European regulatory documents distinguish between RE and RI: typically, documents that regulate RE do not speak to RI, and vice versa. RE regulations have a different legal status than those concerning RI, which are similar in legal status and content to codes of professional ethics. Resources used for teaching seldom focused on RI exclusively and lacked a clear definition of RI. RE teaching materials use terms 'responsible conduct of research' (RCR) and RE interchangeably, and sometimes include personal values, practical wisdom and integrity as goals, without identifying them as RI.
Conclusion: The work of both RE and RI is founded on the common concern to promote, foster and protect good science but the relationship between the two terms and the corresponding fields remains unclear, resulting in confusion, lack of synergy, and overlapping efforts to ensure that science is done in a responsible manner. Our examination of the varied understandings of RE and RI is a necessary first step toward better and seamless cooperation between these two areas of inquiry and practice.

O-084

Roles and responsibilities in a medical research ethics committee – a qualitative research study among members of a Dutch Medical Research Ethics Committee

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Objective: The aim of this research was to gain insight into the perspectives of members of a Medical Research Ethics Committee (MREC) on their individual roles and responsibilities and on possible tensions within and between these roles.
Methods: We conducted a qualitative interview study with 12 members of a large MREC attached to a Dutch University Medical Center (UMC), complemented by a focus group meeting with MREC members. The analysis took place during the data collection process, and guided further data collection (iterative process). The data was analysed thematically on content.
Results: Respondents distinguished five roles: protector, facilitator, educator, advisor and assessor. Central to the role of protector of research subjects is valid informed consent and assessment of an acceptable risk-benefit ratio. The role of facilitator represents the value respondents assign to the progress of medical science. As educators, the respondents aim to raise awareness of researchers with regard to the risks and burdens for the subjects and the scientific quality of the study. The role of advisor implies that respondents use their individual expertise while the role of assessor points to the overall collective judgement of the research proposal. Various tensions were perceived between and within roles. For instance, a salient tension was observed between protecting research subjects from risks and burdens while at the same time allowing space to decide on participation for themselves.
Conclusion: The analysis of the five roles and the tensions within and between them highlight the ethical lines of argumentation during a review process. The roles of protector and assessor not only include rules, but also clarification of ethical arguments in favour or against the study under evaluation. The roles of facilitator, advisor and educator are aimed at improval of the study in ethical and scientific terms. Respondents observe that in the review process important issues remain implicit. Explication of the roles, but also of the ethical considerations and of the final judgement is recommended. To formulate generally applicable recommendations, however, more research is required involving both national and international MREC's.

O-085

Research waste: why we need to rethink meta-analysis

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A key factor in reducing Research Waste is to make the scientific process more efficient by taking previous studies into account in prioritizing, designing and interpreting new research. However, conventional methods for meta-analysis do not allow that study series size and meta-analysis timing depend on previous results in the study series. Hence, our methods do not permit that promising initial results are more likely to develop into (large) series of studies than their disappointing counterparts or that conclusive studies are more likely to trigger a meta-analysis than not so noteworthy findings. Since efficient accumulation of scientific knowledge needs such dependencies, it introduces Accumulation Bias, a term introduced in this paper to study all possible dependencies potentially involved in meta-analysis. Fortunately, all dependencies characterized by our Accumulation Bias framework are statistically manageable by testing meta-analyses with Safe Tests. These tests are an extension of the Test Martingales introduced in Shafer, Shen, Vereshchagin & Vovk (2011) and they include some Bayes Factor tests (e.g. Bayesian T-test), but certainly not all. Safe Tests are very flexible towards many efficient decision procedures that expose meta-analyses to new dependencies. Safe Tests are easily interpretable in comparison to standard nullhypothesis significance testing. Safe Tests also pave the way to interesting research into Safe Estimation that counteracts empirical phenomena like "inflated", "Proteus", and "fading effects" in meta-analysis. We introduce Safe Tests for meta-analysis that are ready to use and thus allow valid assessment of previous studies to reduce Research Waste.

O-086

Why we still use null hypothesis significance testing in empirical research

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Objective: For the majority of empirical researchers, null hypothesis significance testing (NHST) is still the most important basis for drawing conclusions, despite being heavily criticized. According to some methodologist NHST is one of the reasons that most of our research conclusions are false and others have tied it directly to the replicability crisis in science. There are alternatives that overcome many of the problems associated with NHST, but so far uptake has been very limited. Therefore, our project aims to explore perceptions and views on the use of NHST or alternatives among stakeholders in the science system.
Method: We performed interviews and subsequent focus groups using a grounded theory approach. Interview results served as input for the focus groups in order to substantiate and deepen the gained insights. Our sample consisted of the most relevant stakeholders in the science system: researchers, journal editors, representatives of funding agencies and lecturers of statistics.
Results: We conducted 31 interviews and five focus groups with respondents from all relevant stakeholder groups. Results indicate that the extent to which respondents are aware of the debate about NHST varies substantially as does their understanding of p-values and NHST. Although most respondents are open to using alternatives to NHST, they also reported barriers to change their behavior. Firstly, there is a lack of knowledge and skills with respect to the alternatives, while most respondents feel comfortable using NHST; t is perceived as easy to interpret and apply. Secondly, researchers are uncertain about the consequences of the alternatives for science and the scientific system. Thirdly most respondents feel that NHST is expected by their direct and indirect environment: e.g. researchers believe that using NHST is required to get their results published. Fourthly, most respondents find that other (authorative) stakeholders should take the initiative for behaviour change.
Conclusion: We explored behavioural determinants of the unabated use of NHST in empirical research. We found that although respondents are critical towards NHST, the use of alternatives is hampered by the feeling of dependency on mores, conventions and requirements in the science system and on perceived low levels of knowledge and skills.

O-087

Multiple perspectives on inference for two simple statistical scenarios

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When data analysts operate within different statistical frameworks (e.g., frequentist versus Bayesian), how does this impact the qualitative conclusions that are drawn for real data?
We selected two simple scenarios from the literature, a comparison of two proportions and a Pearson correlation, and asked four, for diversity selected, teams of statisticians (D. Lakens & C. Hennig, R. Morey & S. Homer, E.-J. Wagenmakers & Q.F. Gronau & J.B. van Doorn, and A. Gelman) to provide a concise analysis and a qualitative interpretation of the outcome (maximally 300 words per analysis) and to discuss their own and each other's methods and findings.
There are three main results from the analysis and interpretation reports. 1) None of the four teams used the same method of analysis as the original authors of the example. 2) Between the teams, no two approaches to analysing the data were the same. Specifically, two teams used a Bayesian framework and the others used a frequentist framework. The analyses differed both within and between these frameworks. 3) While there were definite conclusions drawn in the examples from the literature, all teams considered their results to be inconclusive with respect to the examples' research questions.

The consequent discussion had four striking elements; two points of agreement and two points of contention. All teams agreed that many research problems occur before statistics get involved and they were all sceptical of the adequacy of the models they had used. There was disagreement about if one could learn anything without invoking Bayes rule, overtly or covertly; and when and how strictly to adhere to the modelling assumptions (e.g., distribution of the data). Specifically, according to some it is these assumptions, as axioms, that allow the logical flow to statistical inference, while other have a more pragmatic view and recommend just making sure whether there are not features of the data that can mislead the applied method.
These results suggest that it might be fruitful to incorporate independent re-analysis into the peer-review process and it reveals that, in contrast to their results and conclusions, even highly educated statisticians have fundamental methodological disagreements.

Concurrent session: Transparency 1

O-088

Risks and benefits of data sharing from clinical trials: do participants see them the way an ethical review committee thinks they do?
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Objective: Individual level data sharing from clinical trials is considered important for the advancement of scientific knowledge and maintenance of research integrity. The objective of this project was to compare the perceptions of members of an ethical review committee to the published results of a survey of research participants in terms of participant attitudes towards individual level data sharing.
Method: Volunteer members and administrative staff of an institutional ethical review committee were invited to complete a structured online 29-question anonymous survey that was adapted from a recently published study regarding the perceptions of research participants about the benefits and levels of concern of individual level data sharing. The adapted survey asked members and staff to indicate what they thought participant attitudes would be towards risks and benefits of data sharing. Participant and institutional ethics approval was sought for publication of results.
Results: The response rate to the ethics review committee survey was 70%. In general, there was consistency between the two surveys regarding the perceptions of participants that the potential harms of data sharing are outweighed by the potential benefits. The ethical review committee members tended to overestimate participants' level of concern about potential consequences of data sharing and underestimate their willingness to share their data. In both surveys, low willingness and predicted low willingness to share data were related to use for legal litigation purposes and reducing the cost of developing new medical products. Areas of discrepancy between the two survey groups included perception of participant attitudes towards privacy, embarrassment, discrimination and accuracy of research results.
Conclusion: This single-center project corroborates the perception that research participants have a high level of altruism and motivation for individual level data sharing. It also highlights the importance of understanding the attitudes of research participants by ethical review committees who make decisions about the criteria under which such data sharing may be allowed.
Reference: Mello MM et al. N Engl J Med 2018;378:2202-11

O-089

Open science for publications and data: chances and risks for research integrity
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Objective: We present reflections about advantages and risks of open science methods for research integrity. It's a crucial point of importance because these methods will soon be compulsory in France and in Europe for publications and data resulting from publicly funded research. A tremendous change is occurring that affects both researchers and publishers.

Method: CNRS is a very large research institution where all disciplines are represented. The COMETS (CNRS ethics committee) is an independent and interdisciplinary think tank that elaborates reflections concerning the researchers' community in all scientific fields (from hard sciences to humanities), in conjunction with other ethics institutional committees and through many interviews of personalities in the society.
Results: Today only about 20% of the research published articles are in open access. Forcing open access will make research results available to all researchers and to the public without delay and financial constraints, which is highly desirable; regarding integrity, data transparency facilitates the detection of research misconducts by releasing information that everyone can check, criticize and correct on the web. Nevertheless, open access entails new risks: the increasing number of "predatory" reviews and conferences tends to promote junk science; the traditional peer review might be replaced by less reliable evaluation procedures; the APC cost might dig differences between laboratories according to their resources; the primacy of contract funded research will develop mainly "fashion" subjects; the long life scientific knowledge cycle could be threatened by the disappearance of paper reviews and of academic libraries. As for data management, providing raw data together with results to the publisher is likely to decrease plagiarism and frauds; yet the risk exists that the data can be stolen; besides, epistemologically sound protocols are not yet well established for research using big data and crowdsourcing; the COMETS provides an analyses based on the study of differences between the various data types across all disciplines.
Conclusion: Open science provides new accesses to knowledge and new communication channels between the scientists themselves and between the scientists and the public. Politicians, institutions, researchers and publishers should be aware of the risks and drawbacks of this unavoidable evolution. It also provides new tools to control and limit research misconducts and promote research integrity.

O-090

Data curation as a means to promote reproducibility and discoverability
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The GigaScience DataBase (GigaDB) is the fundamental infrastructure that enables GigaScience to move beyond the traditional static and descriptive journal article; if a GigaScience article has data associated with it, we curate the metadata and host the files in GigaDB.
While traditional research journals may use a variety of databases to host data for figures associated with their manuscripts GigaDB hosts all the underlying data (where appropriate) to ensure complete transparency and reproducibility of the work. GigaDB is more than just a file server for supplemental files as all GigaDB datasets are curated by GigaDB staff to ensure the data, metadata and links to associated data are correct, complete and sufficient for purpose, in line with the FAIR (Findable, Accessible, Interoperable and Reusable) principles.
The GigaDB curation process affords a secondary check of the manuscript after peer review, with an emphasis on the identification of underlying and/or intermediary files and data that are required for reproducibility. This does not relieve the reviewers of this responsibility but it can help prevent publication of manuscripts that are missing important data, and help ensure that GigaScience remains true to the Open Access ethos and FAIR principles. This additional stage can add a small amount of time to the publication process, but this is often mitigated by starting the curation of the dataset prior to formal acceptance while minor revisions are still being made to the manuscript.
On top of organising the data on behalf of the authors, GigaDB tries to educate on best practice for data sharing and organisation during the submission process, and in workshops around the world. We hope that this will increase awareness of data sharing regardless of where authors choose to publish their manuscripts in the future.
The addition of any metadata increases the discoverability of data and GigaDB ensures these details are as discoverable as possible by inclusion of extensive metadata with compliance to various external standards (e.g Schema.org and DataCite) as well as providing an API for programmatic querying.

O-091

Effectiveness of data auditing as a tool to reinforce good research data management (RDM) practice

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Objective: Good Research Data Management (RDM) is essential in scientific research, especially in this era of big data. The requirement of a Data Management Plan (DMP) by academic institutions, funding agencies and scientific publishers, underscores the need for good RDM. In 2016, NTU Singapore required that each Principle Investigator (PI) develop a DMP for each funded research project. PIs had to answer questions surrounding data source, collection, analysis, storage and access. The DMP remains a 'live' document allowing a PI to edit and update anytime. However, a DMP is only useful if it is used by all research staff. As of July 2018, there were no compliance checks on DMPs and many research staff and students were unaware of its existence. There is a need to plug this gap and to ensure that DMPs are enforced at all levels of research. Hence, we hypothesized that with the introduction of DMP audits, RDM awareness and compliance standards will be raised.
Method: To determine the effectiveness of data audits in raising RDM standards, we collected quantitative and qualitative (questionnaire) data, before and after the data auditing process. We tracked rates of data storage, awareness of RDM, reactions to data audits, data documentation methods, matching of digital (filenames) and physical content (laboratory notebooks).
Results: The Good Research Practice Office (GRPO) at LKCMedicine commenced data audits at the frequency of 3 laboratories per month since July 2018. The data is currently being collected, analysed and the results will be presented at this meeting accordingly. From feedback gathered, most research staff (PI included) were in favour of data audits and many noted increase in RDM awareness in their research units after the audits. Initial results reveal common lapses such as the absence of unique data filenames recorded in notebooks and improper electronic file management. We will present an evidence-based approach for improving RDM practices through data audits, which can be eventually adopted by other institutions.

O-092

Transparency and openness in research: a survey among researchers, peer reviewers and editors across scientific disciplines

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Objective: To assess opinions and experiences of researchers, peer reviewers and editors regarding the Transparency and Openness Promotion (TOP) guidelines, their work climate and perceived prevalences of detrimental research practices.
Methods: We sent an online anonymous survey to 100 000 researchers, peer reviewers and editors across all fields of science on 24 April 2018, with two reminders on 9 and 24 May 2018. The survey consisted of 5 parts: a) attitudes towards the TOP guidelines, b) perceptions of work climate, c) prevalence of detrimental research practices, d) knowledge of statistics, and e) socio-demographic data. Here we report preliminary results; however, we will present the full results at the conference.
Results: We had 3659 respondents to the survey (4.9% response rate; 25,251 emails were not delivered). The majority of the respondents were male (n=2037, 64 %), (senior)researchers (n=2183, 69%), and working at a university (n=1976, 62%). Respondents came from 126 different countries and more than 30 different scientific disciplines. While almost all of the respondents (n=3462, 94%) stated that authors should appropriately cite all data, methods and materials, and almost three quarters (n=2675, 74%) agreed that authors must follow appropriate reporting guidelines; less than two thirds (n=2174, 60%) thought authors should deposit data to a repository, and just over a fifth (n=751, 21%) that authors should preregister studies prior to conducting the research. In regards to their work climate, more than half reported (n=1893, 56%) insufficient funding available for research, and almost one sixth reported difficulties in obtaining ethics approvals for studies (n=494, 15%). Finally, in regards to perceived prevalences of detrimental research practices, more than a third (n=1240, 38%) stated that guest or gift authorship was (very)prevalent in their field, followed by not citing of prior relevant research (n=1089, 33%).

Conclusion: Our results should be interpreted with caution, due to the low response rate and possibility of self-selection. Nevertheless, they indicate that many researchers today perceive high prevalences of detrimental research practices and also do not agree with all TOP guidelines recommendations. The latter might prove a significant challenge to journals trying to implement the TOP guidelines.

Concurrent session: Interventions

O-093

Ensuring minimum standards for responsible conduct of research in a resource poor setting – low cost solutions towards research integrity at Shaukat Khanum Memorial Cancer Hospital and Research Centre (SKMCH&RC), Pakistan

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Objective: SKMCH&RC, a nonprofit cancer treatment and research center is committed to nurture research framework, promoting good research practices. This abstract outlines how institutional research framework including guidelines, processes and oversight can be used as a tool to aid researchers to adopt good research practices, in a low resource setting.
Method: Recognizing emerging threats to research integrity, research guidelines and processes were revised following gap analysis. Reforms in processes, trainings and supervision, appraisal, and central oversight introduced. Data of key performance indicators collected and analyzed to evaluate impact.
Results: SKMCH&RC leadership provides comprehensive guidance for conducting research since its inception (2005), however compliance remained variable. Following gap analysis, Entire research framework was directed to support mechanisms encouraging transparency, full disclosure and honest reporting of research. Detailed report of impact of above mentioned improvements will be available at the time of conference. Following trends emerged and have been noted.
Structured templates, trainings and supervisor oversight improved quality of submissions. Research protocols were required to contain essential information (literature review, methods, analysis plans). Investigators were prompted to disclose conflicting interests, funding information, and publication policy to complete submission. Requirements were set for supervisors' involvement throughout research conduct. Central record monitoring and oversight of ongoing research was carried out. Cases were identified where threat for data fabrication, and falsification were high. Omission of essential documentation, or steps, (due to pressure to publish and lack of support) was most common practice however, corrective and preventive actions including need based trainings were initiated. Efforts were also directed towards timeliness and usefulness of peer review for scientific content. Reforms in appraisals systems allowed appropriate recognition of research accomplishments along with hindrances in these. False claims of research accomplishments and practices falling short of accepted standards of responsible conduct were checked.
Conclusion: Though this study evaluates only a small impact within a single institute, it shows strengthening research frameworks within institutions can be the first step towards achieving essential minimum standards of good research practices, in a resource poor setting.

O-094

The use of embedded poll questions as a tool for assessing research integrity training and climate

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The Epigeum online Research Integrity/Responsible Conduct of Research (RI/RCR) basic and advanced courses use voluntary, embedded poll questions to enhance student engagement in the training experience. The poll questions primarily provide students with a way to compare their thoughts and experiences with others while engaged in what is otherwise a solitary learning experience. Secondarily, the embedded questions also help Epigeum and the research institutions using its courses to assess their training efforts and research environment.

The benefits and limitations of using embedded poll questions to assess training and climate are discussed, including an overview of how the questions were developed, their purpose, and where they were embedded in the course. The findings from five key poll questions are summarized, to illustrate what can be learned from embedded questions and the limitations of the information gathered. The summary findings are based on an analysis of roughly 40,000 responses collected over four years.
Responses are analyzed from the perspective of the research track (biomedical, physical science, social science, engineering, humanities and the arts) and country. Results suggest significant field differences both in reported behavior and attitudes. For example, when asked whether they follow the four key principles for responsible behavior described in the course, 57% of arts and humanities students responded "all the time" compared to only 44% of biomedical and 46% of physical science students. These results are comparable to studies of research behavior. They also support that roughly half of respondents know they do not always follow best practices.
While the use of embedded poll questions to assess training and climate has limitations, we argue that they both aid learning and have potential for improving institutional training programs. By providing snapshots of what other learners are thinking and doing, they help contextualize what is too often a solitary training experience. They also provide a tool for helping institutions understand the effectiveness of their training programs.
Note: A fuller presentation of the results from the embedded poll data is planned for a poster presentation, submitted separately.

O-095

Using the "List Experiment" to identify bias in surveys on questionable research practices
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Objective: Self-reported surveys are the most widespread tool to assess the prevalence of questionable research practices (QRPs). However, most past surveys have disregarded the existence of social desirability biases in self-reporting. Surveys on sensitive topics tend to underreport the prevalence of ethically problematic behavior and this could be the case for QRPs. To investigate this, we report findings using an experimental method, the "list experiment", that allows us to obtain estimates of the levels of social desirability bias relating to QRPs and estimate their true prevalence.
Method: In October to December 2018, the "Practices, Perceptions and Patterns of Research Integrity" (PRINT) project fields a pre-registered survey to all researchers above the PhD-level at 18 universities (approximately 55,000 researchers) in Denmark, Croatia, Austria, United Kingdom and United States. This survey included a method called the list experiment related to QRPs. This method has been developed to identify reporting bias and has a long tradition in the context of reporting-biases relating to, e.g., racism. In total, participants were randomly assigned to one of 15 QRPs in the list experiment and, hence, we can report biases in reporting for the most common types of QPRs.
Results: A list experiment contains two conditions. In one condition, the researcher is presented with four benign research practices and are asked how many (but not which) the researcher engages in. In the other condition, the researcher is presented with the same practices as well as a questionable research practice and is asked how many (but which) the researcher engages in. By comparing the means in the two conditions, we report estimates of how many reports to engage in each QRP when all social desirability concerns are alleviated (as we are not able to identify who engages in what). Furthermore, we compare the estimates from the list experiment with a standard self-reported prevalence measure to provide an estimate of the degree of social desirability bias in reporting on QRPs.
Conclusion: We present the first cross-national, cross-field investigation of biases in reporting on QRP-prevalence due to social desirability.

O-096

A pilot study of the randomized response as a method to be used in a nation-wide survey on research integrity in The Netherlands
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Objective: The Dutch National Survey on Research Integrity planned for the year 2020 will use an adaptation of the randomized response method. Although this method is used successfully for research on doping in sports and misuse of social security benefits, there are some concerns on its clarity and complexity when applied in an academic setting such as ours. We aim to pilot test the method in order to refine its eventual application in the National Survey on Research Integrity.
Method: We will conduct our pilot early 2019 in a convenience sample of European scientists. Immediately after, participants will answer evaluative questions to assess the comprehensibility of the method, and any other concerns about its application. Additionally, we will conduct web-based focus group interviews with respondents in order to understand any difficulties they may have faced with the method.
Results: We expect to have results analysed by the first quarter of 2019. We therefore are able to share results at the 6th WCRI in June. Details of the study on the Dutch National Research Integrity Survey underpinning this pilot will be shared in the presentation. This study protocol and the pilot will be preregistered before the start of data collection.
Conclusion: The randomized response method is well validated and reported to be less threatening when dealing with sensitive questions, thereby yielding more truthful answers. However, there are concerns about its clarity and complexity when applied in an academic setting such as ours. The results will thus inform us of any potential modifications needed when applied in a study setting on research integrity in academia.

O-097

Institutional re-engineering of ethical discourse in STEM (iREDS): a randomized field trial of ethics interventions

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This study evaluates the efficacy of a training program designed to intensify within-lab discourse on research ethics. The training curriculum is based on a digital project management platform combined with project-based ethics instruction designed to be complementary to that platform.
We use a randomized control trial (RCT) design that enables between-lab comparison among randomly assigned intervention groups and within-lab comparison over time. Labs assigned to the treatment condition were introduced to a free, web-based scientific communication platform, intended to foster communication within research groups, and a project-based, peer-delivered ethics training as an integrated supplement to the on-line platform that focuses on the specific topics of authorship and data management. We measure outcomes pre-post with a survey containing 99 items. The randomization is at the lab level and the statistical test will evaluate between-lab treatment effects and difference-in-differences.
Data collection for the RCT will conclude in October 2018. The survey contains 99 outcome measures. Some of these measures are specific to the topics of the training: authorship ("Does your lab have an established authorship plan governing the assignment and order of authors for manuscripts?") and data management, ("Do you know how the data management plan/policy works in practice?"). Other survey items measure the frequency and quality of within-lab communication ("Participating in discussions regarding ethical research practice is part of my responsibility as a member of this lab"), and still others measure lab members' attitudes toward RCR more generally ("How many things related to ethical best research practices would you say you have opinions about?"). In the pre-analysis plan, we will identify the survey items for which we expect the training to have a direct effect, the items that we expect to mediate the treatment effect, and the items that we expect to moderate the treatment effect, as well as the expected direction for each of these. For transparency, we will generate figures that report the results of all effect estimates, including all null effects.

Concurrent session: Publishing 1

O-098

History of scientific publishing requirements: a systematic review and meta-analyses of studies analysing instructions to authors

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Objective: To identify changes that occurred in instructions to authors (ItAs) of journals over time, especially regarding authorship, conflicts of interest, data sharing, ethics approvals, funding disclosure, and recommendations of International Committee of Medical Journal Editors (ICMJE).
Methods: We conducted a systematic review of all studies that analysed instructions to authors (ItAs) of different journals. Literature search, conducted in MEDLINE, Web of Science (WoS) and Scopus, was performed on 1 May 2017, with no language or time limitations. Initial screening of titles and abstracts, as well as data extraction, was conducted by two independent reviewers. Meta-analyses were conducted in Comprehensive Meta-analysis software.
Results: Our search yielded 1271 publications. Following deduplication and screening, we included 153 studies in the systematic review. The studies were published between 1986 and 2017, and analysed more than 100 different topics within ItAs. Median number of ItAs analysed per study was 56 (range 3-1396), and three quarters of studies (n=116, 76%) analysed ItAs belonging to Health Science journals. We conducted series of separate meta-analyses related to addressing of authorship, conflicts of interest, data sharing, ethics approvals, funding disclosure, and ICMJE recommendations. The analyses demonstrated that the percentage of journals addressing those topics were moderated by time, journals' impact factor or indexation in a bibliographic database, country of publisher, publishing language, as well as journals' scope, i.e. scientific area or specialty. Overall, the percentage of journals addressing these topics increased over time. For the conflicts of interest topic, it already reached 94% of representation in Health Science journals by 2005.
Conclusion: Our systematic review with meta-analyses indicated that journals are increasingly addressing important research integrity and transparency in reporting topics in their instructions to authors. However, large differences still exist between scientific disciplines, and, except for conflicts of interest in Health Science journals, none of the topics we analysed were yet being addressed in all journals.

O-099

Global trends in research integrity and research ethics analysed through bibliometrics analysis of publications

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Objective: This paper reports the trends of global publications on research integrity and research ethics. The primary aim is to highlight the common focus as well as differences in emphasis among the countries.
Method: Publications on research integrity, research ethics, academic integrity and academic ethics in the period 1990-2018 from the Web of Science database are analysed. Countries and institutions contributing publications on research integrity and research ethics as well as the source journals of these publications form the basis of this study.
Results: Research publications on research integrity and research ethics grow steadily, with average compounded growth rate 19.2%. USA, UK, Canada, Australia and Brazil are the top 5 countries contributing to global publications on research integrity and research ethics; and Univ Toronto, Univ Oxford, Univ Sydney, McMaster Univ and McGill Univ are the top 5 institutions on global publication on research integrity and research ethics. BMJ Open, Journal of Empirical Research on Human Research Ethics, Journal of Medical Ethics, Science and Engineering Ethics, Journal of Academic Ethics, and American Journal of Bioethics are the top journals of publications on research integrity and research ethics. Terms like "research integrity", "academic integrity", "research misconduct", "plagiarism" "research ethics", information consent" are the top frequent keywords in publications on research integrity and research ethics. Papers in USA, England and Canada on research integrity and research ethics focused on education, social science, medical and biosciences. However, papers published in Brazil, South Africa concentrated on social science, and healthcare matters. Though the publication volume is at present relatively modest, the Chinese publications on research integrity and ethics are oriented towards higher education.

Conclusions: Mapping of terms found in research outputs on research integrity and research ethics can help to highlight the universal trends and topics (e.g. plagiarism) as well as country specific focus.

O-100

Identifying and quantifying the level of questionable abstract publications at scientific meetings

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Objective: Researchers exchange their scientific findings primarily in two ways: through peer-reviewed publications and through presentations at scientific meetings. Information distributed by both these routes results in new, extended findings, support and challenges to existing findings, validation, and translation. The present study reports on the approach using text similarity searching to identify questionable abstracts submitted for presentation at scientific meetings.
Method: It is now common for journals to use both commercial and freeware text-similarity software during peer-review. One such high-throughput, freeware product previously developed by our group, eTBLAST (https://helioblast.heliotext.com/), has been successfully used to evaluate the published biomedical scientific corpus for violations of ethical publishing standards. As has been the case with published scientific literature, we hypothesize that there exists a significant amount of readily detectable alleged plagiarism, duplicate publication, and other forms of redundancy (e.g., "salami slicing") in scientific meeting abstracts, as well as some other types of questionable behavior unique to this medium, e.g., submitting nearly identical abstracts each year.
Results: As an example, we analyzed the annual American Association of Cancer Researchers meeting abstracts. Inspection of similar pairs from the analysis of 5194 citations in the 2017 AACR meeting against Medline confirmed 347 presentations with >40% similarity were presentations on work that was recently reported in peer reviewed literature. However, there were also ~30 that were published more than 5 years prior, some up to 15 years, and thus lack novelty. Inspection also identified a number of accidental multiple identical submissions, and some apparent "salami-sliced." There were 193 similar pairs of 2017 abstracts vs 2016 abstracts identified which appeared to lacked novelty as they were identical or virtually identical.
Conclusion: We describe the application of that system to evaluate, longitudinally, a plurality of conference abstract collections across a variety of biomedical areas and classify the types and quantities of potential ethical issues. From this analysis, we propose a set of standards for evaluating submissions to scientific meetings.

O-101

Estimated prevalence of citation manipulation by reviewers based on the citation patterns of 69,000 reviewers

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While journal reviewers may legitimately seek to improve submissions by recommending to authors the addition of relevant citations, requests to add irrelevant citations with the goal of increasing citations is unethical (COPE reviewer guidelines, Netherlands Code of Conduct for Research Integrity).
Analysis began by considering a potential pool of 506,600 reviewers who completed a review for an Elsevier journal from 2015-2017. 54% of the 506,600 researchers were not cited at all in any of the published papers that they reviewed for Elsevier journals. Researchers who had published <5 papers in total or reviewed <5 papers for Elsevier in the time interval were excluded, leaving 69,000 reviewers with sufficient reviewing and publication data to allow for the definition of a normal distribution of citation patterns to reviewers in papers which they had also reviewed.
20% of the 69,000 researchers were not cited in any of the published papers that they reviewed for Elsevier journals and therefore could be immediately excluded from suspicion. Based on outlier levels of reviewer-citations, the reviewer pool was further narrowed to 1,734 reviewers with suspicious patterns. Not all original submission references were still available and a threshold was therefore set of >=50% of manuscripts with available references. This reduced the pool of 1734 outlier reviewers meriting deeper analysis to 1041 reviewers with sufficient data available to compare the references in the original author submission with the final references in the published article, after it had been through peer review.

Based on this pool of 1041 potentially suspicious reviewers, 0.14% of reviewers were found to have very suspicious citation patterns: citations to their own papers were added during peer review to >80% of the Elsevier submissions they reviewed before publication. A further 0.8% of reviewers had citations to their work added to >20% of the submissions they reviewed. For all reviewers with very suspicious citation activity, editors reviewed the overall data and several reviewer reports to assess whether the additional citations constituted unethical behaviour and as appropriate, contacted reviewers and their institutes. The rate and tone of responses from reviewers and their institutes varied widely. As deemed appropriate by editors, several reviewers were excluded from future reviewer and editorial board invitations.

O-102

Concealed homeopathy: a natural test of peer-review quality

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Objective: To investigate how journals handle implausible articles. Recently, Scientific Reports was criticized for publishing a paper on homeopathy. Meanwhile numerous journals that published articles on the effects of so-called "release-active" (RA) drugs that contain no active ingredients avoided such criticism. We argue that this "rebranded" homeopathy has provided us with a natural test of peer-review quality across multiple journals.
Method: We investigated the quality, quantity, distribution and history of appearance of peer-reviewed papers claiming the effects of highly-diluted RA drugs. We evaluated articles on RA drugs for methodological and other issues that could be detected by reviewers (but apparently were not). We reached the journals that published flawed articles, asked the editors to investigate the issues and gathered their responses.
Results: Around 30 peer-reviewed journals with impact factors as high as 6.3 (Drug Discovery Today) published articles claiming the effects of RA drugs during 2000-2018. The champion in publishing such research is Bulletin of Experimental Biology and Medicine with over 90 papers concerning these "innovative drugs", at least 48 of which were published in an issue edited by the director and owner of a company that manufactures and sells RA drugs. One journal (PLoS ONE) retracted the article in question. One (Journal of Medical Virology) published our criticism of a RA paper. Some journals refused to take action. The discussion with most journals is ongoing. We will report up-to-date results during the presentation. Papers on RA drugs appear to have several qualities that might be related to their ability to pass peer-review: the concentration of active substances is frequently not mentioned; existing conflicts of interest are frequently not declared; the word "homeopathy" is rarely used; conclusions of new articles are supported by authors self-citations to previous articles, frequently published in lower-tier journals.
Conclusion: RA drugs pose a health threat for numerous countries because they are claimed to treat various conditions including influenza, tick-born encephalitis, meningococcal meningitis, diabetes and chronic cerebral ischemia, despite containing no active molecules. Multiple journals published articles with implausible, unsupported claims. Reviewers, editors and regulators should be aware of such issues.

Concurrent session: Training

O-103

On the relative importance of training in research ethics

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Mandatory training in research ethics is often seen as a measure to prevent misconduct. Yet, the effectiveness of such training is disputed. We find that certain types of training in research ethics can promote research integrity, that is, knowledge of and adherence to research ethical norms, and we identify conditions for playing such a role.
We build on recent findings from Research Integrity in Norway (RINO), a nationwide study. The initial survey was sent to nearly all researchers in Norway (approx. 30,000) with a response rate of 23.4% and is followed up with qualitative interviews (individual and focus group interviews).

Our findings from the nationwide survey suggest that there is a gap between policies on mandatory research ethics training in Norway and actual experiences. Almost 40 percent of the responding researchers report that they have never participated in a course on research ethics. We find disparities related to age and institutional affiliation: Older age groups and researchers at research institutes targeting private and industrial sector report on less formal training. At the same time, a clear majority report that they do have knowledge of research ethical guidelines. This suggests that other factors such as mentoring and fostering cultures for discussing research ethics could be crucial contributors. While the survey data indicate possible tendencies, we need qualitative insights to explain how the effect of training is experienced and how knowledge on research ethics is generated in different contexts.

In the qualitative part we seek to elaborate on what kind of training is offered, and we investigate experiences with training in various disciplines and different research institutions. When do the respondents experience that training is successful, and what other factors, including aspects in the work environment, need to be present? We expect these results by March 2019.

Findings from the survey data suggest that knowledge of research ethical guidelines do not hinge on formal training in research ethics alone. In the qualitative study we expect to identify factors related to training and work environments which promote research integrity.

O-104

Training for research integrity and research ethics: a scoping review

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Objective: To collect and assess different materials that exist or could be used in research integrity (RI) and research ethics (RE) training of students, researchers and members of RI and RE bodies.

Methods: A systematic search of PubMed and Scopus, and RRI Tools, Netherlands Research Integrity Network, Open Science Framework and grey literature (base-search.net, opengrey.org, science.gov). Training materials considered relevant for inclusion were journal articles and research projects which describe and/or evaluate interventions aimed at improvement of RE+RI attitudes and/or behavior. We considered any kind of course, face-to-face or online, methodological approach or a model aimed at identification of best RE+RI practices to be an intervention. The results were limited to those published after 1980, as that was the time when research integrity emerged as a research field. There were no language or geographical limitations. Selected materials will be analyzed following Joanna Briggs methodology for scoping reviews.

Results: Our search was conducted in November 2017 and retrieved 32,198 results. After removal of duplicates and screening of titles and abstracts by two independent reviewers, 123 articles were selected for further analysis. We are currently qualitatively synthesizing the evidence and expect the final results by January 2019.

Conclusion: We will collect and categorize training materials according to their scope, delivery modes, methods and availability, in order to make a comprehensible review of the current state of resources, as well as making the materials more accessible to potential users, students, trainers and developers.

This research is conducted on behalf of the EnTIRE Consortium.

O-105

Developing a face-to-face train-the-trainers program for fostering virtues in research integrity

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Objective: This study aims at developing a face-to-face train-the-trainer (TtT) program which provides European researchers and trainers in Research Integrity (RI) tools and skills to develop RI related virtues and comprehend the normative framework provided by the European Code of Conduct for Research Integrity (ECoC) in their specific academic contexts. The TtT program is based on existing ethics reflection methods, such as Moral Case Deliberation. The face-to-face training is complemented and supported by an online e-learning component.

Methods: Starting from a literature review focusing on the existing evidence on methods for training virtues, this study uses an iterative methodology, which combines development of the TtT combined with evaluation activities, including pilots, questionnaires, interviews and focus groups. In each step of the development process, the needs and experiences of expert trainers and researchers are used to build, adapt and improve the TtT program.
Results: The TtT program is based on a learning-by-doing approach. Future trainers are trained using the same program they will later apply in their teaching. The first draft of the program consist of two non-consecutive blocks of two days focusing on developing competencies, attitudes and virtues to foster a dialogue in order to critically reflect on RI dilemmas experienced in professional practice. The dialogue both aims at refection on moral dilemmas and developing concrete and personal virtues. Thus, the TtT program fosters moral competence and moral virtues related to being a good researcher in various (cultural) contexts.
Conclusions: The TtT program supports researchers in developing moral virtues, by fostering reflection on moral dilemmas related to RI. In the future the TtT program and the complementary e-learning component should be evaluated focusing on effectiveness and impact.

O-106

Seminars on Research Integrity
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Objective: The goal is to make graduate students and early career researchers aware of how they could inadvertently become involved in research integrity violations in three broad areas: plagiarism, image manipulation, and data falsification. The seminars involve small group discussions with discipline-specific examples and can take place via high-quality video-conferencing.
Method: The primary approach is discussion, not lecture. People typically think that they are not at risk if their intentions are good, and forget how easily good intentions fall victim to adjustments, minor corrections, and unconscious borrowing. Participants ask questions based on their own work and their own discipline.
Results: The result of some seminars in the last year is an increased awareness about potential risks involving research integrity, and active discussions using examples from the participants' own work are more persuasive than abstract recommendations. Many participants equate research integrity with plagiarism, because of the public emphasis and because detection is relatively efficient with modern tools. Plagiarism is not necessarily deliberate, and can result from not knowing that the boundary between direct quotes, paraphrasing, and using similar vocabulary has shifted over time. The public focus on plagiarism has had the effect of downplaying issues involving data and images, which are more damaging because flawed evidence affects all subsequent works built on it. The sixth report of the UK House of Commons Science and Technology Commission on Research Integrity called for doing more than "simply responding to problems". (June 2018) Awareness is key, especially under circumstances where intentional fraud is rare but researchers are unaware of how carelessness can grow into research malpractice when, for example, chemicals are contaminated or datasets wrongly described. Even leaving out information matters. For the humanist it can mean leaving out a source. For others it may mean dropping data points or cropping images excessively.
Conclusion: The time spent discussing actual problems can be revealing. The more participants are willing to describe cases in their own research, the more they get from the discussion. Small groups with mutual trust matter. The seminar leaders can offer guidance in order to point participants in a useful direction.

O-107

Recognition of the precarious academic self – notes toward a performative virtue approach in professional RI training and its practical implications
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Objective: Lately, a scientific virtues approach in research integrity training has been introduced to complement the predominant discourse of norm- or compliance-based professional training. The underlying rationale is that the cultivation of scientific virtues may be seen as both favorable and constitutive of the academic self, and as a possible prerequisite for adequate research practices.

This study explores how a scientific virtues approach may help acknowledge ambiguous imperatives in academia and their interrelationship with the academic self to be regarded as constitutive on an individual, social and institutional/systemic level. Possible methodological implications of a performative virtue approach in RI training are presented.
Method: First, literature on various modes of education regarding virtues and research integrity from different research fields, such as psychology, philosophy, and social sciences, is reviewed. Thereby, a strong emphasis is put on contradictory tendencies in academia and their impact on researchers, as well as on the psychological implications of a virtues approach in adult learning and teaching. Second, the preliminary results of the literature review are translated into methodological approaches for RI training.
Results: Implicit and explicit imperatives in academia, such as perverse incentives or competitiveness, form (pre-)conditions that undermine exactly the very norms and guidelines set to promote good research practices. It is argued that the recognition of these ambiguous imperatives and their performative (re-)production in and through research practices can help address research integrity issues in professional RI training. Since a virtues approach is concerned with individual character formation, the study takes into account possible limitations of a virtues approach in professional training, such as reactance in experienced participants to what could be seen intrusive to their (academic) self-concept. Hence, it is explored whether rather subversive strategies such as ironic disruptions, humor or promoting a caring and supporting environment in training may help foster the cultivation of scientific virtues among researchers.
Conclusion: The study complements recent efforts to introduce a virtue-based approach into the discourse on RI training. Allowing for a discussion of contradictory tendencies in academia and recognizing the precarity of the academic self provides promising possibilities to address RI issues in professional training.

Concurrent session: Transparency 2

O-108

Findings, conclusions, and recommendations from two U.S. National Academies of Sciences, Engineering, and Medicine's Reports: reproducibility and replicability in science and open science by design
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Objective: Provide an overview of the findings, conclusions, and recommendations from two U.S. National Academies of Sciences, Engineering, and Medicine (National Academies) studies related to research integrity: Reproducibility and Replicability in Science and Open Science by Design.
Method: Each study was conducted by an ad hoc committee of researchers with expertise across a wide range of disciplines and methodologies appointed by the National Academies. For Reproducibility and Replicability in Science, the committee was charged with assessing what is known about the extent of the issues of replication and reproducibility (R&R) in scientific and engineering research. For Open Science by Design, the committee developed guidance on how to move toward openness as the default approach to scientific research. Both committees held evidence-gathering sessions and reviewed published literature to inform development of their respective reports.
Results: Reproducibility and Replicability in Science, which was supported by the U.S. National Science Foundation and the Alfred P. Sloan Foundation, will be published in early 2019, after undergoing the National Academies' rigorous review process. The report will include (1) definitions of "reproducibility" and "replication," (2) assessment of what is known about the extent of R&R in scientific and engineering research, (3) consideration of whether a lack of R&R impacts the health or public perception of research, (4) review of approaches to improve R&R, (5) examination of factors affecting R&R, (6) consideration of R&R across a range of research methodologies, and (7) conclusions and recommendations for improving R&R and highlighting examples of good practices.
Open Science by Design, which was supported by the Laura and John Arnold Foundation, was published in July 2018. The report includes a number of findings, recommendations, and implementation actions aimed at accelerating progress toward open science, in areas such as building a supportive culture, training, ensuring long-term stewardship, facilitating data reuse and reproducibility, and developing new approaches to supporting and communicating research.

O-109

Monitoring open science developments in Europe: the experience of the open science monitor
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The 2nd version of the Open Science Monitor (OSM) started in January 2018, with a running time of two years. The OSM was supposed to monitor impacts, trends and barriers on the developments of open science in Europe, by using qualitative and quantitative methods. In the object of the study, the uptake of openness in the European science systems is an implicit linking of research integrity issues with the debate on closed versus open scholarly work flows, whereby openness is seen as the current most ethical thing to do. The consortium up for this task consists of a think tank/consultancy, two university teams, and has the largest academic publishing house in the science system as a sub-contractor (Elsevier Science). It was this composition of the consortium that created a lot of turmoil in the early stages of the OSM, as various aspects of the debate on open science started to interfere with the aspect of research integrity while working with Elsevier Science, e.g. the overall procurement procedure, the attitude of Elsevier towards Open Access publishing in particular.
In the presentation we will focus on how an academic unit deals with working with a private sector partner in general, but Elsevier Science in particular. The issues raised will be centered around the issue of using proprietary data and its uniqueness, in the light of the availability of open data for bibliometric analysis, around the issue of free versus open data, and the complex situation in which academics find themselves, linking up with a company that is both a publisher (with its specific open access policies), as well as an information broker (offering this unique data set necessary to monitor the uptake of open access publishing within the European context).
Next year at the WCRI in Hong Kong, we can present an updated situation of the acceptance of Elsevier as a sub-contractor in the consortium, and too what extent the role of publisher with an adverse attitude towards open access publishing on the one hand, can serve the public case in the context of an open science focused project as the OSM.

O-110

Ethical constraints on the implementation of institutional open research data management policy in a South African health research context: the push and pull
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Objective: The aim of this presentation is to examine factors that both promote and limit the implementation of institutional open access research data management policy in low and middle-income countries (LMIC) context such as South Africa (SA) in the context of health research. The advantages, disadvantages and ethical limitations to the promotion of an open access data management policy in a South African context will be explored.
Method: Research methods utilised in this presentation will include document review and discussion, and ethical analysis. Funders, institutions and national science councils view publicly funded research data as a 'public good' that should be shared as widely as possible. This stance is however often at odds with regulatory frameworks for health research. The tension (the push and the pull) between the 'Open Science' movement, requirements of international health research funders, and the current SA health research regulatory framework will be explored.
Results: Research institutions in SA, including science councils such as the National Research Foundation (NRF) are actively engaging with the 'Open Science' movement and encouraging, and even requiring researchers to deposit data supporting publications and theses into open access data-repositories. There is also a clear 'push' from both funders and journals. However, health research in SA takes place in a context which is still overshadowed by apartheid and severe disadvantage and poverty. Out of this context has evolved a health research legal and ethical framework that focuses strongly (and justifiably) on protecting the rights of the often-vulnerable individuals and communities that participate in research. This framework makes it particularly difficult for both researchers and research ethics committees to embrace 'open access data'. Furthermore, researchers themselves often work in historically disadvantaged and under-resourced contexts that seemingly undermine foreseeable advantages to data sharing.
Conclusion: There is much value in the promotion of data sharing and open access. However international funders, publication houses and research consortia and collaborators need to be particularly sensitive to research contexts where there are both legal and ethical challenges to the widespread sharing of data that must be considered and accommodated.

O-111

The Brazilian reproducibility initiative: a multicenter systematic assessment of Brazilian biomedical science
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With concerns over research reproducibility on the rise, systematic replications of published science have become an important tool to estimate the replicability of findings in specific areas. Nevertheless, such initiatives are still uncommon in biomedical science, and have never been performed at a national level. The Brazilian Reproducibility Initiative is a multicenter, systematic effort to assess the reproducibility of the country's biomedical research by replicating between 50 and 100 experiments from Brazilian life sciences articles. Based on an initial systematic review of a random sample of these articles, we selected commonly used biological models (rodents and cell lines) and candidate methods (ELISA, western blot, RT-PCR, flow cytometry, MTT, TBARS, H&E microscopy, immunohistochemistry, elevated plus maze and open field exploration). We are currently in the process of recruiting collaborating labs working with these techniques, with a total 28 candidate labs registered at the moment. After this, we will choose 3 to 5 methods to be included in the replication initiative, and randomly select 20 experiments from Brazilian articles from the last 20 years in each of them. Each experiment will be replicated independently in 3 different laboratories, using the originally described protocol as the basis, and recording any necessary adaptations in the participating labs. Replication success will be defined by the original result being within the 95% prediction interval defined by a meta-analysis of the 3 replications, allowing us to analyze the reproducibility of published findings in the light of interlaboratory variability. We will also use our database to study whether there are elements in the original article that can be used to predict a successful replication. The Brazilian Reproducibility Initiative will start its experiments in 2019 and should last until 2021. Our results will help not only in estimating the replicability of Brazilian biomedical science, but also in raising the debate on research reproducibility in the life sciences across the country.

O-112

Best practice in assessing Research Excellence by Public Research Funders – Quality over quantity!
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German Research Foundation (DFG), Bonn

Objective: Research funders shape science not only by funding but also by provoking certain behaviour. In order to pursue an adequate assessment of research quality, we aim at dissecting the funder's contribution to the inflation of the international publication system, the reproducibility crisis and the upcoming of predatory journals and conferences.
Method: We conducted an enquiry covering all 48 research boards of the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) to portrait the respective leading publication cultures in Sciences and the Humanities. In addition, we ran an analysis of recent literature and integrated findings of recent DFG commission reports on publication and peer review topics.
Results: Despite an observable variety of publication cultures, the number of publication types accepted as proof of scientific productivity by the mayor gatekeepers is declining. In many scientific communities, peer reviewed journal articles and their deducted metrics appear to dominate the assessment of research quality at both the institutional and the personal level. At the same time, the number of publications steadily increases worldwide, outrunning the number of readers as well as the potential reviewers. Maximizing bibliometric indices as a concept starts to outgrow the scientific primacy of gaining knowledge. Observed behaviour along those lines includes dysfunctional publishing like avoiding obvious publication formats, citing primarily friends and colleagues, indicating multiple joint first authors, slicing of research results or focussing on high impact journals. The latter goes along with accepting a delayed availability of scientific results by cascades of review processes and a reduction of the scientific spectrum to marketable topics. Worse, scientific misconduct is stimulated, as evident by high speed publishing with diminished quality assurance and authorships without significant contribution.
Conclusions: We assume that accepting reductionist assessment of scientific output as represented by journal metrics creates incentives towards dysfunctional publication behaviour. The latter, however, diverts researchers from the primal scientific goals of science like gain and spread of knowledge. Therefore, research funders need to broaden their assessment criteria of research quality.

Concurrent session: Checking data and images

O-113

Image integrity in scientific publication

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Publications are the most important medium for any scientist to introduce their research results to the scientific community and to the general public. A researcher's publication record is the first consideration during any hiring or promotion review. Tenure, funding and a solid reputation depend on it. Science by definition carries the ideal of increasing and correcting human knowledge and is built on the noble objective of reporting the truth. Illegitimate image preparation, even if unintentional, is an implication of potential scientific misconduct. Authors accept responsibility for the scientific reliability of the results they publish. In order to prevent misunderstandings, misinterpretation, and allegations from their readership, authors must act with integrity, retain objectivity, and avoid bias and self-deception as well as negligence. It is vital that journals continue to be a reliable source of information, and they have a moral obligation to safeguard the published record.
The prevalence of image aberrations in publication is generally underestimated. Elisabeth Bik at al. recently determined the frequency of published papers with image duplications to range at approx. 4%, the true prevalence of inappropriate figures submitted for publication is verifiably much higher, even exceeding 30% at some journals. The prevalence of undetectable image problems is unknown.
Much remains to be done in terms of vigilance: Image screening is still not part of routine pre-publication checks at most journals. This is mainly due to budgetary concerns and a lack of available expertise. The automated image screening systems currently under development tend to focus solely on duplications, largely ignoring other more complex problems. Based on many years of experience as an image data integrity analyst at various journals, I will demonstrate an alarming increase in sophistication in image manipulation, and present a recent case of large-scale systematic fabrication, which is currently under investigation.

O-114

Impact of data availability on resolution of post-publication image concern cases

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Objective: It has been reported that image manipulation and duplication concerns may affect up to 4-25% of the published literature. When questions arise as to the integrity of published results, raw underlying data are essential for clarifying the concerns. Unfortunately, such cases can come to light several years after an article has been published, when authors are no longer able to produce the original data. In 2014, PLOS updated its Data Availability Policy to require that all primary underlying data supporting results reported in PLOS journals must be provided. In this report, we will describe outcomes of post-publication image concern cases resolved at PLOS ONE since 2017, highlighting data availability issues and how they have contributed to case outcomes.
Methods: We will provide a descriptive analysis of data from post-publication image concern cases resolved at PLOS ONE since 2017; the dataset will include cases for articles submitted before and after the data policy update. We will show the distribution of issue types, types of data for which concerns were raised, and case resolutions. We will also examine how long after publication raw data were requested in case follow-up, whether the data were available at that time, and whether data unavailability impacted the overall case outcome. For articles submitted after the policy update, we will describe author compliance with the policy and whether published data availability statements were accurate on the articles in question.
Results and Conclusion: We have not yet completed this analysis, as we plan to incorporate data for all post-publication image concern cases resolved between January, 2017 and May, 2019. Given PLOS ONE's current ongoing and resolved case lists we anticipate that this dataset will include at least 60 cases. The results of these analyses will provide insight as to the potential impact of heightened data requirements on the integrity of the published literature, and areas where further author guidance or internal checks may help prevent or address issues prior to publication.

O-115

Helping research misconduct investigations: methods for statistical certainty reporting of inappropriate figure reuse

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Objective: Detecting cases of figure reuse at scale has been shown to be possible (Acuna et al., Bioscience-scale automated detection of figure element reuse, 2018). However, providing feedback to research integrity officers so that they make the most accurate decision is challenging. The objective of this research is to develop data-driven statistical tests that can be used by these officers during research misconduct deliberations.
Method: We use data from (Acuna et al., 2018) about 1,055 pairs of biomedical-related image regions that were classified by three human judges, 40 of them unanimously classified as fraudulent. For each of these pairs of regions, we built distributions of Euclidean distances between matched keypoints (EDMKP). Using the Gamma probability function, we use maximum likelihood estimation to determine the distribution of EDMKP for likely fraudulent (F) and non-fraudulent (NF) regions.
Results: We use the distributions of EDMKP for the F and NF regions to build two statistical certainty reporting methods: a null hypothesis significant test (NHST) and Bayesian credibility interval (BCI) test. Based on (Acuna et al., 2018), we chose a prevalence rate of 0.6% for the BCI method. Our methods can report the p-value necessary for NHST by simply computing p(EDMKP | NF) and the Bayesian decision by simply computing the probability p(F | EDMKP). These statistical tests are currently being used by research integrity officers and editors. With this new incoming data, we will evaluate how often the significant p-values and Bayesian decisions coincide with the officers' assessments.
Conclusions: Our results show that it is possible to build data-driven statistical certainty methods for research officers. We have proposed NHST and BCI methods with concrete applications during research misconduct investigations. In the immediate future, we will evaluate how well our methods can predict officers' decisions. Future work will focus on improving the modeling of the data distribution. This project is to the best of knowledge one of the first to propose a statistical certainty reporting for supporting research integrity investigations.

O-116

An image integrity database

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Objective: The Image Integrity Database (IIDB) offers a research environment for both detecting and evaluating manipulation in scholarly images -- an important issue in research integrity. The IIDB includes manipulated images, plus metadata about image types and locations, to support manipulation detection software. Retractions notices do not suffice in this regard.
Method: Based on Retraction Watch notices, the IIDB collects the manipulated images from scholarly publishers, and manually inspects such cased to create relevant metadata. The result is a rich dataset that is separated into training and testing subsets, which researchers can use to train, evaluate, and compare manipulation detection algorithms.
Results: The IIDB consists of manipulated images from a range of retracted scholarly publications with an emphasis on the biomedical topics that represent 90% of the retractions. The goal is to have a sufficient breadth of images that most forms of manipulation are sufficiently represented so that detection algorithms can test their reliability against them. Format matters. The IIDB currently has a mix of images, both JPEGs and images in PDF form. The latter are sometimes all that is available, because not all publishers keep older images and retractions typically take years to be discovered. Building an awareness of the need to save images is important. The IIDB follows strict copyright rules, even for falsified materials, and therefore seeks permissions from rights-holders (publishers). IIDB-created metadata help users to discover which images they need and helps in developing algorithms to detect manipulations. Because of copyright reasons, the IIDB cannot be accessed without a licensing agreement that specifies the use of images and that they will not be exposed for other purposes. A longer term vision is to enable the creation of tools that function like plagiarism-detection software in enabling publishers and research institutions to identify problem cases.

Conclusion: The IIDB offers a unique resource for the development of software to detect image manipulation and falsification. The IIDB is a project of the HEADT Centre (Humboldt-Elsevier Advanced Data and Text Centre), and requires broad cooperation among publishers to supply images and among developers to define their technical needs.

O-117

Semi-automated fact-checking of nucleotide sequence reagents in biomedical research publications: the seek & blastn tool

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Objective: We have previously reported that incorrectly identified nucleotide sequence reagents are characteristic of highly similar human gene knockdown studies, some of which have been retracted from the literature. Nucleotide sequence reagents represent verifiable experimental reagents in biomedical publications, because their identities can be independently verified and compared with associated text descriptors. Given the throughput limitations of manually verifying published nucleotide sequences, we have developed a semi-automated fact checking tool, Seek & Blastn, to verify the targeting or non-targeting status of published nucleotide sequence reagents.
Method: From a given publication, Seek & Blastn automatically extracts gene identifiers and nucleotide sequences (15-90 bases) using "named entity recognition" techniques. The sentence containing each sequence is automatically analysed to assign a claimed status ("targeting" or "non-targeting") for each reagent, which is compared to the most likely status according to blastn analysis. Seek & Blast also reports Google scholar search results using each extracted nucleotide sequence as a text query. The approach was built using a published literature corpus (48 papers), and further analysed using 155 unknown papers, retrieved using known papers and the "PubMed similar" functionality.
Results: From previously described and unknown corpora of 48 and 155 publications, respectively, Seek & Blastn correctly extracted 304/342 (88.9%) and 1066/1522 (70.0%) nucleotide sequences and an associated predicted targeting/ non-targeting status. Seek & Blastn correctly predicted the targeting/ non-targeting status of 293/304 (96.4%) and 988/1066 (92.7%) of the correctly extracted nucleotide sequences. A total of 38/39 (97.4%) or 31/79 (39.2%) Seek & Blastn predictions of incorrect nucleotide sequence reagent use were correct in the two literature corpora. Combined Seek & Blastn and manual analyses identified 91 incorrectly identified nucleotide sequence reagents from the two literature corpora. We are continuing to apply Seek & Blastn to analyse additional single gene knockdown papers, and to make changes to the algorithm in order to improve Seek & Blastn performance metrics.
Conclusion: Incorrect nucleotide sequence reagents represent an under-recognised source of error within the biomedical literature. Fact checking tools such as Seek & Blastn may facilitate the identification of papers affected by these errors, and deter their future publication.

Concurrent session: Publishing 2

O-118

Use and impact of the ARRIVE guidelines: a survey of in vivo researchers worldwide

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Objective: The ARRIVE guidelines were published in 2010 to improve the reporting of animal research; they consist in a 20 items checklist. Despite considerable levels of support from the scientific community, their impact on the quality of reporting has been limited. The objective of our study was two-fold:
1: To understand how the ARRIVE guidelines are used, and why certain items are not reported or checked for by reviewers
2: To test whether knowledge of the ARRIVE guidelines is associated with more rigorous experimental conduct

Methods: A random sample of authors who had recently published animal research was identified from Pubmed. The survey included questions about the conduct, reporting and reviewing of in vivo experiments. An Internal Validity (IV) Score, calculated based on the use of seven measures to reduce experimental bias, was used to assess rigour. The study was powered to detect an effect size of 0.08 with SD: 0.23 (both observed under similar conditions in Reichlin et al, 2016 doi:10.1371/journal.pone.0165999) with 90% power and alpha: 0.05 (two-sided t-test). Blinding was used for the data analysis.

Results:387 participants from 50 countries returned complete questionnaires. 41% of authors of animal research papers (n = 361) were aware of the ARRIVE guidelines. The main reason for not reporting a piece of information recommended in the guidelines was that the author did not think it was necessary (38.7 ± 14.4%). Other reasons included the researcher not understanding what was asked for (7.4 ± 4.8%) and space restriction by journals (7.2 ± 4.8%). For respondents not aware of ARRIVE, the IV Score was (mean ± SD): 0.59 ± 0.26 (n=209); for respondents aware of ARRIVE it was 0.65 ± 0.24 (n=147; p=0.03, unpaired t-test).
Conclusion: This study showed that in vivo researchers who are aware of the ARRIVE guidelines design experiments more rigorously. Limitations include a low response rate, which ranged from 0.4% (China) to 8% (UK). The qualitative survey results are contributing to an evidence-base used to revise the ARRIVE guidelines and improve their uptake (Percie du Sert et al, 2018 doi:10.1136/bmjos-2018-000002).

O-119

Improving diversity and inclusion in peer review at Lancet journals
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Objective: To highlight how the unequal representation of women and of researchers from low and middle income countries in peer review represents discrimination, detracts from the quality of the medical literature, and is a threat to research integrity. To suggest ways in which the balance can be redressed, with examples from some Lancet journals.
Method: We will summarise the literature on the diversity, representation, and structural barriers to participation in peer review. We will compare the peer reviewer and author populations for three Lancet journals in terms of gender and regional distribution for 2014-2017. We will summarise initiatives at Lancet journals to improve gender and regional balance in peer review.
Results: Preliminary analyses show that women form only about one-third of the peer reviewer population, which is similar to the proportion of women in the authors for papers in The Lancet but below the proportions of women authors in Lancet Psychiatry and Lancet Global Health. This is despite an almost 80% female editorial workforce across Lancet journals, challenging previous evidence of editor homophily as a way of improving diversity in peer reviewers. For The Lancet and Lancet Psychiatry, a low proportion of reviewers were based in low-income and middle-income countries. Full results will be available for the conference. Initiatives underway include auditing the gender balance and regional distribution of peer reviewers and authors for commissioned material; calls for more women peer reviewers, particularly statistical reviewers; a commitment for the proportion of women and men on Lancet journal editorial boards to be equal in the near future; an Editorial Board Development Programme that includes training in peer review; peer reviewer workshops; and raising awareness and setting targets for editors within the Lancet group and externally. We are publishing editorial content and commissioning content to highlight the need for redistribution of power within the production of knowledge in global health and to highlight the need for institutional and structural change.
Conclusion: Women and researchers from low-income and middle-income countries are underrepresented in the peer review community for Lancet journals. Editors can redress this imbalance in several ways, thereby reducing the waste of research resources and improving the quality, representations, and integrity of the evidence base in medicine.

O-120

Sharing valid research: case study of an open-access publisher
M.S. Souliere, G. ÓF Faoleán
Frontiers, Lausanne

The Frontiers journals publishing program has been involved for years in encouraging the publication of reproducibility studies, and in reducing research waste in various ways. We will present a case study of 3 successful features from the Frontiers Open Science platform that showcase the need for publishers to be involved and propose solutions in the research waste and reproducibility crisis.
We have developed a number of resources for researchers to publish studies on reproducibility (or non-reproducibility) of published work. Our original research article types specifically allows the publication of so-called negative results. Credit is given for datasets, codes and protocols, also via specific article types, which are peer reviewed contributions and received DOIs. Researchers have further hosted on the Frontiers platform special issues dedicated to experimental reproducibility of research in their fields.
We conclude that there are a number of straight-forward practices that can be applied and encouraged by open-access publishers to support researchers in the current reproducibility crisis. Researchers should be made aware that these options are available on some platforms, and take advantage of this to alleviate the current research waste issues.

O-121

The role of corresponding authors in different research cultures
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Authorship in science has been revisited in the last decades, which is consistent with calls for stronger responsible authorship policies in the publication system. In this context, the role of corresponding authors has been reinforced, on the one hand, and challenged, on the other (Logan et al, PLOS One, 2017). In some countries, authorship credit may be attributed to PIs, for example, irrespective of their active participation in a given contribution. In Brazil, it has been highlighted that "the provision of financial and infrastructural resources (e.g., laboratories, equipment, inputs, materials, human resources, institutional support) is not sufficient ground for being listed among the authors of the scientific works resulting from the research project" (São Paulo State Foundation - FAPESP, Code for Good Scientific Practices, 2014). For emerging countries, this guideline cannot be taken for granted. Those providing infrastructural resources today started doing research in a very different time of research development, with very few resources. Exploring this feature may offer insight into the impact of responsible authorship in the practices of corresponding authors from emerging countries that "emerged" in science with limited infrastructure and with their own modus operandi of negotiating credit. This is the case of many low- and middle-income countries. Here, we offer a panorama that provides a broader understanding of the challenges for incorporating mainstream authorship policies in Latin American countries. We offer a perspective on aspects such as differences in the institutionalization of science and maturity for different research systems in Brazil, Argentina, Chile nd Uruguay, which should be considered to assess authorship policies promulgated by their funding agencies.

O-122

Do the updated ICMJE authorship criteria make a difference?

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Introduction: Authorship has become a scientific currency typically, although not necessarily correctly, "used" for evaluation, promotion, and funding purposes. The International Committee of Medical Journal Editors (ICMJE) has established and revised criteria (C) that define authorship (C1 – conception/design of the study or acquisition/analysis or interpretation of data; C2 – drafting/revising for important intellectual content; C3 – final approval) to allow for a more accurate evaluation of qualitative and quantitative contributions of authors on submitted manuscripts. In recent decades, the overall number of authors, both fulfilling these criteria (true authors) as well as not fulfilling them (honorary/gift/guest authors), per published manuscript has increased, and the ICMJE have updated their guidelines to include an agreement of every author on the byline to be held accountable for all aspects of the work (C4).
Objective: Our goal was to investigate whether the introduction of this C4 has influenced the prevalence of self-declared honorary authorship in selected biomedical journals.
Methods: We have performed an analytic observational study of all authors' self-reported contributions in 2091 published articles from 9 general and 8 experimental biomedical journals with publicly available disclosures of their authors' contributions, published before and after the introduction of C4. This translates into a total of 18.125 authors (8086 before and 10039 after the introduction of C4) from 1062 (51%) articles published before and 1029 (49%) articles published after the introduction of C4.
Results: We have analyzed and compared multiple variables, and the most interesting result revealed that the number of authors who fulfilled the first 3 ICMJE criteria has increased pre- and post-introduction of C4 [2860 (35%) before vs. 5394 (54%) after; χ^2-test, $p<0.001$]. On the other hand, the number of authors who fulfilled C4 after its introduction was 542 (5.4%), and only 34 (3%) published articles had at least one author who fulfilled all 4 ICMJE authorship criteria.
Conclusions: The number of authors who do not fulfill ICMJE authorship criteria in self-reported authorship contribution disclosures is very high. The prevalence of authors fulfilling all previously valid authorship criteria has increased. The acceptance of the latest ICMJE authorship criteria update is very low.

Poster abstracts

Poster Walk: Assessment 1

PM-001

Knowledge and attitude of dental professionals toward plagiarism in Mangalore city, India

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Objective: Plagiarism appears to be a common issue in scientific publications and academic institutions across the world. The aim of the study is to assess the knowledge and attitude of students and faculty members toward plagiarism in Mangalore city, India.
Methods: The subjects included students and faculty members of three dental colleges of Mangalore city. A structured questionnaire was given to dental postgraduate (PG) students (second and third year) and faculty members (n = 724). The completed questionnaires were analyzed by SPSS software version 16.
Results: About 72% of dental PG faculty and 88.6% PG students responded to the questionnaire, with overall response of 79.6%. Among the PG faculty, professors displayed the correct knowledge about referencing materials from the internet or other sources, followed by Associate Professors and Assistant Professors. Overall awareness about the term "plagiarism" was overall high and relatively highest among Associate Professors, followed by Assistant Professors, Professors and PG students. There was a statistically significant difference among the groups regarding the issue of self plagiarism, with 63% of respondents in PG students and 88% in faculty demonstrating correct understanding ($p<0.05$). Overall only 18% of respondents had correct information about the use of quotation marks when incorporating verbatim phrases from external sources. Regarding Power Point presentations, PG students knew the appropriate requirements more than faculty members. Eighteen percent of faculty and 27% of PG students claimed to have never indulged in this practice.
Conclusion: About 80% of dental professionals share a high level of ignorance regarding the plagiarism issue due to the lack of information and awareness. There is a dire need to devise an educational strategy aimed at raising awareness of individuals and institutions about plagiarism for academic excellence.

PM-002

Research integrity – a study case on Romania

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Objectives: Scientific research has shown a continuous expansion in Romania over the last 20 years, expressed by an increase of more than 10 times of the number of articles published by Romanian authors and indexed in international databases. However, the average number of citations gathered by these articles steadily decreased during this period. The underlying causes of these findings are multiple, but most are due to insufficient knowledge of current standards of integrity, ethics and dissemination of scientific research. The **Objective:** of our paper is to test this hypothesis, supported by some subjective observations, in an **Objective:** way and to identify practical solutions to increase the quality of scientific research in Romania.
Method: The research was based on a questionnaire that we applied on two categories of respondents: medical students and academics from the University of Medicine and Pharmacy Carol Davila in Bucharest. The questionnaire included a set of 25 questions geared to two specific directions: the level of knowledge of the concepts of research integrity as well as the degree of interest in the accumulation of new knowledge in this field.
Results: Our research gathered a total of 200 people surveyed between September 2017 and June 2018, of which 150 students and 50 academics. The data showed a low level of knowledge in both groups as regards both the research integrity and the current standards of dissemination of scientific research results. At the same time, interest showed a downward trend relative to the age and professional level of the respondents.
Conclusions: On the basis of the obtained answers, we could formulate a series of recommendations necessary to improve the level of scientific research in Romania, of which the most important was the need to develop awareness programs on the obligation to know all the rules of scientific integrity and their application unconditioned by all the actors involved in the development of research programs.

PM-004

Are the professions a model for science? The issue of competence

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Objective: Today the scientific community largely regulates its own cases of misconduct, similar to the model of the liberal professions such as medicine or law. However, professional communities are acutely concerned with negligent incompetence: the category of misconduct where a professional does not live up to the standards expected of a professional of similar qualifications. In this paper we attempt to show that science and the professions diverge in ways we believe is potentially problematic for public trust in science.
Methods: We selected codes of conduct for science (in general), medicine, law, and individual scientific disciplines (sociology, psychology, physics, and philosophy), and for the European Union plus eight countries (USA, AU, CA, UK, BE, FR, DE, IT). We submitted each code of conduct to comparative textual analysis to identify passages pertaining to competence or equivalent concepts.
Results: In 100% of the examined codes of conduct in the liberal professions, incompetence is listed as a major infraction of the code. By contrast, in only 11% the codes of conduct in science, incompetence included as an infraction of the code. We also observed significant variation between discipline-specific codes of conduct in psychology (included 100% of the time), sociology (44%), physics (22%), and philosophy (0%). In evaluating the data, we argue not to simply copy the model of the professions, on the basis of the inherent riskiness of scientific research and the relative absence of client relationships. Nonetheless, incompetence leads to decreased trust in science, and so should be taken seriously. In existing codes, passages relating to competence-like concepts ('rigor', 'reliability') should be developed with more clarity.
Conclusion: Codes of scientific conduct are important tools for the scientific community to self-regulate and deal with cases of misconduct, but currently the codes ignore the issue of competence. While the liberal professions cannot be taken as a direct model for the scientific community, it is important to see how the professions take the issue of negligent incompetence seriously. If the scientific community wants to further prevent future breaches of trust with the tax-paying public, it should find a way to do so as well.

PM-005

What are the barriers to research? A nationwide institutional assessment of faculty working in medical colleges in India

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Objective: Research productivity of the faculty members working in Indian medical institutions is low. Understanding challenges to pursue high-quality research is essential to promote and improve the research output.
Methods: Indian medical faculty working in maternal, neonatal, child health and nutrition research focus areas were surveyed through a cross-sectional survey conducted in 2017. We studied the gaps in knowledge, skills, and attitude for research and assessed the training needs and resources requirement to fill these gaps.
Results: Three hundred and nine faculty members across 49 medical institutions were interviewed. Of them, two third (67%) were currently involved in research and half (50%) among them engaged in MNCHN research. A significant difference was noted among senior & junior faculty members for project conceptualization, proposal writing, data analysis and report writing ($p=0.03$). Very few faculty members (10%) had received any kind of training in health research in past one year.
Financial and administrative problems (75%), overburdening with routine work (36%), lack of enabling environment (32%) were cited as the topmost barrier for undertaking research work. The majority (>80%) preferred to attend the workshops/seminars/CMEs or working in some research projects (on the job training) to enhance their knowledge and skills in health research.
Conclusion: There is an urgent need to foster an institutional culture supportive of research and to regard it as integral in delivering evidence-based healthcare. Assessment of the role of incentives, individual motivation, and other behavioral characteristics may be further useful for fulfilling perceived research learning and development needs of the faculty members.

PM-006

Disciplinary specific detrimental research practices in the Dutch academic setting – results from a focus group study

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Objective: The National Research Integrity Survey to be conducted in 2020 in The Netherlands will include questions on the most important detrimental research practices (DRPs). In this study we aim to use focus groups to explore disciplinary specific DRPs in order to generate a final list of the most prevalent DRPs which will then be included in the National Research Integrity Survey.
Methods: A convenient sample of the Dutch academic population from four disciplinary fields (natural, social and biomedical sciences, and humanities) will be recruited. Two previous studies that ranked DRPs will form the basis for a semi-structured topic guide. **Result:**s will be analyzed using inductive analysis.
Results: The results will provide us with the most important disciplinary field specific DRPs to be included in the National Survey. This study will be conducted early 2019 with results ready by June. We therefore will present the findings at the 6th WCRI. Details of the National Research Integrity Survey underpinning this study will be shared in the presentation. This study protocol will be preregistered before the start of the data collection.
Conclusion: Little data is available on disciplinary specific DRPs particularly in the non-medical sciences such as the natural and social sciences and the humanities. This study aims to make an important contribution by providing further insight into which specific DRPs need to be included in our National Survey on Research Integrity and thereby assist in developing targeted disciplinary specific interventions.

PM-007

Assessing and raising concerns about duplicate data publication, authorship misconduct and data errors in preclinical research reported by researchers with multiple retractions of clinical research publications

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Objective: To assess the responses of journals to concerns about duplicate publication, authorship misconduct and data errors in 33 pairs of publications (36 publications) originating from 15 parent preclinical trials conducted by a group of researchers.
Methods: Two investigators assessed each pair of publications for duplicate reporting of numerical data and discrepancies in reporting of **Method:**s and results. Authorship misconduct was evaluated using an affidavit and publicly available statements. Concerns were raised by email to affected journals in July-August 2017, using a standardized template. Follow-up emails were sent in April 2018 if no decision had been communicated by the journal. Journal responses, including time to acknowledgement of concerns, time to decision, content of the decision letter, and the disposition of the publications at 1y, were assessed.
Results: 27/36 (75%) publications were affected by authorship misconduct. The median (IQR) proportion of numerical data reported in the second publication of a pair that was reported in the index publication of the pair was 45% (28.5-56.5). Methodology or data discrepancies [median (IQR) 3 (1-5)] were present in 28/33 (85%) pairs of publications. Receipt of concerns by journals was acknowledged about 53% and 94% of publications <1mo and after 9mo, respectively. After 1y, journals had communicated decisions about the concerns for only 16/36 (44%) publications. None of the journal decision letters specifically addressed each of the concerns about duplicate data reporting or discrepant reporting of methods and results. No action was decided for 9 publications, correction for 3 publications and retraction for 4 publications: the amounts of duplicate data reporting and discrepant reporting of methods and results were similar irrespective of final publication disposition. 6/9 (67%) publications for which no action was decided were subject to authorship misconduct.

Conclusions: Raising concerns with affected journals about duplicate publication, authorship misconduct, methodological and data errors in preclinical publications led to responses and outcomes which were sometimes non-existent, and often slow, opaque and inconsistent. The investigation of research integrity might be improved by the establishment of an independent body whose specific responsibility is ensuring the integrity of the published scientific literature.

PM-008

A different research world : lessons learnt from Europe for fostering equity based research in developing countries like Pakistan

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Objective: The abstract aims to highlights salient aspects of research framework and regulation in Europe using some of the indicators that form the Health Research Profile (HRP) (i.e. Research priorities, Resources, Production of knowledge (capacity), Packaging of knowledge and Evidence of research impact on policy and equity). The lessons learnt can be used for enhancing equity based research for developing countries. This is essential as research offers a potential for change that largely goes untapped in the most vulnerable populations in developing countries like Pakistan.
Method: The findings are based on observations during the European research ethics fellowship organized by the Good Clinical Practice Alliance – Europe. The training focussed on an In-depth examination of the research review, ethics and regulatory science at EU (European Union) level as well as the member state level within the context of EU law and resources for research.
Results: Ongoing implementation efforts for the newly proposed EU Clinical Trial Regulation (CTR) highlight that a single integrated ethics, scientific and regulatory approval process using unique IT solutions (EU clinical trial portal) and multinational collaboration can streamline and harmonize transnational research and transparent information exchange. However contextual issues such as consent and assent that depend on local national laws need to be addressed as well. Academic research organizations in EU underscore the importance of large scale national and international collaborative pragmatic academic trials in changing clinical practice, providing objective evaluation, exploring multidisciplinary strategies and new approaches in treatment. Public-public partnership models such as European & Developing Countries Clinical Trials Partnership (EDCTP) strengthen equity oriented research that meets local health needs with efforts for impact of health research on policies and engagement of stakeholders in this process. Finally local research networks and regulatory bodies facilitate research into unmet health care needs and orphan populations through networking and collaboration with members from academia and the pharmaceutical industry thereby ultimately increasing availability of medicinal products for these populations.
Conclusion: EU research framework highlights the importance of knowledge sharing and collaboration to strengthen within-country capacity for research and its implementation that can reduce inequities in health in developing countries like Pakistan.

PM-009

Who are we? A descriptive analysis of research integrity personnel in the UK

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Objective: The presentation will provide a descriptive analysis of the personnel with an interest in research integrity, including from the UK government's recent report on research integrity from the Science and Technology Committee, along with delegates at various conferences focussed on the topic. The aim of the review is to discover who are the Research Integrity "doers" in the UK.
Method: The Science and Technology Committee's report included as an appendix a listing of staff responsible for research integrity at each of the 136 universities in the UK. Individuals who submitted evidence to the Committee were listed on the website by organisation and job title. This will be reviewed along with delegates at two recent conferences focussed on research integrity: the UKRIO conference in May 2018 and the Westminster Higher Education Forum in October 2018.

Results: Whilst the full analysis is not yet complete, a preliminary review has indicated that only six staff listed in the Science and Technology Committee as the responsible person in their university attended the annual UKRIO conference in May 2018. The Committee report also listed "other" staff responsible; 20 staff listed here attended the UKRIO conference. This difference suggests a discrepancy between "responsible" and "doers" in research integrity. Further analyses will take place to include further conferences and stakeholders who provided evidence during the Committee's tenure.
Conclusion: Differences and discrepancies in named responsible staff and those attending conferences could potentially have an impact within an organisation as new and relevant information disseminated at conferences may not be seen by senior members of staff.

PM-010

Improving research integrity in a hospital in the developing country by a semi-independent clinical research unit: a preliminary qualitative study
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Objectives: To identify the key factors in improving research integrity by developing a semi-independent clinical research unit
Methods: In-depth interview was done in this preliminary study in July 2018 at Dr. Soetomo Hospital Surabaya. The participants were one person from the managerial board of Dr. Soetomo Hospital, two doctors who responsible for the Clinical Research Unit (CRU), and two users of the CRU which consist of a resident and a senior staff. The questions to all stakeholders were mostly around the story of the CRU, the strategy until today, the obstacles, and the lesson learned.
Results: From the stakeholders, some critical factors were identified. To secure the research integrity in the academic hospital with more than 800 studies every year, a semi-independent unit should be better than the formal government units. Building and maintaining the unit required a strong commitment from all owners and stakeholders, changing pattern of recruitment of staff for the unit, new regulations for all people at the hospital in relation with research, participation from all departments and units, and continuous evaluation of programs and decisions. For the last two years some significant changes were shown. The number of studies which recruited participants before the permission from the ethical committee was almost zero on the second year, and the monitoring and evaluation for at least 90% of studies were done at least once before the study ended.
From the users, the major noted changes were the easiness of research registration and of the process for ethical committee, uniformity of regulations for one research to the other across the hospital, the opportunity for international studies, and the funding from the government for selected projects which fulfill some specific criteria including those related with the integrity aspects. All study participants mentioned the urgency for maintaining, and improving, all actual changes.
Conclusions: Even in the developing country, the efforts to secure the hospital research integrity could be made by the strong commitment from the stakeholders, followed by changing and strengthening the clinical research unit and the regulations, and the participation from all people in the hospital.

PM-011

Fuzzy-based multi-criteria decision making algorithm: an innovative tool for research institutions for evaluation
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Samvad Partners, Chennai

Objective: To evaluate the researchers of different institutions and to study their relation with their educational institutions, their family background including caste and religion in typical Asian context with varying religious faiths and cultures along with their daily routines, particularly the hours they spent towards research.
Method: Each element of the set of given criteria has been treated as independent parameter and a fuzzy set has been defined for each parameter using the limits of quality domain. A membership function has been defined for each parameter to generate fuzzy numbers to compute quality index using computational technique.

Results: A mathematical approach has been developed using fuzzy logic for evaluating the researchers. Further, a fuzzy-based Multi-Criteria Decision Making Algorithm has been designed and developed using the fuzzy logic and computational techniques. Four groups of researchers of different institutions have been chosen to collect data from 20 personals from each group. The researchers have been evaluated with a given set of finite numbers of criteria using the algorithm in terms of Integrated Quality Index (IQI). The criteria for computing IQI of each researcher considers the parameters such as publications, patents filed or copy rights reserved, conferences or workshops attended and organized, national and international reorganizations received through awards, medals and honors, invited lectures delivered; number of students guided in research or thesis and dissertation works; training program or short-term courses organized, number of students trained under internship training program etc. The IQI of a researcher is computed by integrating the quality indices of all parameters considered in the given criteria together using the algorithm. Further, the IQIs have been statistically analyzed to investigate whether any relationships could be established with their social order, region, religion, culture, working style, status, and institutions affiliated for learning and service and found interesting correlations.
Conclusion: In the modern and fast moving world of today, any research institution essentially needs to depute and promote the skilled and talented workforce to accomplish the tasks within stipulated time. The present algorithm would be an asset for assessing researchers and also their research quality if criteria are well-defined.

PM-012

Mechanisms of robust, innovative and translational research: introduction of new, responsible research indicators (QUEST criteria) for the institutional assessment of researchers (MERIT)
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Objective: In August 2017, the Berlin Institute of Health (BIH) QUEST Center for Transforming Biomedical Research adapted a policy to introduce four new responsible research indicators, the QUEST criteria, for the institutional assessment of individual researchers as part of their incentive and reward system. In contrast to conventional citation-based research metrics, the QUEST criteria relate to the mechanisms of robust research such as 1) priority setting, 2) strategies of scientific rigor, 3) strategies of transparency and dissemination of results, and 4) stakeholder engagement. The aims of the policy are to 1) increase the translation potential of the institutional research projects and 2) to optimize the allocation of funding towards projects with translation potential.
Methods: MERIT is an iterative policy implementation project at the BIH comprising the following steps:
1) Development of responsible indicators for robust, innovative and translational research (the QUEST criteria) based on the systematic review of the literature and expert engagement (theory validation and logical framework)
2) Implementation of these indicators in the institutional incentive and reward system, e.g. the institutional funding and hiring schemes (feasibility, testing and implementation phases). The implementation follows a bottom-up/managerial approach. This phase includes stakeholder interviews, workshops as well document analyses.
3) Monitoring and assessment of intended and unintended outcomes/impact of the introduction of the new indicators on the research output, translation process, research governance and funding allocation (process and outcome program analysis).
The BIH compromises the research area of Charité-Universitaetsmedizin Berlin and Max-Delbrueck-Center for Molecular Medicine.
All steps include quantitative and qualitative methods and analyses.
Results/discussion: This presentation aims to report and critically discuss first experiences and results of the development and implementation (steps 1 and 2) of the QUEST criteria for the intramural allocation of funding and hiring schemes for professorships. Currently, the QUEST criteria are tested for feasibility and are further developed in almost all BIH funding schemes as well as in the hiring commissions for professorships at the Charité. The feasibility phase ends in February 2019.

Poster Walk: Assessment 2

PT-013

Gaps in ethical literacy in research among medical professionals in India: a mixed method study
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Objective: Indian Council of Medical Research is apex institution in India to lay down National Ethical Guidelines related to biomedical research. The study was conducted with objective to determine knowledge, challenges faced and possible solutions to barriers in following research ethics among medical professionals working in research institutions in Delhi, India.

Materials and Methods: A mixed method study consisting of both quantitative and qualitative methods was used for data collection. Analytical cross sectional epidemiological study design was used for quantitative data collection and in depth interview was used for qualitative data collection. A pre tested study tool was designed for data collection.
Results: A majority of researchers reported that they were not trained in any formal research ethical training by their respective institutions. Most of them were aware of the fact that newer ethical guidelines for conducting biomedical and health research has been published by Indian Council of Medical Research but very few of them studied them in detail and were aware about the recent updates and changes in guidelines. Most common barriers faced in following research ethical guidelines were time delay in getting reviews/suggestions from Institutional Ethics Board, time consumed in getting appropriate information and knowledge about ethical guidelines while conducting research on animals and in conducting genetic studies. The possible solutions were sought from the experts in field of biomedical research. A majority of them responded about the need of regular formal training program about research ethics at entry level for all researchers. Some of them stressed upon the importance of in-service refresher training and establishing an official Research Ethics Committee which will be responsible for imparting research ethics skills among researchers and for reviewing the proposed research proposals. A national level brainstorming and consensus need was felt on genetic research related ethical guidelines.
Conclusion: Researchers in institutions needs to inculcate strong skills in research ethics so as to reduce malpractices and harm to any subject or scientific community. Widespread dissemination of guidelines needs to be done so that they reach every researcher across the country.

PT-014

Development of research integrity in France has been very slow: has the introduction of research integrity officers since 2015 made a difference?
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H2MW, Paris

Objective: On January 2015, French research organizations and universities (ROUs) signed a charter on responsible research and declared that research integrity officers (RIOs) would be installed. To evaluate what effect these measures have had, we appraised the websites of these organizations and analyzed the RIO profiles.
Methods: The Office Français de l'Intégrité Scientifique (OFIS) website lists all the ROUs and their designated RIOs. During the period spanning 6 to 14 October, 2018, we entered two keywords (plagiarism and integrity) into the search engines on the homepage of the ROUs, and retrieved the relevant information, in particular RIO CVs. From these we developed profiles according to specialty, sex, and age.
Results: The OFIS website lists 133 ROUs: 21 research institutions, 23 'grandes écoles', and 79 universities. Searching with the key word 'plagiarism (plagiat)' netted 25 ROUs, but the web information was minimal, consisting entirely of charters, interviews, and rare training modules. The key word 'integrity (intégrité)' turned up 23 ROUs. But again, there was very little information beyond notices of seminars, events, and few training modules.
Of the 133 total number of ROUs only 81 had named a RIO; 25 were female, and 56 male; of these only 13 were listed by name or title on the institution's organization chart. Mean age was 61.0 + 10.6 years old, and 22 were over the age of 70 s. Only 2 occupied nearly full time RIO positions, while 52 were employed as full time researchers and 27 were retired. The breakdown by discipline was: humanities and social sciences (23), engineering, maths and computer sciences (19), biology (16), physic/chemistry (12), lawyer (7), others (4).

Conclusion: There is a lack of information on research integrity on the websites of French universities and research organizations, which may reflect a lack of information and commitment in the institutions themselves. It is clear from the RIO profiles that most of these people are full-time researchers themselves and therefore ill-equipped to assume additional responsibilities such as promoting ethical conduct and practices.

PT-015

Climate for research integrity at Nanyang Technological University, Singapore

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Objective: To assess the environment for responsible conduct of research at the NTU.
Method: We will use Ethics Climate Questionaire (Victor and Cullen, 1988) to assess general institutional climate, and Survey for Organizational Research Climate (SOURCE; Wells et al, 2017) to assess organizational research climate. The online survey will be fully anonymous and will include the total faculty and staff population at NTU.
Results: We are currently preparing the execution of the survey, which will include the NTU faculty and staff: 1726 faculty, 3527 research, 1616 management, and 1442 support staff. The original SOURCE survey will be supplemented with basic demographic questions and specific questions about data management and data sharing, in view of the recently implemented policies and training requirements for staff members at the NTU and NIE.
Conclusion: The ECQ survey will provide information on predominating ethical climate of the organization/ unit among 5 theoretically identified and empirically occurring climates – "Instrumental", "Caring", "Independence", "Law and code", and "Rules", while the SOURCE survey will provide the picture of the organizational environment for responsible research practices at NTU, perceived by those engaged in academic research. Based on the results of the two surveys, we will formulate recommendations to further foster responsible conduct of research at the organizational, educational and policy levels.

PT-016

Successes and challenges of implementing new policy for promoting responsible conduct of research at the University of Botswana

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Introduction: The University of Botswana (UB) promulgated a Policy on Ethics and Ethical Conduct in Research in 2004, in line with the University strategic plan of becoming a research-intensive University. The policy aimed at establishing mechanisms for ensuring compliance with the ethical standards and UB values, the international research society and civil society. However, no evaluation has been done on the policy implementation process.
Objectives: To present findings from a preliminary evaluation, focusing on the emerging successes and challenges of implementing this policy at UB.
Methods: We retrospectively reviewed all documents, cases, processes, structures and activities for managing Responsible Conduct of Research (RCR) at UB.
Findings: In line with the 2004 Policy, UB developed guidelines and procedures for dealing with Research Misconduct (RM) and Questionable Research Practices (QRP). In addition, the University set up a portfolio for Research Ethics and Integrity in 2008, housed under the Office of Research and Development. The portfolio is responsible for coordinating the formulation of policies on research ethics and integrity as well as serving as secretariat for Research Ethics Committees, including the Research Investigations Sub-Committee.
A total of 14 cases of alleged RM and QRP were reported at the portfolio, 7 of which were concluded and 7 were not.
A total of three workshops on RCR were conducted to UB community.
Challenges of implementing the policy include lack of personnel and budget for RI activities. As a result, one officer who also handles research ethics and serves as secretariat for three other committees handles the RI. This leads to delay in getting RI guidelines developed and approved; and RCR workshops organized.

Conclusion: UB has achieved considerable successes since the promulgation of the policy that aimed at promoting RCR. There are also a number of important challenges that should be overcome to enable UB attain an acceptable level of RI compliance. UB should consider establishing a RI compliance officer position to coordinate and promote RCR. Benchmarking with other institutions that have successfully established RI offices within and outside Africa can help accelerate UB efforts towards promoting RCR.

PT-017

Open data in biomedical research publications: a new responsible research metric to allocate performance-oriented funding at Charité Universitaetsmedizin Berlin

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Objective: Open research data are increasingly recognized as a quality criterion and an important resource that can be reused by other scientists to increase transparency, robustness, and collaboration in science. We developed a text mining algorithm to automatically determine whether raw research data were openly shared with the publication. This algorithm can be used to quantify and monitor open data publications at our institution, allowing us to allocate institutional performance-based funding to incentivize data sharing.
Method: We iteratively developed the algorithm ODDPub (Open Data Detection in Publications) which uses a set of keywords to search the publication full texts for shared raw research data. We subsequently tested and improved the keywords on the whole institutional publication record (PURE, n=8,654 journal articles published between 2015-17) of the Charité Universitaetsmedizin Berlin, a large biomedical research institution.
Results: After four rounds of iterative improvement, we obtained an algorithm that had a positive predictive value of 92% and a negative predictive value of 98% on institutional publications from 2015 to 2017. The algorithm can distinguish between several different ways of data sharing, including the use of field-specific databases (e.g. GEO for gene expression data), general-purpose databases (e.g. figshare) or deposition of raw data in the supplement. Additionally, the algorithm can detect open code, i.e. analysis code disseminated with the publication. The algorithm is specifically developed for the biomedical literature and cannot detect research data that are not linked to a publication. Open data was detected for 3% (n=270) of publications. Starting in 2019, the results of the algorithm will be used to reward open data through the institutional performance-oriented funding scheme. This will allow us to incentivize open data at our institution.
Conclusion: Our text mining algorithm allows users to automatically screen large numbers of publications for data sharing. Institutions can use it to assess data sharing rates on a large scale and to identify specific publications that shared research data. It thus allows users to monitor institutional data sharing rates over time and can be used to reward individual researchers for open data.

PT-018

Awareness of scientific misconduct among health care professionals

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Objective: To assess the awareness of Scientific misconduct among Health Care Professionals working in a Tertiary care Hospital, Mangalore, India.
Methodology: Institutional ethical clearance and informed consent was obtained before the start of the study. A cross sectional questionnaire based study was conducted to evaluate the awareness of Scientific misconduct among Health Care Professionals working in a Tertiary Care Hospital, Mangalore, India. Scientific misconduct questionnaire was distributed to 75 participants out of which a total of 60 participants returned the questionnaire. The participants were selected based on convenience sampling since all the doctors were not easily accessible. The participants were asked to fill in their estimation of the level of seriousness of each type of scientific misconduct.

Results: Requiring your name to be put on paper for which you have provided only money and/or facilities was not misconduct according to 26.7% of the study subjects. Attempting to publish already published work was severe misconduct according to 48.3% of them. Not understanding the statistics which we are using was not misconduct according to 16.7% of the study subjects. Allowing your name to be put on paper for which you have not made reasonable contribution was moderate misconduct according to 46.7% of the study subjects. According to 50% of the study subjects knowingly/unwittingly selecting only those data that support a hypothesis was moderate misconduct. Knowingly/Unwittingly circumventing ethical guidelines for animal or human research and paraphrasing other people's published or unpublished work without attribution was severe misconduct according to 51.7% of them.
Conclusion: From the present study, it can be concluded that people had varied awareness about different forms of misconduct. Action should be taken to increase their awareness about misconduct.
Limitations: The limitations of the study include small sample size and use of convenience sampling which limits the generalisability of the study. Further studies are required to assess the practice of misconduct, factors fostering misconduct and methods to reduce them.

PT-019

Assessment of knowledge, attitude and practice of pharmacy professionals and students towards plagiarism of scientific publications in Raipur city, India – a questionnaire study
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Introduction: Plagiarism and falsifying documentation is a most common types of misconduct in academic area across the world. Advancement in the worldwide web, detecting and combating plagiarism is an important matter of concern in the educational hub.
Objective: The objective of present study is to assess the knowledge, attitude and practice of pharmacy professionals and students towards plagiarism in the local region of Raipur city, India.
Method: A questionnaire based study was conducting among the consenting subjects of pharmacy students and professionals in colleges of Raipur city, India. Structured questionnaire included various parameter on knowledge, attitude, practices, and related contents on plagiarism were given to pharmacy professionals, where n= 350. All the data of completed questionnaires were tabulated and analyzed by using SPSS software version 21.
Results: Response rate of pharmacy students and professionals to the questionnaire was 89.2 % and 80 % respectively. Among the faculty member, professors and associate professors had more research publications compared to assistant professors and students. **Result:**s revealed that only 20% of students had good knowledge, 32 % had moderate knowledge and 45 % have poor knowledge towards the plagiarism. The pharmacy professional had high knowledge about plagiarism of scientific publication. Awareness about the knowledge, attitude and practice towards plagiarism of scientific publications was relatively highest among the pharmacy professionals. The % percentage of article processing fee of scientific publication was more among the pharmacy students (75.3%) and less among the pharmacy professionals (20.1%).
Conclusion: All the pharmacy professionals believed that the publications of original scientific content is important criteria for academic excellence. All pharmacy professionals and some students (32.6 %) were engaged in research work and their number of publications improved with time. The pharmacy students reflects insufficient levels of seriousness and awareness about the knowledge, attitude and practice towards plagiarism of research publications. So, the educational interventions are essential to mend the awareness and understanding about the plagiarism of research publications.

PT-020

Plagiarism in arts – aspects, similarities and boundaries
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Objective: In 2018 the Competence Center for Academic Integrity, established at the mdw – University of Music and Performing Arts Vienna/Austria, opened a new field for integrity research. Artistic plagiarism normally appears case-by-case but there exist neither common statements, a definition nor any some reference to a framework. Artistic integrity includes misconduct in arts herein focused on music, film and theatre.

Method: In contrast to research integrity only a small range of literature and other resources on artistic research exist. Sometimes there are interesting results from special lawsuits but this is random. Therefore first of all it is necessary to interview experts from universities and abroad in order to find similarities and elements for a definition which make it possible to recognize plagiarism in the field of arts.
Results: The research in this field runs since half a year and is supposed to bring final results in spring 2019. Preliminary results show interesting aspects of artistic plagiarism:
1) Although it is appreciated that pieces from other artists are "quoted" in a new work there is a big grey zone. Art is always developing itself and therefore many examples of revised art, copied and yet new art, edited art with new art-look etc. exist. It is a big mystery to define the point where plagiarism ends and new art begins.
2) The economic aspect has a big influence in contentious cases because the plagiarized work helps to increase the fame of the original work which is important for its market value. Therefore most of the lawsuits end with an agreement that the earned money is divided between the parties.
3) Each art branch has its own special features and artistic techniques in using foreign elements. Therefore overall results valid for all kinds of art are not to be expected.
Conclusion: Artistic plagiarism is mostly a topic if some well-known artist is accused of having plagiarized. Common rules or experiences when artistic works are plagiarized do not exist, there are only some singular decisions on it. The integrity research in this field will find aspects for this underexposed topic and help to deal with future cases.

PT-021

Intercultural differences in response and reciprocation an central Asian and European patients with acute stroke: data of the SITS-Stroke Registry in Kyrgyzstan
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Objective: To compare the response and reciprocation in Central Asian and European patients with an acute stroke according to data from the SITS (Safe Implementation of Treatment in Stroke) stroke registry in Kyrgyzstan.
Method: The first questionnaire was created to evaluate the demographic parameters, lifestyle and behavior in two subgroups of patients. The second questionnaire was filled out by the researcher based on the wish of the patient to participate in an interview.
Results: Ischemic stroke patients from Kyrgyzstan were evaluated about stroke risk factors retrospectively (n = 232, Central Asian (Kyrgyz) 78%, European (Russian) 22%). We found that Central Asian patients were less physically active, had more diabetes, preferred animal fat in their daily diet ($p = 0.001$) and high social status of the patients prevailed. Central Asian patients were more reserved, suspicious, more frequently denied interviews and expressed mistrust. European patients were more open, talkative, welcomed interviews positively and highly reciprocated in neurological probes performance, but were concerned about the protection of their personal data and the aim of the research.

Conclusion: We found clear differences in the willingness of participating in research with the two ethnicities of stroke patients. Patients' culture, mentality and customs can affect the course ofthe research, therefore any scientific research should be of relevance to the local population and questionnaires should take into account cultural peculiarities of patients.

PT-022

Children in phase I trials in oncology: social value and clinical development success rate. A systematic review
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Objective: We will asses how many of drugs and treatment regimens tested in pediatric Phase I trials cohort were approved for pediatric population by the US Food and Drug Administration (FDA) and/or the European Medicines Agency (EMA) within 5-years period since Phase I study publication; We will also asses how many of pediatric Phase I trials were cited in other publications within 5 years period since Phase I study publication.

Method: This review will be based on a cohort of 139 out of 170 pediatric Phase I trials identified in our previous systematic review (doi: 10.1371/journal.pmed.1002505). We will manually search www.accessdata.fda.gov and www.ema.europa.eu in order to identify development success rate (registration). We also search Google Scholar to find citation patterns. The data will be presented narratively. If possible, we use meta-analytic methods and assess differences between groups using the Q test for heterogeneity in meta-regression.
Preliminary results:
Our systematic analysis of the development success rate of 139 systematically found Phase 1 trials in pediatric oncology published in 2004-2013 shows that only 3% of the drugs and drug regimens tested in those trials were registered in 5-years period by the European Medicines Agency and 5% of them were registered by the US Food and Drug Administration.
Preliminary results of the citation patterns of 101 trials (out of 139) lead us to identify 3007 citations: 126 in phase 1 trials, 84 in phase 2 trials, 9 in phase 3 trials, 527 in preclinical research and 2264 in other types of publications.
I will present the complete results at the conference.
Provisional Conclusion: Phase I trials in pediatric oncology are not likely to offer the direct benefit for the trial participants. Development success rate of those trials is also low, comparing to trials with adults. Thus it is essential to identify and facilitate the broad social value of those trials.

PT-023

The research about the awareness of medical research management personnel on research integrity and relevant management status

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Objective: To understand the status of research integrity awareness among medical research management personnel and relevant management status within the institution.
Method: The questionnaire survey was used to investigate 115 managerial personnel of universities and institutions and hospitals as well as educational administration in medical fields, and the data were analyzed statistically.
Results: About the research integrity knowledge, the average score of research management personnel's was (43.09±10.41), and the overall awareness rate was 46.77%. In the institution's management of research integrity, 59.13% of the management personnel showed their institutions were able to take the initiative to impose punishment measures after finding research misconduct, 69.57% offered courses related to academic norms or scientific research integrity, and 71.30% formulated punishment regulations related to research misconduct. In promoting research integrity within institutions, the overall satisfaction for research was 41.65%, and they believed the main factors affecting research integrity were academic evaluation system, social environment, personal achievement motivation and moral qualities; and they perceived that the most necessary measures for research integrity were research integrity education, promulgating rules and regulations, establishing research integrity archives, implementing the one-vote veto system, and conducting academic criticism; and they also believed that the reasonable and effective measures to prevent misconduct were institutional constraints, integrity education, punishment, clear responsibilities, supervision and reporting, and moral education; It was also believed that the best way to carry out the education and publicity of research integrity were daily guidance by instructors and counselors, holding lectures or academic reports, carrying out relevant courses, conducting online publicity or communication, reading literature and relevant documents, etc.
Conclusion: There are deficiencies in the awareness level of research management personnel, and there is still room for improvement in promoting research integrity within institutions regarding punishment, prevention and protection. It is suggested to be stricter in supervision, investigation and punishment, to promote research integrity education and publicity, and to further reform the academic evaluation and incentive mechanism.

PT-024

Optimizing the responsible researcher? A comparative study of practices of research assessment and ideals of responsible research at two biomedical institutions

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Our objective is to present the results of our project 'Optimizing the responsible researcher'. This project aims to describe the optimal profile of biomedical researchers in terms of their propensity to foster responsible conduct in research and compare this profile with existing academic advancement and reward systems.
In our project, we compare two University Medical Centers in the Netherlands in terms of (1) the ideals of responsible research of biomedical scientists and (2) the existing criteria of evaluation and career advancement. We used focus groups with biomedical scientists to determine the profile of a responsible researcher and document analysis and semi-structured interviews with research support staff and higher management to analyze current recruitment, assessment and promotion criteria.
In an earlier phase of the project, we discovered that our institutions differed significantly in terms of their assessment policies. Where one institution chose to align with the predominant performance-based evaluation of individual researchers and research departments, the other looked for ways to challenge the dominance of performance-based evaluation by expanding and using multidimensional evaluation criteria. Three results stand out. First, there is a considerable consensus among biomedical scientists at both institutions about the ideals that responsible research should abide by. Second, there is a considerable difference between biomedical scientists in terms of the perceived benefits and pitfalls of research evaluation at their respective institutions. Where scientists in the 'alignment' institution emphasize the pace and the individualizing pressures of scientific work, scientists in the 'challenger' institution express uncertainty about the assessment of their work and the potential gap between their own organization and other organizations in the field of biomedicine. Third, the comparative nature of our project makes it possible to provide a set of concrete policy recommendations for designing (or adapting) academic reward systems aimed at fostering excellent, socially responsible research.
Research institutions differ in their conception of responsible research and their perceived room for manoeuver. Our systematic comparison between scientists and managers at two University Medical Centers enables us to elaborate on stability and change in research evaluation and helps to present new strategies for how to shape future evaluation criteria.

Poster Walk: Education/new approaches 1

PM-025

The use of coaches to optimize research ethics and integrity
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A key feature of the Luxembourg Agency for Research Integrity (LARI) is LARI Coaches. Adapted from the Philips Research (Eindhoven, Netherlands) experience of global coaches who assist medical device researchers with navigating the research ethics committee process, the LARI Coach goes farther and takes a longitudinal approach to guiding researchers amid the complexities of designing, conducting, recording, monitoring, auditing, analysis, and reporting of research. LARI Coaches receive specified training and continuing education for their role. Coaches are never a replacement for the research supervisor; they are research peers across institutes who guide and instill proactive best practice in the research process so that researchers produce credible outputs, and are protective of the rights, safety, and welfare of participants. This oral session describes the selection, training, and operationalization of LARI Coaches.

PM-026

Luxembourg gets creative with the CAPRI model of research ethics and integrity education

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The visual arts can be used to stimulate innovation, objectivity, diligence, spatial reasoning, and observational prowess—all of which are vital to science. Robust observation skills, especially, are critical to good research practice. Observation is part of the informed consent process, as well as data collection, analysis, and reporting. It is also part of study monitoring and auditing. The educational use of the visual arts has been shown to improve the observational skills of medical students (future clinical investigators) and research data has been crafted into works of visual art as part of the scientific learning experience. The Luxembourg Agency for Research Integrity (LARI) created Creative Approaches Promoting Research Integrity (CAPRI) as the framework for its research ethics and research integrity education program. Courses use a workshop format which blends research ethics lectures with hands-on artistic activities such as rock painting, Lego® assembly, mobile-making, and historical painting analysis. This oral session presents an educational model that is a fun, non-traditional **Method:** for researchers of all levels and disciplines to learn about research ethics, research integrity, reflective thinking, and observation.

PM-027

The European Network of Research Ethics and Research Integrity (ENERI)

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The European Network of Research Ethics and Research Integrity (ENERI) brings together various European initiatives involved in Research Ethics (RE) and Research Integrity (RI) to build up a platform of permanent exchange and evolution. ENERI is an EU project and started its work in September 2016. The project duration will be three years. The aims of ENERI are to create a joint European network and platform to intensify the exchange of expertise, harmonize the processes within investigation procedures of alleged research misconduct and ethics reviews, and develop a core curriculum for individuals involved in investigation panels and ethics reviews.
ENERI‘s output will be:
• Collection of information about national structures and procedures of Research Integrity Offices (RIOs) and Research Ethics Committees (RECs)
• Handbook of recommendations for Research Integrity and Research Ethics: A guide for Researchers, Members of Research Integrity Offices and Research Ethics Committees
• Development of advanced training modules for members of RIOs, RECs, researchers and evaluators of research proposals and research integrity/member of ethic commissions
• Establishing of a dynamic database of experts in RI and RE
The project started with a mapping of the networks to collect information about common features and differences within national structures and procedures to learn from each other and take advantage of synergies. Within the project a set of recommendations how to deal with research misconduct and how to protect those involved in the investigation were developed.
One major issue was the design of a training program addressed to researchers and scientists in the field of RI and RE. The working methods were based on introductions to themes and active work on case studies and dilemmas in smaller groups.
The project partners will also compile an expert database with contact information and information on the experience of experts in these two fields. The database of RI- and RE-experts is designed as a broad, multidisciplinary and inclusive approach.
This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No. 710184.

PM-028

The new Greek law for the operation of research ethics and deontology committees: context and challenges

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Objective: The objective of this work is to present the new Greek law for the operation of Research Ethics and Deontology Committees (REDCs) at an institutional level and to shed light on the challenges appeared from its enactment t on March 2018.
Method: The authors have initiated a mapping exercise, through the Ethical Aspects in Research and Technology for Human network (EARTHnet). A questionnaire was circulated within the network, where the largest publicly funded Universities and Research Institutes in Greece are represented.
Results: In September 2017 the Greek Ministry of Education summed up a panel of seven experts, in order to draft a law for the operation of ethical screening at an institutional level, through the creation of REDCs. The driving force for this initiative was that a stage of the ethical assessment of upcoming EC funded projects should be implemented within the fund receiving institute. The draft law was approved by the Greek parliament and, since March 2018, has been put into action, having a clear legal mandate upon publicly funded Greek Universities and Research Centers. These institutes are obliged to create their REDC and to align their Codes of Conduct with the context of the new law, until September 2018. The authors have circulated a questionnaire among EARTHnet members, in order to map the challenges faced during the creation of the REDCs and during the first 6 months of the implementation of the new law, i.e. from October 2018 until March 2019. It aims to map the challenges concerning: (a) selection of the REDC members, (b) interaction with the institutional agencies and academia, and (c) implementing ethical assessment in publicly funded research.
Conclusion: Until now, there has been no coordination between institutional Ethical Committees, due to the lack of a National Code of Conduct. The implementation of the new law is an opportunity to initiate a process for the creation of a National Committee of Research Ethics and Research Integrity in Greece.
Acknowledgements:
The project leading to this application (ENERI) has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 710184.

PM-029

Fostering a positive approach to promote responsible conduct of research with a playful on-line awareness tool

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The promotion of responsible conduct of research (RCR) is essential to foster an RCR culture in any research context. While efforts have been put on RCR awareness based on research misconduct, the Fonds de recherche du Québec (FRQ) have chosen to adopt a positive approach towards RCR promotion. This positive approach means putting less emphasis on research misconduct and more efforts towards the promotion of best practices in all their RCR communications, including the Policy for the responsible conduct of research they adopted in 2014.
The FRQ acknowledge that research institutions are best placed to engage in the promotion of RCR within their community. They also recognize that they have a responsibility to provide the institutions with proper tools for promoting RCR. In 2018, the FRQ developed an awareness-promoting on-line tool that focuses exclusively on the promotion of RCR best practices. This new tool is one of the rare ones available in French and adapted to the Quebec national context. It touches topics such as responsible dissemination of research, responsible evaluation of research, responsible use of research funds, responsible research ethics with humans or with animals, and environmental responsibility in research. Conscious that RCR applies to all research fields and domains as well as researchers across their career paths, the FRQ tool uses real-life situations that aim to illustrate the complex diversity of research contexts. This awareness-promoting tool uses gamification to address serious RCR topics in a realistic context with a lighter touch. It was conceived to be flexible and to allow easy extraction of segments for educational purposes by interested users. Since this on-line tool focuses on RCR best practices, it can be used internationally. The FRQ thus strongly believe it can contribute to the global dissemination of a positive approach to RCR and the anchoring of an RCR culture in all research contexts.

This presentation is an invitation to discover their tool which proposes both a serious and playful environment to promote RCR.

PM-030

Research integrity: the responsibility of academic and clinical education

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Research and innovation outputs are increasing worldwide, being expectable to create 3.7 million jobs in Europe by 2020 [1]. The scientific and institutional challenges are diverse and variable through different organisations and research fields [2]. Although the strong efforts to promote the development of research policies, the lack of education standards regarding the core values of research integrity, as responsible conduct, honesty and professionalism [3–6], is denoted by the increase of misconduct cases, reflected in the proliferation of retracted papers among scientific and medical international journals due to data fabrication or plagiarism, which takes particular consequences when related with biomedical and clinical practices [5].
The present study includes an overview of guidelines related with ethic and integrity decision-making, emphasizing the fundamental role of academic and clinical education as key to develop a set of attitudes on researcher profiles that empowers ethic training and promotes the development of research integrity benchmarks. The report also describes how this approach has been implemented at Faculty of Medicine of University of Porto (Portugal) over the years in comparison with other academic environments.
In order to promote transparency in research, a culture of research integrity is needed in higher education to ensure the development of an ideological and moral behaviour by researchers. This approach seems to be corroborated by students at academia. Concerning to a responsible conduct of research, integrity education should be the top priority of the transversal curricula of medical and research-related curricular plans.
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PM-031

Meta-analysis: a missing component of RCR curricula and ethics studies of research methods

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Meta-analysis has reshaped modern science, especially biomedicine, epidemiology, behavioral science and education. To perform a meta-analysis is to aggregate results of previous empirical studies and perform various statistical analyses on that aggregate. Despite its ubiquity, this method has yet to find a place in RCR education. This is a collective, international mistake. Meta-analysis, long a source of epistemological controversy, bears on familiar RCR issues:
Data sharing: Meta-analysis generally relies on the published literature -- it systematically uses data published but not explicitly shared for the purpose of meta-analysis. But no consent for the use of study data ever contemplates data use in a meta-analysis. Because it would be absurd to suggest that research participants must consent to meta-analyses, the technique contributes to arguments that the concept of "secondary use" is flawed and has impeded biomedical research by requiring consent when it is not ethically needed.
Data management: There are several kinds of meta-analytic software, but they are rarely compared, and those comparisons reveal differences in features and ease of use, among other variations. Ought scientists performing, using or relying on a meta-analysis – be familiar with software used in the analysis? Should they know about the software's provenance, version control, fitness for purpose and other elements of software engineering ethics?

Human subjects protection: Studies presented for review to research ethics committees (REC) must often include a risk-benefit assessment. In some cases, the REC must determine if a particular risk is acceptable. Such assessments and determinations generally rely on the published literature. This leaves for reviewers the challenge how to balance the findings of a double-blinded, placebo-control trial against a meta-analysis.
Rigor and reproducibility: Meta-analyses of similar publication sets have produced inconsistent results, leading to a puzzle in efforts to address scientific reproducibility. The very idea that similar analyses of similar pre-existing data sets would produce different results suggests a wholly new component of the reproducibility problem.
Despite generations of attention to ethical issues raised by research methods, meta-analysis has so far, albeit with a few exceptions, not enjoyed comparable attention. This is a major shortcoming of current RCR instruction and research.

PM-032

Building a new health research ethics structure and system after a negative audit: the long journey to recovery
M. Greeff, W. Towers
North-West University, Potchefstroom

The greater the change in the way research is being conducted, the greater the challenge for effective structures and systems to be in place to manage research ethics. Research ethics offices supporting IRBs and IRBs are constantly placed under pressure. In a country like South Africa IRBs reviewing health or health-related research are required to be registered with the National Health Research Ethics Council. One of the responsibilities of this NHREC is to audit these registered IRB on a five yearly basis. The purpose of this presentation is to show how an ethics office and IRBs of a specific university managed to recover after an extremely poor audit outcome mainly due to structural inconsistencies, a management not in touch with the requirements of health research ethics and misunderstandings of the then 2008 ethical guidelines set by the NHREC and the Department of Health. This led to a slow process of developing and implementing a total new quality research ethics structure and system to support two IRBs (research involving humans and animal). The structural planning of such an endeavor was, however, a much easier task than bringing in the human element of "resistance to change". This presentation will focus on the 3-year long journey to recovering from a negative audit and building a new effective research ethics structure and systems, leading to a clean 2017 external audit by the NHREC. The lynchpin in this process was creating an Ethics Office handling the formal ethics review process for approvals, providing training in research ethics as well as a supportive and consultative function. It also had to manage two ethics committees i.e. both human and animal, and above all, had to facilitate change in the minds of researchers, and senior managers, who play a critical role in integrating ethics into the everyday lives of academics. This was crucial as there was a great deal of resistance experienced, due to numerous negative perceptions towards ethics, with the most prevalent being that ethics review has a negative impact on research outputs, which could affect positions as senior managers, career development, promotion opportunities, and publication outputs.

PM-033

Ethics, theatre, and science: cross-disciplinary fostering of ethics and science conversations
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Objective: To facilitate a positive ethical culture and conversations about ethics and scholarly research, the objective was to conduct an exploratory investigation of the use of staged readings of academic dramas as a new variant on the existing model of responsible conduct of research education.
Method: Staged readings of academic dramas ("Purely Academic," by David Abramson, an Australian computer scientist and "Margin of Error," by Will Cooper, a professional playwright, of San Diego's Roustabouts Theatre Company) were performed in the 2018 Winter and Spring quarters at UC San Diego for various members of the research community.

Results: A table reading of "Purely Academic" was conducted by students for their science ethics class, followed by two staged readings performed for the public by professional actors, graduate acting students, and faculty from the UC San Diego Department of Theatre and Dance. In addition, a single staged reading was performed of "Margin of Error" by the original cast. The science ethics class included 15 students (mostly graduate, some postdoctoral), and each of the subsequent readings were each attended by ~100 interested members of the UC San Diego community. All readings were supplemented with guided conversations between the actors and the audience about what they had seen, what it meant, whether it was consistent with their experience, how best to address similar problems when they occur, and how to protect against such problems in the first place. Both by objective and qualitative assessment, the readings were well attended, appreciated and seen by the vast majority of audience members to be of value.
Conclusion: The mostly positive reactions of participants are consistent with the hypothesis that staged readings of academic dramas are a tool of potential use to stimulate reflection, empathy, and discussion regarding the ethical dimensions of scientific study and application. Even some of the audience members who found the staged readings to be less valuable used the post-show survey to reflect on ethics and science.

PM-034

Promoting research integrity in Africa: the moral responsibilities of research institutions toward research frontline staff

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Introduction: Research is the cornerstone of innovation and social development. It is agreed that research is essential in seeking new knowledge that is useful in social and scientific development. Through research, data are systematically collected and analysed to make an inference regarding a specific health condition, social factors, health systems, or processes. Research generates new knowledge which is often used to make important decisions, with far-reaching implication on the health of current and future generations. Research is built on a foundation of trust. Thus, the data collected, the methods used and the analysis/interpretations made must be truthful, accurate, and transparent. Deviation from these norms undermines the trust in an individual researcher and the entire research enterprise.
Problem statement: The last decade has witnessed an unprecedented increase in the number of transnational research, conducted in Africa. Although highly qualified local and international researchers usually oversee such studies, they are often unfamiliar with the language and cultural norms of the community involved in the research. As such, they employ local people, usually known as fieldworkers, to provide support in consenting, translating study information and collecting data. In most Africa settings, this cadre of staff is employed without any relevant training, yet their practice and adherence to local and international scientific and ethical standards determine the overall quality and integrity of the research output.
Research question: Do African research institutions have a moral responsibility to systematically support fieldworkers?
Rationale: The important role fieldworkers play in research is increasingly recognized internationally. However, there are no guidelines that define what kind of training and support research institutions ought to accord fieldworkers. This has the potential to expose research participants to harm and undermine the integrity of research.
Research Aim: To normatively analyse whether research institutions have a moral responsibility to systematically support fieldworkers, and help them undertake their roles in conformity with the highest scientific and ethical standards.
Study findings: Findings from this study will generate a critical understanding of the moral responsibilities research institutions have towards fieldworkers and help to develop harmonized systems, policies and guidelines that nurture and support best field practices.

PM-035

Research education and scholarly publishing: use of case approaches to improve engagement
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Cabells, Keighley

Traditional journal metrics have been effective at highlighting good and bad research over a significant time period, however they can fail to help researchers identify fake research. A longstanding criticism of journal metrics is that there is no qualitative measure - a citation for great research looks the same as a citation for terrible research in the numbers. So how can researchers trust the numerous metrics at their disposal? The argument made here is a focus on educating researchers about predatory journals and fake research, and on how to use metrics to do robust analysis. Taking both a critical approach to published research and a blended approach to journal data will give academics a rich, accurate picture of their research landscape.
Access to the Cabells database of 11,000+ 'Whitelist' journals and 9,000+ 'Blacklist' journals and how they are used has provided use cases on how to adopt optimized journal research techniques that are both ethical and replicable for academics. Using a more sophisticated model than 'Think. Check. Submit.', a new model is proposed that will enhance the publication opportunities for academic researchers.

Poster Walk: Education/new approaches 2

PT-036

Expert strategies on research integrity problem-solving
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The objective of the study is to identify how experts on research integrity approach and solve ethical dilemmas and integrity issues. Experts are in this case individuals serving on research ethics and integrity boards and committees. The study utilizes theory on both ethical problem-solving (Mustajoki & Mustajoki, 2017) and collaborative problem-solving processes (e.g. Hakkarainen et al., 2004).
The study utilizes a qualitative research approach. Data consists of authentic situations in which experts on integrity solve dilemmas in collaboratively. A total of 15 experts participated in the research. Participation in the research was voluntary and based on informed consent. The group sessions were videotaped. The collaborative setting makes it possible to analyse not only individual problem-solving strategies but also, and most importantly, the collaborative problem-solving process. Thus, the data collection mirrors the kind of situations in which ethics and integrity experts normally analyse dilemmas in multi-member boards and committees.
The results show how experts identify issues in the given cases; identify and analyse the stakeholders, their roles and responsibilities in the case; and identify solutions and foresee potential implications. Furthermore, the results also show the nature of arguments and justifications through which the experts negotiate the case.
The study contributes with understanding of the strategies and analytical steps that experts take in forming an understanding and solving dilemmas that are challenging from an ethical/integrity point of view. This contribution to the body of knowledge has two applications. First, the knowledge can be used for designing more effective advanced training for expert groups to meet their learning needs at the appropriate level. Second, it can be utilized for developing basic training for student and early career researcher populations to help them develop expert-like approaches when solving ethics/integrity dilemmas in their own research or researcher community.
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PT-037

Ethics in the creative process: exploring ethical framing and timing on ethical and creative outcomes

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Previous research suggests a negative relationship between ethics and creativity (e.g., Gino & Ariely, 2012). However, as evidenced by recent ethical scandals in research, responsible conduct of research (RCR) is imperative to ensuring scholarly integrity and fostering public trust in research. Given that research is necessarily a creative endeavor, the present effort aims to examine how an ethics frame influences creative performance in a two-study effort manipulating project framing and timing of framing when engaging in creative problem solving.In study 1, approximately 150 MTurk participants will be asked to develop a novel restaurant concept. Participants will also be told to focus on profitability, ethicality, or both during the design process. Participants will then be asked to evaluate their design and develop a final concept. In study 2, approximately 120 participants will develop an idea for a novel restaurant concept. Participants will then be asked to evaluate this idea and develop a plan for implementation. The manipulation will focus on when ethics is emphasized – before idea generation, only before idea evaluation, only before implementation planning, or not at all. Restaurant plans in both studies will be content coded for creativity- and ethics-related outcomes. The IRB for study 1 is currently under review and data collection will begin immediately upon approval. Funds for data collection have been approved, and data will be collected through MTurk. Data collection is expected to be completed in less than one week. Content coding will begin in fall 2018. Study preparations are underway for study 2 and data collection will begin in early spring 2019. Responses will be content coded as data collection progresses. Data analysis will be completed in May to ensure study findings are ready to present come June. Results from this effort may provide insight into when ethics should be emphasized in the creative process, providing suggestions for governing research bodies such as Institutional Review Boards. Although this study uses a restaurant design task, it provides insight regarding the relationship between ethics and creativity which may spur future work related to ethics in research specific creativity.

PT-038

A roadmap for the "Standard Operating Procedures for Research Integrity" (SOPs4RI) project

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Objective: This poster presents a roadmap for "Standard Operating Procedures for Research Integrity" (SOPs4RI), a four-year, multi-partner project funded by the European Commission. SOPs4RI aims to stimulate transformational processes across European research performing and research funding organisations (RP&RFOs). Specifically, SOPs4RI will establish an inventory of relevant tools that RP&RFOs can draw from when developing governance arrangements promoting a strong research integrity culture.
Method: SOPs4RI takes a mixed-methods, co-creative approach to the development and empirical validation of standard operating procedures (SOPs) and guidelines to cultivate research integrity and reduce detrimental practices. Empirical elements of the project include 20 expert interviews, a three-round Delphi survey, 32 focus groups across academic disciplines, a survey of researchers across 31 countries with a planned sample of approximately 260,000, and four co-creation workshops engaging stakeholders.
Results: The SOPs4RI project will be carried out from 2019-2022. Through comprehensive empirical research and inclusion of core user groups, it will develop an array of SOPs and guidelines that are sensitive to the organisational context and the academic domain in which they will be applied. The sequential implementation of qualitative, quantitative, and co-creative parts of the empirical research programme will enable iterative refinement of the properties of the SOPs and guidelines.
SOPs4RI includes a pilot programme, in which selected RP&RFOs apply the SOPs and guidelines in local practices. A number of public and private research funding organisations as well as university networks have confirmed their willingness to participate in the pilot phase. Results of this final step of the validation procedure will feed into the final version of SOPs and guidelines. To promote adoption, the consolidated inventory of SOPs and guidelines will be transformed into a user-friendly, web-based toolbox, freely available to all interested RP&RFOs.

Conclusion: The poster will present the SOPs4RI roadmap. WCRI 2019 provides an excellent opportunity for early interaction between the project participants and core future users of the SOPs and guidelines emerging from the project. The poster presentation will also be a site for recruiting participants to the co-creation components of the study. The poster is presented on behalf of the SOPs4RI consortium.

PT-039

Integrating Responsible Research and Innovation (RRI) into regional policy

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Objective: Our aim is to propose a conceptual framework of and practical recommendations on how to integrate the principles of responsible research and innovation (RRI) – such as gender equality, public engagement, ethics, open access, and science education – into regional policy in Europe.
Methods: In addition to synthesizing the relevant literature on ethics and social responsibility in research and innovation, we make use of stakeholder engagement workshops to conduct policy foresight analysis related to RRI. These workshops involve researchers, governments, industry, and the public.
Results: Though the concept of responsible research and innovation is attracting increasing attention, the principles of RRI will have little practical impact unless they are integrated into policy. Our research, which is part of the EU-funded SeeRRI project, emphasizes the importance of first mapping the territorial research and innovation ecosystem to identify relevant stakeholders, then engaging these stakeholders in the formulation of policy. Additionally, our framework includes institutional assessment based on RRI principles.
Conclusion: We provide step-by-step recommendations on how regional policymakers in Europe can enhance the level of responsibility in research and innovation within their territory.

PT-040

The experimental design assistant: an interactive web-based tool to provide bespoke feedback on experimental plans

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Objective: In recent years there has been growing concern regarding the reproducibility and reliability of biomedical research. Poor experimental design, analysis and reporting have been identified as contributing factors. The NC3Rs has developed resources to help researchers improve experiment design, analysis and reporting, including the Experimental Design Assistant (EDA). The EDA is a free-to-use web application with a supporting website, which helps researchers design robust in vivo experiments.
Method: The EDA was developed by a working group consisting of statisticians, in vivo researchers from both academia and industry, and a team of software developers specialised in expert systems. Principles followed during development include providing learning in the context of the researcher's own experiment, integrating the EDA into the research cycle, and providing information on available options so that researchers are aware of the implications of different choices and can make an informed decision.
Results: The EDA was released late 2015, with further improvements added incrementally. It helps researchers design in vivo experiments. The tool allows researchers to develop their experimental plan as a machine-readable diagram. The system uses computer-based logical reasoning to analyse the experimental plan and suggest improvements, help identify missing information, or highlight the implications of certain design choices. This enables users to make informed decisions. The system also suggests statistical analysis methods appropriate for the researcher's specific design, provides support for randomisation and blinding, and includes power calculators to determine the appropriate sample size.
Conclusion: Using the EDA leads to more carefully designed experiments, more likely to yield robust and reproducible data. EDA diagrams are more explicit than text descriptions and their use improves communication with collaborators, grant funding bodies and ethical review boards. EDA outputs also contains all the details required to pre-register an experiment, including objectives, primary outcome, analysis plan and measures to reduce subjective bias.

PT-041

Responsible conduct of research education should include issues of race and gender

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The 2015 and 2017 World Conference on Research Integrity conference programs contained no sessions devoted to teaching issues of race or gender in Responsible Conduct of Research (RCR) training and education. However, in the United States and elsewhere, issues of race and gender are becoming increasingly important, and the research integrity community should begin to consider appropriate ways of discussing them in our training and education programs. The biases we bring to science make for bad science. Since racial and gender bias (both intentional and unintentional) is deep and pervasive, and an accumulating body of evidence demonstrates the empirical consequences of these biases in scientific research, we have the responsibility to address issues of race and gender in RCR courses as an integral part of making research reliable. Consider, for example, the following study result: "…it is of interest that students who self-identified or identified their mentor as a member of an ethno-cultural group were significantly more likely to conduct research with populations consisting of 50% or more minorities" (Fisher et al., 2009, 14). Or this: "A new study published in the journal Nature Neuroscience suggests that research done on male animals may not hold up for women" (NYT Editorial Board, 2015). Who we are can affect how we conduct and evaluate research, with clear implications for the reliability and of research results both individually and as a whole. Thus, teaching issues of race and gender is not an accessory to good research; it is as important to the reliability of research findings as proper data management. In this presentation, I will discuss empirical findings such as these that relate directly to traditional and familiar RCR issues, and suggest several ways in which RCR educators can include or enhance discussion of race and gender in their research ethics and integrity classes.

PT-042

Creating research environments that ensure genomic research integrity

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Human genomic research is one of the most dynamic scientific fields globally, providing humankind with untold insights into their biology, behaviour and health. Paired with this, however, is a cavalcade of ethical, legal and social implications (ELSI), that if not effectively managed can result in major harms to society. Few countries, especially those in the developing world, have strong legal structures in place to ensure research integrity in genomic research, thus increasing the potential harms such as "helicopter" research, biopiracy and a lack of benefit sharing. Institutions are thus being placed in a position where science, ethics and the way that research integrity as a whole is being ensured, needs to adapt. To address this, institutions have to create policies that ensure that all three aspects are sufficiently addressed in genomic research. These policies, however, need to be operationalised to create an appropriate research environment. Research ethics committees (RECs) are mainly responsible to ascertain that the institutional policies regarding research integrity are put into practice, as they carry the greatest accountability when it comes to approval of studies being undertaken. RECs, however, often experience difficulties in doing so when it comes to genomic research, as they do not always have the required experience, which can place participants at risk and can affect the integrity of this type of research. In order to truly empower them, institutions should ensure capacity building within RECs by developing practical guidelines that can be easily implemented when reviewing genomic research. The aim of this paper is to reflect on key guideline documents to setup an understandable guiding framework of the critical principles that should be implemented in such guideline documents by institutions to ensure scientific integrity, ethical rigour and responsible management, in genomic studies. These principles include aspects related to consent, withdrawal from research, return of research results, public data release, benefit sharing etc. Such a framework will greatly assist institutions in developing effective research environments that support and protect the research integrity of the genomic sciences.

PT-043

INTEGRITY: searching building blocks for a teaching philosophy on RCR

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Starting our Horizon2020 project INTEGRITY in January 2019, we aim to develop innovative tools for teaching research integrity. These tools will be developed in a co-creative, and an evidence-based manner. For the Consortium partners, training in responsible conduct of research (RCR) is a good means to empower students and stimulate virtuous behaviour. INTEGRITY will take Transparency, Honesty and Responsibility as core values to further develop a view on teaching RCR . What is innovative in this project is that the concept of RCR, which is being used for more than two decades now, will be taken as an encompassing concept that drives empowerment of students. Using core characteristics, like that it aims to build capacities and not to set boundaries; that it focuses on core values in RI, like Honesty, Transparency and Responsibility; and that it can closely relate to research ethics, allows us to focus on overlap(ping consensus) in research ethics education. Yet, this project, for it to succeed, requires us to develop a comprehensive teaching philosophy that can support the development of innovative tools. In our search for building blocks for such a teaching philosophy, we will take the following steps: first, we will use existing literature to see how RCR can be characterized so far and how it is reported to be (un)succesfull in educational practice. Secondly, we will use surveys to inquire students' perceptions and experiences with research integrity scaffolded to the different stages of their studies. Thirdly, we will align these data, together with pedagogical insights, with educational philosophical insights and develop a view, that could function as a standard for teaching RCR and which is supportive for the teaching of RI. In this presentation, the first steps towards this teaching philosophy, distinguishing the building blocks based on literature review on what RCR is and how effective it is, will be presented . The teaching philosophy will be used to build a benchmark to develop innovative tools in other parts of the project. The ambition is to set a standard that can be used independent of the developed tools to build curricula in research integrity throughout Europe.

PT-044

Research integrity framework in Nanyang Technological University (NTU) for the promotion of responsible conduct of research

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Nanyang Technological University (NTU) in Singapore is a research-intensive public university that has been consistently ranked as a top young university globally. Against a backdrop of increasing research output and a rise in normalised research citation impacts, NTU managed two high-profile breaches in research integrity in 2016 leading to the dismissal of 2 faculty members and the revocation of a PhD degree – the first such revocation in Singapore - plus a substantial number of paper retractions.
In response to these incidences, NTU established a central office overseeing research integrity and ethics in April 2017, charged with the responsibility of ensuring researchers conduct their research in accord with the research integrity framework in NTU.
To this end, NTU has implemented a number of new and/or reinforced actions:
• It is compulsory for ALL faculty, research staff and graduate research students to complete an online training programme on research integrity within 6 months of joining NTU. The President was the first to complete the course! New joiners will also be orientated to the research integrity framework under our "Train-the-Mentor" sessions.
• Mandatory submissions of Data Management Plans for new grants promote best-practice in research planning through data collection, processing and storage.
• To assist in upholding better research practice, preliminary compliance audits are conducted with results reported to the Audit and Risk Committee of the Board of NTU.
• Launched a grant call on research integrity to independently study and obtain empirical data of research integrity (climate) practice in NTU.
• Revising and updating policy and procedures as a living document
• Engaging faculty across NTU (>20 schools and autonomous Institutions) through a high-level research integrity committee.

This presentation will reflect on our research integrity journey over the past 2 years, present data from our training programmes, and share initiatives and issues with the broader community. This will encourage a discussion of evolving standards with other academic institutions looking to embark on similar initiatives.

PT-045

Institutional responsibilities and strategies for responsible conduct of human subject research: experiences and lessons learned at Peking University

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Objective: Share experiences and lessons learned at Peking University Human Research Protection Program (PU HRPP) since 2010, review strategies adopted including massive research integrity training, routine project auditing, as well as international collaboration and accreditation, propose shared responsibilities among institution and researchers for developing responsible conduct of human subject research in China.

Method: Benchmarks were set during the whole working process of PU HRPP. International accreditation and collaboration were early strategies for bring in best ethical practices; then training and auditing were developed as internal quality improvement measurements. Training feedbacks and auditing reports were reviewed periodically for dynamic assessment in regular working group meetings.
Result: Given the research landscapes and regulatory contexts in China, many problems and obstacles were identified, and continued efforts from both the institution and researchers have been needed to navigate these issues. There are international ethical guidelines and standards for responsible conduct of research, though, develop tailored best practices taking into account of local context and make sure compliance still a big challenge. Take human subject protection for example, investigators always consider ethical review as an extra burden hampers their research. Because of the general ethical guidelines in China, it is difficult to outline practical measurements directly, while it leaves institutions a lot of space for intellectual design. It is imperative that institutions set up more supportive infrastructures, e.g.: consulting service, tailored training and so on besides top-down policies. On the other hand, researcher should be more proactively seeking for higher ethical standard to make sure their research quality, e.g.: apply for ethical review before initiation of the research, delegate qualified personnel to particular tasks, streamline management during the whole research process, responsive to problems identified in a timely manner and so on. More generally, an atmosphere should be constructed to develop a more responsible relationship among research, researchers and institutions.
Conclusion: Globally, we are in an evolving process of updating research integrity, it is imperative that we surface the problems and learn from each other. Sharing our experiences from China may help to inform others of the challenges and possible strategies for developing shared responsibilities among institution and researchers.

Poster Walk: Education and training 1

PM-046

Fostering research integrity in future researchers through discipline-tailored RCR courses for PhD students

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PhD students of different disciplines are embedded in academic cultures that vary in research paradigms and methodological approaches. Because of this, ethical challenges differ, as do grey zones in responsible conduct of research (RCR) issues such as authorships and plagiarism. As well, RCR comprises dilemmas and active choices. For effective training, RCR course contents should be tailored to disciplines, and both awareness, reflection, and discussion are required to build competences.
This contribution presents the framework for the RCR course for PhD students that has been developed at University of Southern Denmark (SDU). The presentation outlines course structure, organizational setup, and underlying didactical principles. Furthermore, possible future improvements are discussed.
Initiated and coordinated by the university library, the course is offered to all newly enrolled PhD students, in versions that are tailored to each of the five main areas of Humanities, Social Sciences, Technical Sciences, Natural Sciences and Health Sciences. All courses follow the same modular structure.

To take disciplinary differences into account, while still ensuring identical overall learning outcomes, all courses are taught by a combination of library personnel and faculty. The central coordination by the library ensures a transparent and identical course structure across the main areas.
Much RCR teaching is targeted at obtaining compliance. The ambitions of the RCR courses at SDU are higher. The main objective is to contribute to PhD students' ability to conduct research in accordance with scholarly rules, principles and guidelines on international, national and institutional levels. By completing the course, participants get to understand the basic principles of RCR and grey zone areas, and will be able to account for their own PhD projects in terms of the principles. As well, participants will be able to actively integrate RCR principles in future research.
To obtain these objectives active reflection among course participants is required. For that reason, courses are arranged in small classes (max. 20 participants). Lectures are short and run in combination with group-based learning tools such as board games and peer-to-peer project feedback. Fact-oriented contents such as laws and regulations are communicated in online sessions.

PM-047

A survey on fostering research integrity in Chinese universities

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On March 31, 2016 Notice of the Communist Party of China Group of the Ministry of Education about Accountability mechanism on Strengthen the responsibility of scientific integrity Fostering was issued. It requires that universities foster scientific integrity and report the details of them to the Ministry of Education for more than two year. This survey intends to investigate the status of scientific integrity fostering in Chinese universities.
According to requirements of NPGCCPMERI, the questionnaire was designed. The survey ran in the spring and summer of 2018. 280 responses had been submitted. 251 valid samples were obtained. All collected data were analyzed by SPSS21.0 statistical software. Hypothesis 1 and 3 were analyzed with Cross Tabulations. Hypothesis 2 was analyzed with Frequency Analysis.
Through the survey, it is found that: the leaders attaching importance to scientific integrity, announcing the results of the investigation, establishing the integrity committee, and announcing the annual report, those four aspects have a very significant relationship with the decrease of scientific misconduct (the above factors are arranged in descending order).
· The conditions for the implementation of the representative work system in a large range in China are still not mature;Compared with other organizations, medical colleges have shown significant differences in most factors. So we suggest that the work of those above mentioned four aspects should be strengthened; Representative works evaluation system should be methodologically improved; Chinese Universities should learn from medical colleges and promote the fostering of scientific integrity.

PM-048

Research integrity course for PhD candidates at Tilburg University
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Tilburg University, Tilburg

Objective: Presentation of and receiving feedback on the Tilburg University Research Integrity Course.
Method: Looking back at the evaluation by the sounding board of the pilot course offered in May-June 2018 and showing what progress was made during December 2018-May 2019.
Results: Research integrity issues at Tilburg University prompted the Board to set up a task-force to prepare and implement a mandatory research integrity course for all (new) PhD Candidates. The pilot version was run in May (1 full day) and June (half-day) combining preparations of the participants, lectures and workshops. The evaluation of the pilot course resulted into an adjusted design: the participants will prepare by means of 4 online modules, reading a book on research ethics and submitting an assignment. The actual course takes the form of a 1 day training with lectures, discussion of the assignment with supervisors and parallel interactive workshops. The participants will be provided with a certificate stating that they took part. The course is part of the institutional duties of care as formulated in chapter 4 of the new 2018 "Netherlands Code of Conduct for Research Integrity".
Conclusion: Although research integrity is first and foremost a habit or virtue, a formal course is set to contribute to the development of this attitude.

PM-049

Mainstreaming research ethics and integrity training as part of research education

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The perception is well known that research ethics and integrity training is (a) often seen as an add-on to the curriculum, (b) a compliance activity (c) and associated with the four cardinal sins (unethical research on humans, plagiarism, fabrication and / or falsification of data) on how not to behave in research. The counter arguments are known too, namely that research ethics and integrity training is no tick box approach but a fundamental part of research education. In "Get ready, get set, go! Preparing for your doctoral studies and doctoral education" (Laetus OK Lategan, editor. Bloemfontein, South Africa: Sun Media) this challenge was addressed through taken two specific approaches. Firstly, research ethics and integrity were mainstreamed in a model reflecting on the research process and secondly to link research ethics with the responsible conduct of research (contribution in book by Lategan, Sempe & Tilley). This paper will present this framework highlighting four guiding issues: (a) research ethics and integrity are part of the research education value chain. The value chain suggests a particular outcome of inputs to a process. (b) Research ethics and integrity can be informed by the four international acknowledged principles of bio-ethics (autonomy, respect, no harm and justice) to confirm the importance of universality, (c) research ethics and integrity go beyond the (bio-)medical sciences and should become part of STEM sciences in general and human and social sciences in particular. (d) Respectful research is a way to secure the integrity of the process and as ethical guide, addresses the vulnerability of the research participant. The application of this framework will be discussed against the background of research on a public health ethics framework for geriatric patients. The usefulness of the framework will be reported based on observations of and discussions discussions ethics training for academic staff and postgraduate students.

PM-050

How may I teach you something if I do not know what and how to do it? Evaluating existing research integrity training programs

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Even though several Research Integrity (RI) training programs have been developed in the last decades, it is argued that current existing training practices have been failing to reduce research malpractices within the scientific community. Defining and understanding capacities and lacunas of current RI training programs is becoming of extreme importance to develop up-to-date educational trainings to tackle present-day challenges. Performing in-depth consultations is a primary necessity to understand and outline how RI trainings should be conducted. For this reasons, different focus groups are being conducted in order to collect qualitative data through discussions among the stakeholders on issues related to educational resources in relation to their experiences and in connection to their opinions about RI training programs at European level.
Seven different focus groups, lasting approximately one hour and involving around eight people, are being conducted. Six stakeholders' categories, from commercial and non-commercial organizations and involved (in)directly in RI training programs, have been identified in order to have a broader overview of the state of the art of RI educational practices. Publishers, trainers, researchers involved in RI, funding agencies, PhD students and Post-Docs, policy makers and stakeholders from the private sector are being actively involved in the discussion. Contents, structures, and assessment of training programs and role of the trainers will be discussed during these consultations and the results will be in-depth analyzed to delineate the current state of the art and to identify what is needed to implement existing educational programs. The analysis of the consultations as well as the research outcomes will be ready at the time of the conference.
The outcomes of the focus groups will provide an important overview of the existing RI practices and resources across disciplines and groups of stakeholders. This research will become very important in understanding what may be the more consistent way to structure RI training programs for new researchers' generations.

PM-051

Building a responsible conduct of research (RCR) training programme: a perspective from the University of Cape Town

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As a leading university in Africa, it is imperative that any training programme developed by the University of Cape Town's (UCT) Office of Research Integrity (ORI) responded to its African context. The RCR training environment in Africa is not well-established; general complacency toward engagement with RCR topics persists. Complacency arises as it is not viewed as instantly beneficial to researchers. Here we outline the journey taken toward developing RCR training to meet institutional needs and contexts.

RCR training can impact many areas of researchers' careers: attracting funding; sharing data; publishing in high-impact journals and, navigating demands of fair North-South and South-South collaborations. In this context, equipping researchers to understand and navigate these demands must form a key part of RCR training. Additionally, we must acknowledge the potential positive reputational impact that RCR training could have on individual researchers, research teams and the institution. A robust training programme has the potential to start a constructive feedback loop, allowing institutions to attract world-class researchers and high-impact funding opportunities, further enhancing institutional reputation.

Global South institutions experience different challenges to the Global North (a fact recognised by a large volume of scholarship and initiatives such as COHRED's Research Fairness Initiative). In the context of increased collaborations, the South are at risk of exploitation by the better-resourced North; burdened by lack of capacity; heavy work-loads and, the immediate demands of their own geopolitical and social contexts.

Equipping researchers with knowledge and tools relating to RCR matters and, shifting attitudes towards RCR must be addressed as part of training initiatives. There is little capacity development in RCR in Africa, this is where we have tried to make a difference. By building a strong, responsive institutional training programme we have taken the first step towards capacity development. Our focus has been on creating an environment where 'good' researchers can flourish, and to give people the tools to cope with and address regional RCR challenges.

Thus, in developing our training programme, we needed to be sensitive to the challenges of our context but also take advantage of our position as a leading institution in Africa, for Africa.

PM-052

Education concept on research integrity in governmental research institute in Switzerland

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Educating research integrity (RI) in a large multidisciplinary research institute is a challenge. There are some similarities to training courses for safety aiming to achieve an intended behavior in order to avoid damages and to foster quality. However, the complex processes of research activities demand a deep internalization of values and principles rather than just following a list of rules.

Directives such as guidelines are the basis for education. Since about 10 years PhD students at PSI have to participate in a classroom course on our RI guidelines. Participation of postdocs and principal investigators in annual workshops on ethical issues are not yet mandatory and thus the awareness to RI rise in most cases only after a conflict emerged.

In order to reach all researchers we have decided after a market survey to develop together with an external professional the eCourse "RI in research". The resulting interactive course presents basic principles and values as they are outlined in our guidelines and also provides practical examples. In a pilot phase, this eCourse was executed by PhD students before their participation in the face-to-face course which was followed by a test of 10 multiple choice questions. The feedback of the students showed a good acceptance of this concept (score 3.8 of 5, n=33). Generally, the eCourse of about 25 min. duration and the attendance course with embedded discussion of 1.5 h duration were well appreciated. The students confirmed that after these two parts that they gained relevant and useful insights for their practical work that was the intention. Some test questions, however, were too demanding and some students found knowledge of ethical definitions less helpful for their daily work. We adjusted these questions, but maintained a high level of precision in ethical terminologies.

The eCourse module "RI in research" is now used for blended learning of all PhD students at PSI. The pressure on supervisors to know the content of this course has increased and the course is now also accessible for postdocs and PIs. More details on the concept, evaluation of training on RI will be given in the presentation.

Poster Walk: Education and training 2

PT-053

Phronesis: a crucial decision-making skill for researchers conducting community research
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The changes in the way research is being conducted places more and more challenges to researchers and specifically health researchers conducting research in various community contexts. The health researchers conducting research in communities are often faced with unanticipated ethical issues in the course of their research that could not have been predicted before the onset of the research process. The focus of this presentation will be on the findings of a qualitative study exploring whether community intervention researchers use practical wisdom (phronesis) as a decision-making skill to solve these unanticipated ethical issues during research in the community. Expert researchers were invited to take part in a semi-structured focus group. It became obvious that phronesis forms an integral part of their everyday existence and decision-making during community intervention research. The capacity of practical wisdom should be assimilated into a researcher's everyday reality. It is crucial that young researchers should be mentored to become phronimos. Researchers should be taught this skill to handle unanticipated ethical issues.

PT-054

Responsible research and innovation training programs: implementation and evaluation
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Objective: As defined by von Schomberg, Responsible Research and Innovation (RRI) is a transparent process in which society and innovators become mutually responsive, with a view on ethical acceptability, sustainability and societal desirability of the innovation process. Higher Education Institutions and Responsible Research and Innovation, or HEIRRI, is a Horizon 2020 project that aimed to integrate RRI into education of future scientists and other professionals. It developed training programs for different levels of education, from secondary schools to postgraduate levels. Our objective was to perform those pilot training programmes and evaluate the pilot experiences.
Methods: Pilot matching and schedule implementation were developed considering characteristics and curricular possibilities of participating institutions. For evaluation, surveys were developed for participants and trainers. Surveys addressed participants' reaction to the programs, their perceptions and attitudes towards and intentions for future use of RRI. Each survey had questions on demographic data, Likert type statements (1 to 7 range), and open ended questions.
Results: In total, 37 pilots were organized in 15 higher education institutions, 5 project consortium and 10 non-consortium institutions. 554 participants and 48 trainers completed the surveys. Satisfaction with the programs was high (M=6, 95% CI 5-6), as well as participants' attitudes towards RRI (M=5, 95% CI 4-5) and intentions for future use of RRI (M=6, 95% CI 6-7). Non-consortium participants were more satisfied and expressed greater intention for future use of RRI principles ($P<0.001$, Mann Whitney test). Participants also found the courses to be a good introduction to RRI, with appropriate design and relation to their work. Their comments had a high rate of positive and cognitive words, which indicates a high level of involvement in the topic they were writing about. Suggested improvements were more real world examples and more allocated time and flexibility of the activities.
Conclusion: HEIRRI training programs showed to be well accepted and easily integrated into curricula. They can be used to introduce RRI to different levels of education and general public, and are freely available at RRI Tools (https://www.rri-tools.eu/heirri-training-programmes).
This research was conducted as a part of the HEIRRI project.

PT-055

Identification of essential virtues addressed in ethics and research integrity training: a scoping review

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Objective: Most approaches to ethics and research integrity (ERI) training are principle-based, but it has been argued that approaches focusing on compliance but neglecting researchers' moral and value development fail to equip them for the complexities of real life research and situations not covered by rules and codes. The European project VIRT2UE takes a primarily virtue ethics approach to research integrity in order to develop a train-the-trainer learning programme enabling contextualized ERI teaching across Europe. The aim of this study is to identify gaps in the virtue-based research training, to clarify key scientific virtues and to report on the types of evidence that address scientific virtues in ERI training.
Method: We will conduct a scoping review of the academic literature dealing with virtues addressed in ERI training. In order to include any existing literature which evaluated or reported on scientific virtues addressed in ERI training, we developed a search strategy based on the following concepts: 1) research integrity, 2) research ethics, 3) principles of European Code of Conduct for Research Integrity, 3) scientific virtues. We will include experimental, quasi-experimental, controlled before and after, before and after, and interrupted time series studies published in Medline, Scopus, Web of Science, ERIC, and PsycINFO. Two independent reviewers will assess documents for eligibility, initially reviewing titles and abstracts, and then the full text of those deemed eligible. We will follow the methodology and guidance for the conduct of scoping reviews developed by members of the Joanna Briggs Institute and members of five Joanna Briggs Collaborating Centres.
Results: At this stage, we conducted the preliminary search of Medline which retrieved 7898 articles. Title and abstract screening excluded 7829 articles, leaving 69 article for full text analysis. The same search will be adapted to other 4 data bases and the full set of selected article will be included in the synthesis of evidence.
Conclusion: The results of this scoping review will inform the future efforts in scientific virtue training by providing evidence regarding which virtues should be stimulated and developed in training for good research practice.

PT-056

Designing and implementing research integrity online training

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In 2018 the Queensland University of Technology (QUT) developed and launched a new online training program about the responsible conduct of research, called "Research Integrity Online" (RIO). This novel training is based on the new Australian Code for the Responsible Conduct of Research, and is consistent with global codes of conduct for research.
RIO aims to provide a concise and engaging introduction for researchers to the responsible conduct of research. The course includes a variety of multimedia including animated videos, short interviews with academics from a variety of disciplines, interactive case studies (that provide feedback based on user-choices), and interactive menus.
At QUT RIO is required training for all researchers and for all staff engaged in research management and support.
This presentation will outline the context and rationale for designing the new course. It will provide an overview of the course structure, course content, and techniques used to develop the materials in an interactive and engaging way.
We will also outline learnings from quality improvement analytics showing engagement times, quiz attempts, completion rates for staff vs. students, and the varying difficulties of different quiz questions in the random pool.

PT-057

Training early career scientists to use meta-research to understand and solve problems: a participant-guided "Learn by Doing" approach

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Objective: This "learn by doing" participant guided program was designed to train early career researchers to use meta-research to identify, understand and solve problems with scientific research. After completing the program, participants will be able to apply their skills to address problems in their respective fields.

Methods: Early career researchers participating in the eLife Ambassadors program were invited to join the meta-research initiative, in which members work together to propose, design, conduct and publish a meta-research study. Program elements included learning how to develop research questions, designing meta-research studies, identifying sampling frames, selecting data sources, developing screening and abstraction protocols, data abstraction and analysis, developing solutions based on meta-research data, strategies for communicating results and manuscript preparation.
Results: The ten meta-research team participants included graduate students, post-docs and new PIs working in diverse fields, including cancer biology, cell biology, developmental biology and plant sciences, at different institutions in the United Stated and Europe. Most had not heard of meta-research before joining the program. After learning about meta-research by reading published studies, each participant developed his or her own project ideas and assessed feasibility. All ideas were critically discussed on team calls, where participants provided suggestions to strengthen study designs. Some participants obtained preliminary data. The group selected one team members' project on examining reporting quality for images in scientific publications in cell biology, physiology and plant sciences to complete as a group. Participants worked in pairs to lead different stages of the project. The three subject areas were selected based on participants' research interests and team members with programming skills developed customized data collection tools. The group has completed screening to select articles, developed a data abstraction protocol, completed abstraction training, and is currently abstracting data.
Conclusion: The initiative demonstrates the feasibility of using a participant guided "learn by doing" approach to teach meta-research skills to early career researchers. The team took advantage of participants' diverse areas of expertise to strengthen the project. Several participants are developing protocols for their own proposals and plan to use their skills to address problems in their respective fields after completion of the project.

PT-058

Using training to positively reinforce best practice in research

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Objective: At the Cancer Research UK Beatson Institute we have introduced mandatory research integrity training for all researchers, from PhD students to PIs. We use this training to underpin our research integrity policies, promote best practice, and raise awareness of research integrity issues that are relevant to all of our researchers.
Method: We wanted to move beyond simply introducing policies or policing misconduct to an environment where researchers have the knowledge and tools to conduct high quality research. Our Institute is relatively small (350 researchers) and our research is focused on cancer cell biology, enabling us to provide pertinent and very targeted training.

Results: We identified areas where we could provide training to cultivate best practice into standard practice. Our goal has been to ensure the generation of robust, reproducible data and to give our scientists the confidence to conduct their research responsibly. We deliver research integrity training as face-to-face workshops to small groups of researchers in a relatively informal setting to encourage discussion. We start with an induction session to introduce concepts, policies, expectations and support. With CRUK being a signatory of the UK's Concordat to Support Research Integrity, we use this as a framework to structure this preliminary session. We then move on to sessions on avoiding plagiarism in scientific writing, guidance on managing data from collection to long-term preservation and sharing, data processing and acceptable use of image software such as Photoshop, and finish with statistical guidance for designing experiments and analysing data. This training is not provided in isolation as important messages are also reiterated during technology and tool training elsewhere in the Institute. Overall, we aim to keep the training fresh and interesting by discussing issues highlighted in journal editorials, on RetractionWatch and in the national press.

Conclusion: By embedding research integrity training as everyday and across the board, we have created a culture of best practice that is supportive, open and above all practical. We have anecdotal evidence of the benefits of this training but have yet to establish a more formal way of measuring its impact.

PT-059

The education of responsible conduct of research for the students in both general and medical universities

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Jichi Medical University

Objective: The purpose of this research is to consider the education for developing students' consciousness of responsible conduct of research at the universities in Japan.
Method: To prevent various research misconducts, effective education at university are important. In this study, we can see two examples; one is the class at the University of Tokyo as a representative for general universities where students will land various occupation such as public officials, business people, scientists, researchers, engineers and so on. The other class is from Jichi Medical University as a representative of the special university in Japan, where students here will be medical doctors someday.
The respondent of this research are the freshmen and sophomore students. Optimizing the early years of our students is the best investment we can make in order to develop the awareness of research integrity. Each class has 10 lessons per semester. We discuss the theme using the materials of case study, newspapers and documentary films. Before and after the semester, we conducted pre and post survey using the questionnaire we prepared where to measure the level of understanding about research integrity.
Results: Based on the survey we conducted, it was recognized the effectiveness of understanding about responsible conduct of research in both classes. There were differences in the topics that they expected. Some kind of social topics including political and economic factors were felt desirable for the students at the University of Tokyo. Topics on life science, medicine, pharmacology and communication etc. were felt desirable for the students at Jichi Medical University.
Conclusion: In this research, we have seen two different preferences regarding the desirable topics of the Japanese students about "research misconduct". As a result of this study, it confirmed hints on effectiveness and educational ingenuity respectively. We will continue to improve and further aim for better education.

Poster Walk: Investigating research misconduct 1

PM-060

Lessons learned from a misconduct case with deception and obstructive efforts
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Research misconduct is defined as fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results (United States Public Health Service [PHS] Regulations 42 CFR § 93.103). Misconduct proceedings become challenging when the respondent is deceptive and uncooperative. This communication describes a case in which the respondent mislead the investigation committee and obstructed the efforts of the institution to resolve the allegations of falsification and fabrication of data and how the institution and the Office of Research Integrity (ORI) uncovered the deceptive efforts. While the initial investigation at the institution determined that there was a lack of evidence to make a finding of research misconduct, additional efforts and forensic analyses of the electronic data files revealed unequivocal evidence of data falsification and fabrication. The respondent's obstructive efforts, including corruption of computer files and fake witness statements via emails and phone conversations, finally were uncovered. While outwardly corporative, the respondent obstructed the investigative process by evading scheduled committee interviews and then provided fake documentation to justify the failure to comply. When provided with the undisputable evidence of data fabrication and falsification, the respondent admitted to committing research misconduct and agreed to a seven-year period of exclusion from eligibility to be supported by funds from the Federal Government. Many lessons learned through the handling of this case are valuable for handling of future misconduct cases.

PM-061

Analysis of research misconduct in various academic programs of universities in Nepal
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The main objective of the study is to analyze the research misconduct in academia in Nepal. Research misconduct in Nepal involves among students and academic faculties member of university and colleges.In order to conduct the study, various methods such as review of literature, national news, government and universities reports regarding research misconducts among the researchers have been investigated thoroughly.In this study, the research misconduct information on various academic programs of university has been categorized in order to find which academic programs faculties and students involved in increasing number of research misconduct and academic dishonesty while conducting research activities.The analyzed results indicate that the majority of faculties from the university were found to have research misconduct for getting of promotion in their position. Various research misconducts include copying of same ideas, paragraphs in partial or full without citation or acknowledgement of the original authors' articles. The article published with such misconduct has not been strongly looked into investigation because of no widely freely available software for checking plagiarism. Furthermore, the students were also been involved in research misconduct thereby buying and selling of thesis for the master's degree fulfillment from the university. These trends were noticed for the majority students of humanities and management programs. In addition, in engineering programs, there exist small magnitude of research misconducts such as including the name as co-authors without any efforts in the specific research activities and depth of knowledge of the particular subject matter. This research misconduct was done for getting recognition and increasing the points in the published article for promotion from lecturer to associate professor position in the university. Various research misconducts were examined during the study particularly in the academic sectors of different departments and programs of University. The trend could be more increasing if no proper solution and measures are taken in time. Since university grants commission of Nepal has guidelines for research misconduct, it should be effectively implemented in all academic sectors for fostering research integrity. Besides, it is suggested that the knowledge regarding research ethics and guidelines should be given to students, technicians and even principal investigators before conducting the research work in context to Nepal in order to produce next generation researchers for excellent research environment in academia.

PM-062

Hyperprolific authorships: lessons learnt from the investigation of a research misconduct case
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Objective: In 2016 the Norwegian Commission for the investigation of research misconduct investigated allegations of research misconduct in a hyperprolific authorship. The investigation was the first of its kind in Norway and possibly worldwide.
Method: The investigation was conducted according to statutory law. The Commission appointed experts in bibliometrics and in the relevant field of research. In addition, a selection of the published articles was checked using a plagiarism detection tool. The accused researcher declined to contribute to the investigation.
Results: In Norway, governmental research funds are partly administered through a weighted funding model, of which one part is a National Publication Indicator. The researcher had been allocated a considerable part of this funding. He was registered with 392 scientific publications between 2009 and 2016 in Web of Science, with a sharp increase from 2012 to 2013 coinciding with a change in the publication profile. The high amount of publications and the publications' global profile complicated this investigation compared to other investigations. The investigation focused on the following possible breaches of good scientific practice: authorship recommendations, the use of specific publication strategies such as Least Publishable Unit and salami-publishing, plagiarism, double-publications ("self-plagiarism"), breaches of good citation practices and systematic co-operation in the form of publishing clubs or citation cartels. The Commission found some breaches, but research misconduct could not be proved according to the legal requirements in Norway (clear preponderance). The Commission criticised the university for lacking a system for ethical management of its institutional publication strategy. In addition, the Commission criticised the Ministry of Higher Education and Research for the management of the National Publication Indicator and gave recommendations for strengthening the ethical impacts of the indicator.
Conclusion: Investigating a hyperprolific author for alleged research misconduct is complex and costly, and new methods had to be developed for parts of the investigation. The statement given by the Commission was well received by the scientific community, however less so by the Ministry and governmental bodies.

PM-063

Increasing listing of journals on the ICMJE website: is it a trap to attract more submissions?
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Objective: To discuss the increasing list of journals on the International Committee of Medical Journal Editors (ICMJE) website over the last 10 years and to evaluate if these listed journals have characteristics of potential, probable or possible predatory journals.
Methods: A total of 4645 journals were listed on the ICMJE website (on 05 October 2018). A total of 500 journals (n=100 from each year [2014 to 2018]) were randomly selected for this analysis. Each journal site will be visited and evaluated for characteristics of potential, probable or possible predatory journals. Data will also be collected to note if any of these journals were listed in the Beall's list of predatory journals/publishers (now defunct). Additionally, each journals' 'instructions to authors' will be evaluated to check whether the journal mentions that the manuscript should be prepared according to ICMJE recommendations and if it shows ICMJE's image on the website.
Results: Of the total 4645 journals, 4055 were listed in the last 10 years and 3393 in last five years (2009 to 2018; n=42, n=156, n=125, n=218, n=121, n=567, n=613, n=610, n=694, n=909, respectively). The data will be ready for presentation and will include how many of the listed journals (last five years) had characteristics of potential, probable or possible predatory journals, if any of these were listed in Beall's list, ICMJE recommendations in 'instructions to authors' and use of ICMJE's image on the website. Any other significant findings will be captured and presented at the meeting. unfortunately, a significant number of authors or researchers are still not aware of predatory or fake or pseudo journals and ICMJE's stand on this. These researches may fall into the trap by seeing ICMJE's name (and many other names) on the journal's website and end up in submitting their work.
Conclusions: Currently, data collection is in progress and results will be available for presentation at the conference. Results would possibly demonstrate the trend of journals listing on ICMJE website and its possible use as a marketing tool or trap to attract more submissions from eager to publish researches.

PM-065

Selective citation in the published literature on the association between diesel exhaust exposure and lung cancer risk: a citation analysis

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Objective: Development of knowledge depends on an unbiased representation of evidence. Selective citation may thwart this unbiased representation. The epidemiological research on the association between diesel exhaust exposure and lung cancer risk had some **Method:**ological challenges that gave rise to different interpretations and intense debate between proponents and opponents of the existence of this association. This has raised the question about the role of selective citation, and citation bias in particular. Specifically, we aimed to assess which factors determine the citation of previous publications in this field.
Method: We identified all published literature in Web of Science Core Collection on this topic. We extracted data on characteristics such as authors' conclusion, study design, sample size, funding source, gender, affiliation, and authority. We also looked at self-citation. To assess the impact of these characteristics on citation, we performed a series of univariate random-effects logistic regressions, with the potential citation paths as unit of analysis.
Preliminary Results: A total of 96 publications were identified: 40 cohort studies, 34 case-control studies, and 22 reviews. Forty-nine of these publications were supportive, whereas 11 were non-supportive, 22 had a mixed or unclear conclusion, and 14 publications did not state a conclusion on the association between diesel exhaust exposure and lung cancer. Out of the 4317 potential citations within this network, 674 citations did occur (16%).
Preliminary results suggest that there is no citation bias in this field: supportive and non-supportive publications have a similar chance of being cited. Study design was related to citation: narrative reviews had a smaller chance of being cited compared to case-control studies, cohort studies had an equal chance, and systematic reviews had a higher chance. Other factors related to citation were: journal impact factor, authority, self-citation, sample size, and continent. Publications from North-America were more and those from Asia were less likely to be cited compared to European publications.
Conclusion: There is evidence for selective citation within this field, but not for citation bias. It is unlikely that this selective citation has an impact on the development of knowledge, as supportive and non-supportive findings are cited in a representative manner.

PM-066

Confronting research misconduct in unregulated research

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In the United States and other countries, research misconduct is typically investigated and penalized by academic institutions and/or central government funding agencies. However, new research approaches such as "citizen science" can avoid these regulations due to the ways in which they are conducted. For example, they might not be supported by public funds, might not include conventional academic researchers, and might not be disseminated via typical publication practices.
Surely this research is not immune to misconduct, but it may well be immune to the typical research misconduct consequences of funding revocation, grant debarment, or employment termination, not to mention not subject to existing oversight mechanisms.
How could we treat a case of scientific misconduct in the absence of our traditional mechanisms? And more broadly, what does this imply for ensuring scientific integrity in these new research approaches?
I will briefly describe conventional approaches to research misconduct and some of the new unconventional research methods giving rise to the problem. I then consider alternative mechanisms, ranging from tort law to professional responsibility to a proposed "research integrity insurance" that might be deployed to address these cases in the future.

PM-067

Do papers report information needed to assess the risk of bias?
A systematic review of papers using common animal models to study preeclampsia
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Objective: In this systematic review, we sought to determine whether papers that use common animal models of preeclampsia report information needed to assess the risk of bias
Methods: PubMed and EMBASE were searched to identify original research articles using animal models of the pregnancy complication preeclampsia that were published between January 2000 and September 2016. The search strategy included terms for preeclampsia and other hypertensive pregnancy disorders, and published term lists for identifying animal studies. Two independent reviewers followed standardized screening and abstraction protocols. Detailed information that was abstracted from English and Spanish language papers that included a common preeclampsia model (>20 publications). The study was conducted in accordance with the PRISMA guidelines but was not pre-registered.
Results: 328 English and Spanish language papers included one of the eight common preeclampsia models. Most papers used a single preeclampsia model (n=299, 91.6%). 24 papers (7.3%) used two models and 5 papers (1.5%) used three models. Two studies were performed in baboons; the remaining studies were conducted in mice or rats. Only one paper reported a power calculation. Authors reported using randomization to assign animals to preeclampsia model vs. control groups in 35.3% of studies, and to treatment vs. no treatment groups in 31.1% of studies. No study specified the randomization procedure. 41 papers (12.5%) did not report whether blinding was used for any measurements. The remaining papers (n=287, 87.5%) specified that blinding was performed for some measurements, but provided no information about blinding for other measurements. Animal age was reported in 31.5% of papers and weight was reported in 45.1% of papers. Other important details, including parity (13.1% of papers), diet (12.8%), inclusion and exclusion criteria (17.1%) and the number of excluded animals and reasons for exclusion (2.8%), were rarely reported. It was difficult to determine whether animals may have been excluded without explanation, as 63.7% of studies (n = 209) did not clearly report sample sizes in both the methods and results.
Conclusion: Interventions to improve reporting are urgently needed, as most studies using common animal models of preeclampsia are missing information needed to assess the risk of bias.

PM-068

A question of seriousness: measuring integrity breaches in an Australian context
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In June 2018 Universities Australia, the National Health and Medical Research Council and Australian Research Council released a new Australian Code for the Responsible Conduct of Research (the Code) articulating broad principles designed to promote an honest, ethical and conscientious research culture. The accompanying Guide to Managing and Investigating Potential Breaches of the Australian Code for the Responsible Conduct of Research (the Guide) sets out a model for managing and investigating potential breaches of the Code. The Guide specifies that breaches fall on a spectrum ranging from minor (less serious) breaches to major (more serious) breaches, with 'research misconduct' being an optional term defined as 'a serious breach which is also intentional, or reckless, or negligent.' The overall approach represents a shift away from a simple definition of research misconduct towards a greater reliance on interpretation by individual institutes. This is likely to challenge institutes that receive relatively small numbers of cases, and do not have ready access to independent disciplinary expertise.

This paper will present the findings of a pilot study we will conduct to determine a) whether there is any consensus in academic perceptions of the seriousness of breaches and b) which parameters most strongly influence these perceptions. An online survey containing 36 vignettes constructed to differ on key parameters will be administered to a convenience sample drawn from a population of academics at several Australian universities. We will examine how key factors derived from the Guide (consequences resulting from the breach, mitigating factors, aggravating factors, and intentionality) serve to delineate serious from non-serious breaches with the aim of promoting consistency across institutions in managing breaches. Differences between the Australian and international context in categorising the seriousness of breaches will also be discussed.

PM-069

When research misconduct involves potential criminal behavior: new collaboration strengthens protection of US biomedical research funding

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Objective: To describe cooperation between the U.S. Department of Health and Human Services (HHS) Office of Research Integrity (ORI) and the Office of the Inspector General (OIG) when allegations of research misconduct appear to involve potential crimes.
Methods: ORI and OIG have identified several key issues for which information exchange between the offices is appropriate because they may involve criminal behavior with Public Health Service (PHS) funding. These issues include, but are not limited to, theft of intellectual property, diversion of funds, and improper equipment transfers.
Results: ORI's statutory authority (42 Code of Federal Regulation part 93) aims to protect the health and safety of the public, promote the integrity of PHS supported research and the research process, and conserve public funds. Under the statute, ORI cooperates with HHS research funding entities aligned under the PHS, particularly the National Institutes of Health as the largest funding agency within HHS. ORI also collaborates in joint jurisdictional matters when more than one U.S. government department or agency provides funding to a grant in which allegations of research misconduct arise. OIG conducts audits, evaluations, and investigations to detect and prevent waste, fraud, and abuse in over 100 HHS programs. Because of concerns about intellectual property in general, ORI granted OIG access to our database in 2018 for them to monitor whether ORI's active investigations overlap with theirs. In addition, ORI actively notifies OIG when behaviors suggesting criminal activity arise in the course of a research misconduct investigation. OIG's work proceeds independently of ORI's, and ORI must rely on OIG's direction if in fact they uncover criminal activity irrespective of the alleged research misconduct.
Conclusions: ORI's relationship with OIG provides an added layer of scrutiny to ensure that both ORI and OIG can take appropriate actions to protect U.S. biomedical research investments. The collaboration already has provided new opportunities for technical and investigatory assistance.

PM-070

Managing research misconduct: the European Research Council (ERC) – strategy and practice

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In October 2012, the European Research Council (ERC) issued a strategy for identifying and addressing scientific misconduct, the first such policy from a research-funding agency on the European level. The Poster presents the strategy, the administrative procedure implementing it, the actors involved in the process, and statistics on the cases dealt with since 2012.
The mission of the ERC is to support research at the frontiers of knowledge in a pan-European competition in which grants are awarded on the sole criterion of scientific excellence. A necessary conditions to make ERC competitions fair and efficient and to maintain the trust of both the scientific community and society as a whole is to uphold ethical standards at all stages of the competitive process, and to maintain and promote a culture of research integrity.

An essential part of this task is to detect and treat vigorously any allegations of scientific misconduct and to counteract decisively all practices involving it. To this end, the ERC Scientific Council has delegated to its Standing Committee on Conflict of Interests, Scientific Misconduct and Ethical Issues (CoIME) the responsibility for dealing with conflict of interest, fraud and ethical matters related to any facet of the ERC's competences. The CoIME works closely with the ERC Executive Agency (ERCEA) to address all cases of suspected scientific misconduct that come to the attention of the ERC, with the purpose of reinforcing the ability of the ERC to take appropriate follow up actions.
An administrative procedure to handle incoming information on scientific misconduct, as well as a strict policy on conflict of interest reflected in the Code of Conduct of ERC peer reviewers, strengthen the capability of the ERC to deal efficiently and effectively with infringements of research integrity and ensure timely follow-up actions.
Since 2012, the ERC has handled an average of 13 cases per year, including cases of conflict of interests of peer reviewers; plagiarism; manipulation, falsification and fabrication of data; incorrect authors' ordering in publications; misrepresentation of data in proposals. The ERC strategy on scientific misconduct provides for record keeping and reporting of cases. They are published in an anonymised way on the ERC Web site.

PM-071

Bibliometric and linguistic analysis of research integrity and research ethics concepts in articles: a cross sectional study of three bibliographical databases
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Objective: The aim of the study is to quantitatively and qualitatively analyze the research output in the field of research integrity (RI) and research ethics (RE).
Method: We conducted two separate searches for the terms "research integrity" and "research ethics" in the Web of Science, Scopus and PubMed. Only research articles will be included in the analysis: randomized and non-randomized trials, control before-and-after studies and observational studies (cross sectional, cohort and case control studies). We will use the Linguistic Inquiry Word Count (LIWC) software to analyze the text in the articles to compare differences in prevalence of moral expressions according to the Moral Foundations vocabulary between different types of publications and between different RI and RE.
Results: The first search retrieved significantly more research articles for RE (10035 results for PubMed; 8035 for Web of Science and 8426 for Scopus) than for RI (590 results for PubMed, 860 for Web of Science and 514 for Scopus). We will visualize the RI and RE research fields in terms of published research output as well as the collaboration structure. We will also compare the RI and RE research publication in terms of Moral Foundations vocabulary .
Conclusion: This study will help us better understand the structural characteristics of the community in the RI and RE research fields, including collaboration and knowledge sharing. We will also provide insight into possible linguistic differences which may help differentiate between the terms RI and RE and to quantify the overlap between areas.

Poster Walk: Investigating research misconduct 2

PT-072

Self-reported and observed breaches of FFP and QRP among Norwegian researchers
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Objective: In a meta-analysis of 21 studies, Fanelli (2009) found that up to 2% of the researchers had committed FFP, and as much as 30% QRP. So, is that a near universal figure? Focusing on both self-reported and reported observed breaches of FFP and QRP, and also on attitudes towards FFP and QRP, we address this question through an analysis of survey data on research integrity.
Data and Methods: Data stem from the Research Integrity in Norway (RINO)-survey, distributed to all researchers at Norwegian universities and institutions of research and/or higher learning, with a net response rate of 23,4 (N=7291). Data are subjected to a standard univariate and bivariate analysis.

Results: There is a high degree of normative consensus regarding FFP. The pattern is the same for QRP, even though the variation is higher for some items.
Only a very small minority (0.2%-0.5%) report to have committed FFP, i.e. much lower than Fanelli's findings. Once we turn to reported knowledge of colleagues' FFP, the percentage rise.
- 2% know of colleagues' fabrication of data,
- 2% know of colleagues' falsification of data
- 14% know of colleagues' plagiarizing

The pattern is similar for QRP. Depending on the item, from 2,5% to 20% report having committed a QRP.
- 2.5% report not having informed about uncertainties in data, analyses or conclusions.
- 5% have chosen not to report severe breaches of research integrity, even if this should have been done.
- 12.5% have included irrelevant references in order to increase a colleague's and/or a journal's citation score.
- 20% have copied others' references without consulting the original sources.

Conclusion: We find a high degree of normative consensus regarding FFP-issues. Only a very small minority report having committed such violations of good research ethics. However, QRP are more frequently occurring, even though the analysis of our data do not give the same high percentages as found by Fanelli. Summed up, the more serious a violation of research integrity is found to be, the rarer is its occurrence, either through self-reported practices, or as knowledge of colleagues' practices.

PT-073

Identifying potential research integrity risks through bibliometric analysis of institutional review board cases
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Nanyang Technological University, Singapore

Objective: Nanyang Technological University, Singapore set up an Institutional Review Board (IRB) in 2010. This presentation reports the analysis of over 3400 projects approved by the NTU Institutional Review Board (NTU-IRB) during the period 2010-2018 to identify potential risks related to research integrity.
Method: Heat maps are generated through various filters employed on the data. High frequency terms (with occurrences over 100) in the title of these projects such as "Singapore", "education" and others are filtered out in order to provide better contrast on the evolution of research topics over the years. Correspondingly, relatively low frequency yet prominent terms are detected in the maps for different periods.
Results: During the period 2010-2012, terms like "teaching", "school", "teacher", "child", "assessment", and "knowledge" are prominent, indicating that the main research topics in this period is on education. In the period 2013-2014, new terms like "health", "stress", "development", "psychology", "culture" emerged, indicating research on social science and mental health have surfaced. Subsequently, terms like "identity", "game", "relationship", "disability", "anxiety", "human red blood cell haemolysis", "disease" emerged in 2015-2016, indicating that research topic are shifting to biomedical and health care. During 2017-2018, new terms like "virtual reality", "elderly", "homecare", "influenza vaccine", "barrier", further indicate a shift of research to combat the aging society and communicable diseases. This trend reflects increased risk from the perspective of research integrity as the topics are trending towards research that are critical to public health policy and of higher societal concern.
Conclusion: This work demonstrates the use of maps based on frequency of key terms in IRB approved projects to provide better insight into the risk profile of an institution's research projects. This could guide university to potential areas of research misconduct at an early stage, and come up with internal controls and audit plans for such projects. This heat map can also help to co-relate with incidences of misconduct occurring internationally, and alert institution on related research projects.

PT-074

Research misconduct in doctoral theses in China: types, causes and governance
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Research misconduct in doctoral dissertations had become one of the social focuses of public attention. In this study, six types of academic misconduct in doctoral dissertation were analyzed by using the National Doctoral Dissertation Quality Inspection data. Based on the socialization theory of doctoral students, this paper discussed the causes of research misconduct in doctoral dissertations, as well as presented several strategies for effective governance of research misconduct at the discipline level, institution level and national level.

PT-075

Virtue and vice in the prevention of research misconduct
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Royal College of Surgeons in Ireland Bahrain, Manama

Objective: Our default response to research misconduct has been regulation. Whilst regulation is necessary this is analogous to treating a disease once it has occurred. Might there be other approaches to preventing research misconduct? This presentation examines the potential role of virtue ethics in reducing research misconduct.
Method: This presentation is a theoretical analysis of the significant and emergent field of virtue ethics in relation to research misconduct. It then uses the available empirical evidence from the field of business ethics to examine the possibility of a virtue ethics approach to research misconduct.
Results: Virtue ethics examines the personal values and the "settled dispositions" of the agent, and their subsequent effect on behaviours. It is therefore upstream with respect to outcomes such as good or bad actions. Virtue theory gives a practical framework for the analysis of the agent's internal reasons for action. It sees moral agency as arising primarily from internal moral identity, not from external forces such as regulation. It is of particular value in the analysis of why regulatory systems may fail due to behaviours such as cheating or gaming.
Following on from the work of MacIntyre in particular, virtue theory has been developed extensively across ethics in general, particularly in medical ethics and in business ethics. The challenge therefore is to establish virtue theory as a part of the landscape of the management of research misconduct. Its potential value is as an upstream preventative influence – a carrot that may balance the blunt stick of regulation. Can we build on this theoretical framework, and on the emerging empirical studies in business ethics in particular, to bring in a new paradigm for the management of research misconduct?
Conclusion: This presentation is an initial theoretical analysis. However it brings a powerful and well established theoretical model, together with significant empirical evidence from another field, that of business ethics, to offer fresh insights into the management of research misconduct.

PT-076

Factors influencing understanding of informed consent among people living infected HIV (PLHIV) in pharmacogenetic research: a case study of Infectious Diseases Institute, Uganda
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Introduction: Many studies in sub-Saharan Africa have reported limited understanding by study participants consenting for genetic research, yet obtaining informed consent that is "truly" informed is essential for biomedical research. We assessed factors associated with understanding of genetic informed consent among research participants enrolled in pharmacogenetic studies at the Infectious Diseases Institute, Uganda
Methods: We conducted a cross sectional study between February and May 2018. A Quality of Informed Consent (QuIC) measure tool was randomly administered to selected participants > 18 years. Descriptive statistics and a logistic regression model was fit to assess factors that influence understanding of informed consent in genetic research.

Results: Of the 206 individuals enrolled, majority (67%) were females and the median age was 32 (IQR 28-38). Majority had post-primary education (66.5%), were unemployed (62.1%), and participating in research for the first time (57.3%). Regarding the score of various constructs of the consent process, 98.2% were aware that they were participating in a research study; followed by confidentiality (91.4%); benefits to others (91.1%) and potential risks or discomfort (80.3%). The constructs regarding duration (61.3%), purpose (61.6%) and procedures (69.1%) of the study were least understood among the participants. The overall average score was 74.26
Participants with post-primary education [Odds Ratio (OR);3.29 (95% CI:1.25-8.69)] had increased understanding of the genetic information compared to those with lower education level as well as employed [OR,2.45 (95% CI: 1.04-5.78)] compared to unemployed; Participants with ≤1 year since enrollment in the current study had increased odds of understanding of the consent process [OR =3.59 (95% CI: 1.48-8.67)] compared to those enrolled > than a year back.
Conclusion: Lower literacy levels and shorter participation in research were key factors that may hinder participants' comprehension of genetic research. We recommend inclusion of aiding **Method:**s such as audio-visual resources with parallel examples from patients' daily life to ease understanding of genetic complex term in this particular group.

PT-077

Development of a list of 'Points of Consideration' for standardizing investigation of research misconduct in Japan

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Objective: In order to standardize the process of research misconduct investigation in Japan, APRIN, the Association for the Promotion of Research Integrity, has created a list of 'Points of Consideration' for misconduct investigation committees. Our work is based on the notion that, in the light of global research collaboration, we need a global standard of a misconduct investigation.
Method: Some 15 APRIN members met every 1-1.5 month over a year to discuss appropriate investigative procedures. The members included a lawyer and researchers from academic institutions and industries who served investigative committees.
Considering variable circumstances unique to each institution, we discussed how to incorporate the general requirement set by the Japanese guideline into our specific recommendations geared to actual investigative processes.
Results: The following factors make the process and the results of investigations variable among research institutions in Japan:
1) Institutions rarely have a full-time RIO.
2) Due to the necessity of respect for academic freedom, the Japanese government guidelines omit the details.
Our discussion shed light on the variety of items that need to be addressed throughout misconduct investigation. The results will be presented as a 'List of Consideration'. In particular, two points became the foci of our discussion, namely, whether to disclose the results of the investigation which revealed 'no misconduct' and how far back the publications of the alleged researcher should be investigated. Similarly important to consider is the capacity of each research institution to conduct an investigation and their policies. To assess the usefulness of this List of Consideration for institutions, we present it to each research institution and seek feedback. This nationwide survey is carried out during the second half of year 2018 and early 2019.
Conclusion: In Japan, it is difficult to appoint a full-time RIO for various reasons. In this regard, the establishment of specific guidelines to apply to misconduct investigation processes, e.g., our 'List of Considerations', will help misconduct investigations attain consistency and fairness. We believe the 'List of Consideration' can serve as a step toward global standardization of misconduct investigation, which is needed in the era of global research collaboration.

PT-078

A toolkit for promoting responsible conduct in research-creation (RCRC)
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Objective: This proposal will present the final results of a two-year research project on RCRC: responsible conduct of research (RCR) in research-creation (RC), an emergent field of knowledge production at the interface of academic research and creative activities. In collaboration with the main research funder in Québec (Canada), the FRQ, we developed a novel and practical Toolkit to promote RCRC, which main components will constitute the core of this poster.
Methods: We used five methods to integrate multiple perspectives to better understand RCRC issues: 1) a scoping review of the academic literature on RCR and RC; 2) an international online survey of RC practitioners, evaluators and commentators; 3) a group discussion with the RC community about its perceptions of RCR; 4) a co-design workshop with the RC and RCR communities to create practical tools; 5) and a review of RCR institutional policies regarding their integration of creative practices.
Results: Beyond the classic RCR issues (e.g., conflicts of interests and commitments, data management, dissemination and evaluation), we found that the main obstacles encountered in RCRC emerged from the definition of RC itself, the postures adopted by researcher-creators, and the diversity of practices it encompasses. We thus developed a Toolkit to accompany the RC and RCR communities in a shared reflection on RCRC. It includes a report outlining the main findings from our study and four detachable tools: 1) an RCR checklist aimed at researcher-creators; 2) institutional recommendations for RCRC; 3) twelve misconduct case studies specific to RC practices; and 4) a podcast on conflicts of interest and commitments.
Conclusion: Rather than adopting a top-down approach of RCR based in institutional policies, our project showed the pertinence of taking a bottom-up approach for promoting practice-specific reflections in RC about RCR issues, as well as considering the best 'creative' practices as pathways to responsible RCRC. This approach could also be promising for promoting RCR in other fields of research.
Note: A poster presenting preliminary findings from this study won the prize for "groundbreaking contribution" during the 5th WCRI in Amsterdam (2017) (http://hdl.handle.net/1866/20005).

PT-079

Research integrity in the wake of misconduct: a multifaceted, center-wide effort
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Objective: Following a high profile case of misconduct, the Duke University School of Medicine (DUSOM) initiated multiple programs to enhance the School's commitment to research integrity and the responsible conduct of research (RCR).
Method: DUSOM provided extensive resources, including hiring faculty to teach RCR and creating the Advancing Scientific Integrity, Services and Training (ASIST) initiative. The DUSOM required RCR training for all faculty/staff engaged in research. All Research Units developed data management standard operating procedures (DMSOPs) detailing data storage, review, and management. Each DUSOM Department/Institute/Center developed a Scientific Culture and Accountability Plan (SCAP) detailing how their unit supports and sustains a localized environment of research integrity. A DUSOM-wide survey (Survey of Organizational Resource Climate, SOURCE) was conducted to better understand perceptions toward research culture. Research integrity plans within Core grants were evaluated.
Results: Nearly 5,200 DUSOM faculty/staff completed RCR training within an 8-month period. Training is ongoing, with a requirement for one self-directed, online course and one collaborative course every three years. Efforts are underway to better integrate RCR education into DUSOM departmental and lab units with faculty-led discussions focusing on department and discipline -specific research integrity topics. RCR workshops on focused topics, such as bullying and mentorship, will be developed and offered.

ASIST provided support to the development of DMSOPs and SCAPs including the creation of best practice guidelines. Duke's Office of Audit, Risk and Compliance is reviewing DMSOPs/SCAPs for effectiveness and will provide recommendations by the end of 2018 for process improvement. Measuring the impact of this multifaceted program is challenging, and efforts to do so are underway. The research climate survey conducted in 2017 will be re-issued in 2020 to measure temporal changes.
Conclusion: DUSOM has undertaken a multifaceted effort to improve and communicate a commitment to research integrity. Initiatives target multiple groups at all levels—individuals, laboratories, departments and the DUSOM as a whole. Sustaining the resource-intensive support required to maintain this multifaceted initiative will be challenging over time. Developing initiatives at all levels and encouraging continued dialogue is critical to our ultimate goal of a culture shift toward enhanced research transparency, accountability, and integrity.

PT-080

Spin and outcome reporting bias in randomized controlled trials of psychological interventions on depression
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Objective: The aim of this study is to investigate the prevalence of spin and outcome reporting bias in randomized controlled trials (RCTs) of psychological interventions on depression. Spin is widely understood as reporting practices that mislead readers so that results are viewed in a more favourable light (Chiu, Grundy & Bero, 2017). Outcome reporting bias means that the outcomes reported in the publication differ from the outcomes registered a priori. Both are understood as biases that make the reported results seem as if there was an actual result although there is not, i.e. the actual result is nonsignificant. Additionally, we investigate how often certain standards of research, in this case defining primary and secondary outcomes and preregistration, are met.
Methods: We conduct an analysis of RCTs on psychological interventions for depression using an updated database of depression RCTs (http://www.evidencebasedpsychotherapies.org/). Spin will be evaluated in RCTs with clearly defined primary outcomes by the use of a rating scale similar to the one developed by Gewandter et al. (2015) which itself traces back to Boutron et al. (2010); outcome reporting bias will be rated for all RCTs with clearly defined primary outcomes that are prospectively registered by a self-developed rating scale. Both will be rated by two independent raters.
Results: At the moment, we are waiting for the updated database of RCTs, which will be ready till the end of October. All rating instruments are ready to go so we will be able to immediately start rating when the database is available. Ratings will be finished until December 2018. Data analysis will be performed until March 2019.
Conclusion: This study is designed for the assessment of the prevalence of spin and outcome reporting bias as well as the adherence to standards in RCTs on psychological interventions. Based on this study, we are planning a following Project in which we will investigate how these findings interrelate with the construct of Researcher Allegiance.

PT-082

Parallel systems of accountability for research misconduct
J.R.T. Thomas
Healy Hafemann Magee, Roanoke

This presentation will examine the three forms of legal accountability related to research misconduct in the United States: (1) criminal liability; (2) civil fraud accountability (e.g. the False Claims Act); and (3) administrative accountability. This presentation will build upon a similar presentation at the 5th WCRI in Amsterdam. Thomas will analyze the structural problems with these parallel forms of accountability and how the lack of an integrated approach actually undermines the efficient, transparent, and just handling of research misconduct cases. Thomas will provide recent case examples illustrating the lack of synch between these parallel systems. Thomas will also suggest possible ways to better integrate the three tracks and will discuss some of the legal issues faced in research misconduct-based False Claims Act cases. John Thomas is a Partner with Healy Hafemann Magee and one of the leading attorneys representing whistleblowers in the United States. This presentation will be based upon research conducted by Thomas as part of his thesis project with the Johns Hopkins University Masters in Research Administration, which he anticipates completing in December 2018.

PT-083

Chinese large-scale withdrawal and challenges for global periodical governance
W. Yang
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Question:
On the one hand, in 2015, 2017, there are hundreds of Chinese scientists are involved in astonishing large-scale withdrawal, it is a scandal. On the other hand, large-scale withdrawal doesn't happen in Chinese SCI periodical, owing to these Chinese periodicals have no room for this large-scale withdrawal. It is the important facts should be seriously taken, why it is oversea SCI periodicals, instead of Chinese SCI periodicals?
Comparative studies Method with periodicals management:
There is no large-scale withdrawal in Chinese SCI periodicals. Firstly, all Chinese SCI periodicals have specific procedure of paper check for plagiarism, which is totally free supported by CNKI Company. In the contrast, paper check isn't a necessary procedure in oversea SCI periodical editing process, meanwhile, paper check business isn't free and complicated.
Secondly, all Chinese SCI periodical have full-time editor, with financial support from CAST or university. These full-time editors position have definite duty and enough time to contact with peer reviewers and authors, so that there is no room for forged peer reviews. In the contrast, because of cost, many oversea SCI periodical editor is part-time job, and with no pay, they usually are scientists, not occupational editors, having no enough time to supervise the whole editor process.
Thirdly, the peer reviews of Chinese SCI periodical are commonly authors of the periodical, or the scientists of research institute where run this periodical, seldom are the recommender of the article contributor, on other words, it has own peer reviewers, rarely recommended peer reviewers. As a result, there is no room for forged peer review. In the contrast, many oversea SCI periodical trust in article contributors' recommendation, lack of supervision and control of peer review.
Further question concerning periodical system change.
Is there model change of many SCI periodical editing procedure?
Is there supervision model shift of regulation towards SCI periodical?
Should Chinese SCI periodical be the reference object?

Poster Walk: Perceptions/attitudes 1

PM-084

The public comment period of state medicaid guidance: who speaks?
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Objective: Oregon, Washington, and California each have a committee to objectively evaluate clinical evidence and create evidence-based reports on topics of interest to health payers and the public to guide coverage decisions and health spending in their respective Medicaid programs. These committees use a transparent public process to ensure that patients and other stakeholders have the opportunity to provide input to these reports. What remains unknown is the type of person who provides public input and the level of evidence provided.
Method: Using three states' databases (Oregon: https://www.oregon.gov/OHA/HPA/CSI-HERC/Pages/Evidence-based-Reports.aspx, Washington: https://www.hca.wa.gov/about-hca/health-technology-assessment/health-technology-reviews and California: https://icer-review.org/materials/?fwp_materials_type=public-comments) we identified all coverage guidances from 2015 to present. For each coverage guidance, we reviewed the original draft (pre-public comment) and final report (post-public comment), and public comments. We categorized the type of evidence (e.g. RCT, observational study, etc) used in the reports pre- and post- public comment and investigated whether coverage recommendations differed between the draft and finalized report. We also reviewed the affiliation of public commenters, the presence of financial conflicts of interest, their position with respect to the coverage recommendations, and the type of evidence used to support their testimony.
Results: Pending at the time of abstract submission, however, we anticipate having preliminary results by spring 2019. Our results will describe the following domains:

Changes in coverage recommendations following public input
The type of evidence (e.g. RCT, observational studies, etc) used to support the coverage guidance before and after public comments
Descriptive information on public commenters:
- Affiliation (e.g. member of the public, patient, industry, clinician)
- In favor, neutral, or against coverage recommendations
- Presence of financial conflicts of interest

Conclusion: To our knowledge, this will be the first descriptive study detailing the profile of public commenters and investigating the changes made to original coverage guidance after public input. We hope this study will generate discussion on the merits and/or potential shortcomings of a transparent public process that allows for public engagement.

PM-085

Dishonesty in research: reflections of doctoral students in selected universities in southwest Nigeria

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Objective: Dishonesty in research is becoming a norm among researchers across the globe. Ensuring the integrity of the researchers and attitude towards knowledge production contributes greatly to scientific advancement. Thus, this study examines the level of awareness, perception and management of research integrity among doctoral students in selected universities in the Southwest, Nigeria.
Methods: A descriptive cross-sectional design will be used to sample 120 students undergoing PhD training in three Federal Universities through a two-stage cluster sampling technique with probability proportional to size. Interviewer-administered questionnaire method will be employed to gather quantitative data on awareness level, perception and management of research integrity. Data will be analyzed at uni-variate, bivariate and multivariate levels using STATA 14 version.
Expected Results: This study will inform and increase postgraduate students' level of awareness of plagiarism, data doctoring/falsification, and ethical issues in the research enterprise. It is expected that this study will document doctoral students' perception towards plagiarism, data falsification, result fabrication and general misconduct in research. Through capacity building, it will enhance PhD dissertation output and ensure quality assurance in knowledge production and scientific advancement. It is capable of stimulating policy discourse among university management and other stakeholders toward restoring the loss of academic culture and integrity.

PM-086

Are success indicators threatening integrity? Results from interviews and focus groups with diverse research actors

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Objective: Past research on research integrity often points to systemic and cultural aspects of success — such as pressures, perverse incentives, and competition — as potential threats to integrity. This project aimed to build a comprehensive understanding of the complex relationship between research success and integrity by gathering perspectives from a broad range of research actors seldom targeted in past research on research integrity.
Methods: We conducted semi-structured interviews with different research actors (i.e., funders, institution directors, research integrity offices, policy makers, editors and publishers, past researchers, integrity experts; N=33), as well as focus groups with producers of research (i.e., researchers, research students, and research staff), to discuss research success, responsibilities, and current threats to research integrity.
Given our interest in understanding the connection between different interacting actors of research, we used biomedical research in Flanders as a lens to be able to obtain a comprehensive multi-actor sample within an interacting system. Despite possible cultural particularities of our sample, we believe our findings and the research culture and dynamics they reveal may serve to better understand the dynamics of a number of research environments.

Results: Most interviewees distinguished between intrinsic and extrinsic aspects of success, differentiating between what currently constitutes success in science, and what they believed success should be. Interviewees mainly discussed four categories of successes: researcher successes, output successes, process successes, and successes attributable to luck. Nonetheless, interviewees, and sometimes actor groups, disagreed on the scientific value of a number of the indicators they identified. When discussing potential threats to integrity, participants frequently connected problems as resulting from, or as interfering with success indicators. Finally, obtaining perspectives from different research actors helped us identify a complex network of expectations of responsibilities, many of which appeared to paralyze what interviewees considered necessary changes in research assessment.
Conclusions: Our findings illustrate the complex relationship between research success, integrity, and responsibilities, and reaffirm that current research assessments and expectations of successes may be tightly connected to several problems which currently threaten the integrity of science.

PM-087

Exploring the experiences of undergraduate students to research ethic misconduct in a Nigerian university
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In recent times, concerted efforts have been made to ensure that research ethic misconduct was adequately managed teaching and learning in Nigerian University, despite the huge efforts, students were still deprives the cogent benefit ingrained in doing research without violation of its ethics. The research explore the depth of knowledge transfer available to undergraduate's student on research ethic management and ascertain challenges encountered towards application of research ethics on thesis writings. It also explores the views of undergraduate students on level of involvement of teachers in research ethic misconduct towards teaching and learning. Exploratory research design was engaged which uses in-depth interviews sessions in sourcing for useful information. Stratified sampling and purposive (with snowball) sampling technique was engaged to selected final year undergraduates students. Content analysis and NVIVO software will be engaged for data analysis The findings which is at fieldwork stage is expected to provide conspicuous evident towards ingraining management of research ethic misconduct among university students and teachers in order to meet up to global university research practices. In all, it expedient that research ethic misconduct, which has constraint academic quality in Nigerian university need to be adequately manage so as to attain quality dissemination of knowledge in the country.

PM-088

Dishonest marking of scientific research fund projects in papers: a serious behavior that should be recognized as academic misconduct
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Objective: To analyze the performance and influence of dishonestly marked scientific research fund projects in papers, and probe into the necessity of recognizing it as academic misconduct.
Methods: Taking the project of Chinese National Natural Science Foundation of China as an example, this paper analyzed the dishonest marking occurrence of this fund projects in published and submitted papers. Further, the quality of the submitted paper with dishonest marking fund project was evaluated. This paper analyzed the necessity and identification elements of identifying dishonest marking fund project behavior as an new academic misconduct.
Results: Nearly 50% published papers marking fund projects were dishonestly marked, meanwhile it's occurrence in the submitted papers was 67.7%. The quality of papers with dishonest marking fund projects was low. There were at least 7 kinds of forms of dishonestly marked fund projects. Through five elements, the dishonest marking fund project behavior can be recognized as academic misconduct.
Conclusions: Dishonest marking of fund projects in papers should be considered as a new kind of academic misconduct. The dishonest marking of fund projects violates academic integrity, interferes with the editorial department's normal review of manuscripts, and hinders the normal review and publication opportunity of other authors' manuscripts.

PM-089

Perceptions of research integrity climate differ between academic ranks and disciplinary fields - results from a survey among academic researchers in Amsterdam

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Objective: We aim to assess whether researchers from different academic ranks and disciplinary fields experience the research integrity climate differently.
Method: We sent an online questionnaire to academic researchers in Amsterdam using the Survey of Organizational Research Climate (SOuRCe). The SOuRCe is a reliable and valid measurement instrument that evaluates what factors play a role in the perceived research integrity climate on a scale that ranges from 1 ("not at all") to 5 ("completely"). It consists of 28 items forming 7 subscales that detail the organizational climate of integrity on a departmental and institutional level.
Results: Bonferroni corrected mean differences showed that junior researchers (PhD students, postdocs and assistant professors) perceive the research integrity climate more negatively than senior researchers (associate and full professors). Junior researchers note that their supervisors are less committed to talk about key research integrity principles compared to senior researchers (MD = -.39, CI = -.55, -.24). PhD students perceive more competition and suspicion among colleagues (MD = -.19, CI = -.35, -.05) than associate and full professors. We found that researchers from the natural sciences overall express a more positive perception of the research integrity climate. Researchers from social sciences as well as from the humanities perceive less fairness of their departments' expectations in terms of publishing and acquiring funding compared to natural sciences and biomedical sciences (MD = -.44, CI = -.74, -.15; MD = -.36, CI = -.61, -.11).
Discussion Results: Suggest that department leaders in the humanities and social sciences should do more to set fairer expectations for their researchers and that senior scientists should ensure junior researchers are socialized into research integrity practices and foster a climate in their group where suspicion among colleagues has no place.

PM-090

Ethical perspectives in use of personal data from medical records for health research

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Objective: To describe the attitude of the study participants about ethical issues in using their health care information from medical records for research purpose.
Methodology:
Study Design: Cross-sectional study
Study setting: Outpatient waiting areas of a Tertiary care hospital, Mangalore, India.
Research Ethics:Study was approved by the Institutional Ethical Committee.Informed Consent was obtained from the study participants.Transcripts were anonymized.
A total of 348 participants above the age of 18 years of age participated.A close ended questionnaire consisting of 12 items regarding their ethical perspectives in use of their personal data from Medical records for research purpose was developed based on a previous study.
Results: Males-45.1%, Females-54.9%. 52% of the participants felt that their health information is safe and secure.71.8% of the participants are concerned about invasion of their personal information.Majority of the participants felt that people who have authorized access to computer and also those who do not have, are the biggest threat to privacy and confidentiality of personal medical records.7.5% of the participants responded that their information was used without their consent.73.3% of the participants felt that only the doctor and the concerned patient should have access to medical records.

Conclusions: Register based research provides valuable benefits for public health, in terms of knowing the disease aetiology, risk factors and in disease surveillance. But the key issue is finding the balance between the public health benefits and respect for autonomy with privacy protection.
The study results concludes that the participants were willing to share their data without consent if it was of public health importance.

PM-091

More equal than others? An annoying habit

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Objective: The claim that "two authors contributed equally to this work" has come into fashion lately for various (and obvious) reasons, but seems rarely justified. Our journal demands an explanation which is to be published in the paper as an acknowledgement. It was investigated how authors complied with the requirements.
Methods: The incidence of equal authorship claims and the adherence to the Instructions-for-Authors in this respect were analyzed retrospectively.
Results: Between 3/2015 and 12/2018 in 79/1361 (5.8%) original manuscripts submitted to a cardiothoracic surgical journal equal authorships were claimed. There was an increasing trend over time. A primary satisfactory explanation according to the Instructions was given in 21 (27%), a cursory one in 16 (20%) and none in 42 (53%). 40/79 manuscripts were rejected and therefore had no chance for amendment. In 4 a final decision is pending. Eventually, 35 manuscripts were accepted for publication, in 14 of which the authors withdrew the initial request, confining themselves to a single first authorship. 21 were published with a fully acknowledged equal authorship.
Conclusions: Although clear instructions how to handle an equal authorship are given by the journal, most authors disregard them initially. When asked for a detailed explanation, a considerable percentage retrieved the claim instead, which questions scientific integrity. All such claims should therefore be investigated carefully by Editors. New trends (equal last authorships) seem to be emerging.

PM-093

Knowledge and attitude of Ethics Committee (EC) members regarding bioethics

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Background: Ethics committee promotes greater understanding of ethical issues on biomedical and health research to safeguard the dignity, rights, safety and wellbeing of potential participants. Hence, it is essential for EC members to be aware of the common strategies to research ethics. However, the information about the knowledge, attitude, and practice of EC members regarding bioethics is scarce worldwide.
Aim and Objective: No data is available from Bangladesh for this regard. Therefore, this pilot study has been designed to assess the knowledge and attitude of EC members on bioethics in Bangladesh.
Method: A cross-sectional study was done by using a self-structured questionnaire on 50 Ethics Committee (EC) members from 20 different Government and non-Government institute across Bangladesh from January to June 2018.
Results: Maximum respondents (97.9%) had prior knowledge of bioethics from different sources. Three quarter of the respondents (75%) expressed strong agreement that the ethical clearance were required for all research involving human subject in Bangladesh. Half of the respondents (50.77%) agreed that the goals of research is to cure disease and eliminate suffering research subject. Three fourth of respondents (77.1%) strongly agreed that signing a consent form did not mean that participant will continue the research. But a little less than half of the respondent (43.7%) believed that the verbal informed consent is okay for illiterate participants. More than half of the respondents (56.3%) expressed strong agreement that mental patients has no decision making capacity. Half of the respondents believed that physicians should not respect the patient's refusal in treatment. Maximum respondents (91.7%) agreed that the quality of life should consider form the patient's perspective. Half of participants (54.2%) agreed that the advance directives were not helpful in dialogue among patient and family. A large number of respondents (40.33%) did not know whether Bangladesh government had policies or laws on sensitive topics e.g. abortion, artificial reproductive technologies, human cloning, stem cell research.
Conclusion: EC members in Bangladesh still have paternalistic attitude regarding some bioethical issues. There is almost no training for EC members in Bangladesh. Therefore, training for the EC member is utmost recommended.

PM-094

Associations between certain factors and attitudes with self-reported episodes of research misconduct

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Objective: Studies have shown significant levels of research misconduct (RM). Our aim was to assess the association between certain factors and attitudes with RM among researchers in the Middle East.
Methods: We distributed an anonymous survey to investigators in Egypt, Lebanon, and Bahrain. The survey included: a) demographic data, b) respondents' self-report of RM, and c) attitudes regarding the acceptability of research practices (16 items). An attitude score was formed by simple addition and ranged from (16 – 90 points). Attitudes sub-scales were developed for each RM sub-domain: attitudes towards IRB regulations (3-15), fabrication/falsification (4- 20), plagiarism (3-15), authorship (3-15) and conflict of interest (3-15).
We developed a Research Misconduct Scale (RMS) using 19 items; each Item recoded as 0 for no RM and 1 if RM occurred at least once in the last three years. To compute the final RMS, fabrication/falsification/plagiarism were given a weight of 3 (6 items), violation of IRB regulations/conflict of interest a weight of 2 (6 items) and items related to "questionable research practices and authorship" a weight of 1 (7 items). The total RMS score ranged from (0-41) points. We used descriptive/bivariate/multivariate logistic regression to analyze the data.
Results: Participants (n=278) showed a high rate of misconduct: 59.4% self-reported at least one RM. Significant predictors of RM included a) lack of "prior ethics training" for "violation of IRB regulations (OR = 0.49; $p<0.02$) and "fabrication and falsification (OR =0.27; $p<0.0001$) and b) graduation from a "university in the Middle East" for "fabrication and falsification" (OR = 0.20; $p<0.02$). Significant Spearman negative correlations were shown between the RMS and the overall attitude score; attitudes toward IRB regulations; fabrication and falsification; plagiarism; authorship; and conflict of interest (all p-values less than 0.001).
Conclusion:
RM represents a significant issue in several universities in the Middle East. The demonstration that a lack of "prior ethics training" and certain attitudes toward RM should help develop educational initiatives in research integrity.

PM-095

Perspectives of key stakeholders on essential virtues for good scientific practice in research

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Objective: In contrast to the principle-based approach to ethics and research integrity training which stresses the importance of following moral rules, the virtue-based approach focuses on the development of good character traits. The aim of this study is to involve a broad range of experts and stakeholders in order to answer which virtues should be stimulated and prioritised in training for good research practice.
Method: We will conduct two mixed focus groups meetings which will include a total number of 24 participants. We will use a heterogeneous stratified purposive sample to reach participants from different research domains: academics, research integrity committees, policy makers, funding and process organizations, students, industry and SME. We developed a discussion guide with questions that address three topics: 1) understanding of scientific virtues, 2) the relationship between virtues and research, and 3) learning of scientific virtues. After transcription, two researchers will provide the coding of the themes based on the participants' comments. All analyses will be done using the NVivo 11 software.
Results: We conducted the first focus group (n=14) on October 2, and are currently transcribing the discussion for theme coding. After the analysis of the results from the first focus group, we will adjust the scripts for the second focus group meeting in order to allow further in-depth discussion of the identified topics and then conduct the second focus group. The second focus group is planned in January of February 2019.
Conclusion: In order to develop a virtue-based training programme, it is necessary to further develop the evidence base regarding which virtues will allow researchers to go beyond mere compliance of rules and codes by motivating them to strive for excellence in themselves and their practices. The results of the focus groups will be taken into account directly in the development of the training programme and materials as a part of the European project VIRT2UE.

Poster Walk: Perceptions/attitudes 2

PT-096

Political and economic considerations on research integrity: a vision from Latin American countries

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To compare investment and funding sources for scientific research in select Latin American and Asian countries to address whether a universal model can be developed to foster research integrity and dissuade misconduct.
Using the World Bank's fiscal year 2019 country classifications for low-, middle-, and upper-income countries, I will compare a number of Latin American and Asian countries that are similarly classified to examine their engagement in research. I shall then examine Transparency International's and the World Bank Institute's classification on perceived corruption, rule of law and political stability for the same countries. I shall examine UNESCO data to establish percentage of GDP invested in research as well as number of scientists per country.
The majority of Latin American nations are considered upper- middle economies and high-income economies, with a per capita income between U$D 3896 and U$D 12056 or more, similar to most Asian nations. Despite this apparent economic similarity, Latin American countries invest much less in scientific development than their Asian counterparts, and their sources of financial support for research also differ. Considering these differences, the question is what is needed to create international standards for research integrity that avoid a relativistic approach but account for local conditions.

PT-097

The research survey for NSTDA research integrity

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The advancement of technology and communication has allowed students, researchers and involved people to comfortably access information. However, the ease of accessing a large amount of information in combination with lack of understanding and awareness in the importance of some code of conducts may lead to the problems such as plagiarism of intellectual works of other scholars. This causes the effect on person and institution.
National Science and Technology Development Agency (NSTDA) conducts research and development (R&D) in science and technology and also acts as a funding agency in limited scopes. In order to achieve a high standard of research quality and integrity, a survey is done with the goal to determine knowledge and understanding of fabrication, falsification and plagiarism. The target groups were NSTDA researchers, researchers from other institutions granted by NSTDA, research assistants and R&D supporting staffs such as project managers.
Among the 54 preliminary respondents, 70% were research staffs (researchers and research assistants), 28% were R&D supporting staffs and 2% were non-R&D staffs. 44% of respondents had worked more than 10 years. 47% of respondents had working less than 5 years. However, we found that 70% of research staffs might not clearly distinguish the actions that are considered as fabrication or falsification. Nonetheless, all respondents understand the problems of plagiarism including self-plagiarism. Furthermore, R&D supporting staffs seem to be more understanding in principles and procedure of research integrity than the research staffs. Interesting questions about research integrity were also fed-back.
In conclusion, this study shows that education, advocacy and experience sharing or a culture of integrity in research should be promoted. Awareness and understanding about research misconduct and research integrity are important factors to ensure the research conducted by NSDTA and grantees are safe, ethical, and comply with applicable regulations, laws, institutional policies and code of conducts.

PT-098

Perceptions regarding clinical trials among ethical committee members of ayurvedic institutions of india: an exploratory study

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Objective: Ayurveda is the oldest systems of medicine in India. The vital role of the Institutional Ethical Committee members is to ensure safety of the study participants. Hence an attempt was made to explore the perceptions towards clinical trials among the Institutional Ethical Committee members of Ayurvedic Institutions.
Methods: A cross sectional study was conducted among members of the ethical committee from 8 Ayurvedic institutions in Mangalore, India. A total of 96 members were personally contacted and data was collected for a period of two months with a questionnaire that was checked for reliability using Chronbach's alpha test.The obtained data was analysed using SPSS version 20 (IBM SPSS Statistics 20.0 software).Chi square test was used to compare categorical variables. The confidence level was kept at 95%.
Results: Only 37.5% of them had obtained training on Good Clinical Practice.78.12% of the members felt that audio visual recording of the informed consent process was not useful. 65.62% of the respondents suggested that multiple authorities should collectively decide the compensation amount.84.37% of the members did not know the serious adverse event reporting timelines to the Ethical committee by the principal investigator.76.04% of the non ayurveda members felt that ayurvedic drugs will not have any adverse effects.
Conclusion: The study reveals some important deficits in the perceptions towards clinical trials and also reiterates the need to make GCP training mandatory for all the members of the committee along with training on regulations pertaining to research on herbal drugs.

PT-099

Scientific misconduct: everyone's problem? Proposal to promote research integrity in the University

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Background: It seems that misconduct in the investigation are worldwide, "Initially, scientific misconduct was a problem restricted to a few countries, such as the United States. But now, emerging nations in science such as Brazil 'have joined the club', due to the increased visibility of their research, and have been impacted negatively due to this problem, "said Steneck. Cases of fraud or plagiarism, associated with scientific misconduct have generated disastrous consequences for the advancement of science, from the discredit on the part of the population to the scientific community, to the generation of false hopes in the patients who trusted that biomedical research would find a cure for their diseases.
Objective: Evaluate the level of knowledge related to scientific misconduct in medicine students, so that through training they can decrease it in the future.
Methods: An anonymous survey was applied to 71 students of the second year of medicine of a national university (November 2017).
Questions about: values, practices of scientific misconduct, and knowledge about research integrity, in primary, secondary and university education. What actions were taken when discovering the bad behaviors.
Results: The answers reveal that more than 90% of the students accept that the tasks are copied, but in the personal response, far fewer accept it. 71% accept that in the university the students copy in the exams, but they deny having copied them. 76% never heard the term scientific integrity, and 100% do not know the values associated with scientific integrity.
The actions of teachers against plagiarism are null in 50% of the cases in the school, and more than 71% in the university. The teaching of values is low in the primary school and a little less in the secondary and in the university and that apparently they only learned values in the house.
Conclusion: These results demonstrate the need to continue cultivating values, and that the responsibility seems to fall directly in the teachers, which evidences the need for actions taken by schools in continuous training of its teachers.

PT-100

An online survey highlighting research practices among doctors in India
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Introduction: Evidence based medicine is the backbone of medical science in current scenario and doctors should strive to share and gain knowledge from the scientific community. Little is known about the research practices of doctors in India.
Objective: To learn about the attitudes and practices of doctors towards research.
Methods: It is a cross-sectional study done with the help of an anonymous online pre-tested questionnaire. The questionnaire was randomly mailed from a mailing list to 500 doctors of different places and specialties and 100 of them filled the form and participated in the study.
Results: The response rate of doctors was low- only 100 (20%) doctors participated in the study. Majority of the doctors (50.5%) worked in government medical college, followed by private medical colleges (18.2%), private hospitals (9.1%) and other places of work like government hospitals or NGOs. About 75% had received some training or they attended workshops on research methodolgy. When inquired whether number of research papers should be one of the essential/ desirable qualification requirements for promotion in academics; 48% replied with a yes, 27% with a no & 25% with a Maybe. Around 42% of doctors think that research work might deviate doctors from clinical or teaching work. Two-third (76%) of them had done one or more publications with an average experience of 5.7 years. Around 1/3rd doctors modified data to obtain desired results and one-third also admitted to deliberately ignoring biases in their study design. One-fourth (25%) stated that they did not always take informed consent from subjects and 41% stated that they did not always obtain clearance from the institutional ethics review board before starting a research or project. Thirty one percent researchers had ever given undeserving authorship under pressure to a supervisor and 60.3% faced financial constraints during their study.
Conclusion: The research environment is not very congenial for doctors in the country with majority facing issues like financial constraints and insufficient knowledge of research methodology. Many doctors indulge in unethical practices like ignoring informed consent, biases in the study, ethical clearance and giving undeserving authorship.

PT-101

Research misconduct: a global concern
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Research integrity and compliance issues are rarely simply a matter of right vs. wrong. Often there are subtleties of dubious practices that can mar a scientific project, a career, and an institution. Factor in global collaborators with different policies, guidelines, expectations, and/or accepted practices, and the situation becomes even more complicated and difficult to mitigate.
This discussion will look at case studies that involve multiple collaborators across the world to see how differences in research integrity perspectives influenced investigational procedures and outcomes.

PT-102

Media and social media attention to retracted articles according to Altmetric
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Objective: To describe the amount of media and social media attention that retracted articles and their retraction notices receive and how this compares to similar unretracted articles.

Methods: We downloaded all records of retracted literature maintained by Retraction Watch and originally published between January 1, 2010 to December 31, 2015. For all records available on this database, we identified the respective Altmetric Attention Score (AAS), as reported by Altmetric, of the original publication and its retraction notice. We finally compared the AAS of a random sample of 572 retracted full journal articles available on PubMed to that of a maximum of 5 random un-retracted full articles from the same issue and journal. Paired comparisons were done using the non-parametric Friedman and Sign tests.
Results: There were 4,486 eligible retracted articles, the majority of which (3,537; 78.8%) were research articles. Most articles emanated from cellular biology (1,034/4,486; 23.0%), molecular biology (923/4,486; 20.6%), and genetics (653/4,486; 14.6%). The most common reasons for retraction were duplication of article (653/4,486; 14.4%), fake peer review (537/4,486; 12.0%), and plagiarism of text (408/4,486; 9.1%). Out of 4,486, about half (2,220; 49.5%) of journal articles in our dataset had received any media and social media attention (AAS>0) and 4% (196/4,486) received substantial social attention (AAS>20, i.e. top 5%). There were no marked differences in AAS in retracted articles between field or reason for retraction. The AAS of each original article did not differ substantially from its retraction notice (Median, 0; IQR, -0.3-0.3; P-value = 0.11) and AAS differed between them by >20 in only 2.7% (119/4,486). In comparing 572 retracted journal articles to 2,832 same-issue un-retracted articles, retracted articles appear to receive more attention than un-retracted articles (Median, 1; IQR, 0.0-7.9). Retracted articles received a higher AAS than their median control on 253 occasions, a lower AAS on 57 occasions and the same AAS on 140 occasions.
Conclusions: There is large diversity to how much media and social media attention retracted articles receive. Retraction notices typically receive similar attention as the original articles being retracted. Retracted articles tend to receive more attention than un-retracted control articles.

PT-103

Exploring the attitudes of engineering faculty members and students towards plagiarism of scientific publication in Uttar Pradesh state, India: a questionnaire & cross sectional survey study
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Aim: The aim of this study was to evaluate the attitudes towards plagiarism of scientific publication of teaching faculty and engineering student in Uttar Pradesh State.
Methodology: Exploration of attitudes towards plagiarism of scientific publication questionnaire was prepared and circulated among the faculty members (n= 90) and engineering students (n=400) in some districts (Lucknow, Allahabad, Varanasi and Kanpur) of Uttar Pradesh. SPSS software version 21 were used to feed the data and descriptive statistics were applied to analyze the data. Principal axis factoring analysis was used to validate the questionnaire.
Results: In the present sample, one factor structure of attitudes towards plagiarism of scientific publication questionnaire was confirmed by Principal axis factoring analysis. Response rate of Engineering faculty members and students was 89% and 70 % respectively. In 400 engineering students, there was 170 female students and 230 male students and 90 faculty members (60 male faculty and 30 female faculty). Most of the students involved in review article writing, research paper, communication and case study. In faculty members, some are professors, associate professor, assistant professor and instructor with the work experience of 15 years. For attitudes towards plagiarism of scientific publication questionnaire, students and faculty members of engineering colleges score a mean of 42.32 (6.8) and 47.21 (5.6) respectively. It was suggested from the study that some of the respondents showed, that they did not worked in plagiarism free atmosphere.
Conclusion: Positive response were assessed from the Engineering faculty members and students for attitudes towards plagiarism of scientific publication questionnaire. All the subjects agreed that non-plagiarism of scientific publications are important for the academic excellence.

PT-104

Student perspectives on research integrity training as expressed in embedded poll questions

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The Epigeum online Research Integrity/Responsible Conduct of Research (RI/RCR) basic and advanced courses use voluntary, embedded poll questions to enhance student engagement in the training experience. The primary purpose of the poll questions is to provide students with a way to compare their thoughts and experiences with others while engaged in what is otherwise a solitary learning experience. Secondarily, the embedded questions were introduced as a tool to help Epigeum and the research institutions that use its courses assess their training efforts and research environments.
This poster presents a summary of the findings drawn from the embedded poll questions. The summary findings are based on an analysis of nearly 40,000 responses collected over four years. The responses to 15-20 questions are analyzed from the perspective of research track (biomedical, physical science, social science, engineering, humanities and the arts) and country.
Note: This poster is designed to supplement the oral presentation on the use of embedded poll data in research integrity training submitted as a separate abstract

PT-105

A cross-institutional survey on research integrity among research postgraduate students in Hong Kong and Taiwan

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The presentation reports on an anonymous online questionnaire on research integrity (RI) administered to research postgraduates (RPgs) at the University of Hong Kong and National Chiao Tung University in Taiwan from October 2018 to March 2019. The questionnaire, which was put on SurveyCake, aimed at examining the knowledge of and attitude on different aspects of responsible conduct of research (RCR) among RPgs at the two participating universities. The following aspects of RI were thus covered in the questionnaire: general understanding of RI concepts, one's internal compass/values, responsibility of upholding RI, awareness of measures to uphold RI as taken in the research context, experience in and reaction to research misconduct/questionable research practice, and concerns behind whistleblowing. Other purposes of the study included: (a) facilitating any revamp of RCR education in the two universities; (b) shedding light on the degree of sensitivity to RI among RPgs in two Asian universities; and (c) serving as an exemplar of RCR research for universities which are interested in conducting RCR surveys. In the presentation, we will share the findings of the survey and highlight possible similarities and differences between RPgs of the two universities in terms of their understanding and awareness of RCR. We will end the presentation by discussing the implications of the survey findings from the RCR educational perspective.
Keywords: research integrity survey, RCR education, comparison study

PT-106

Research ethics and research integrity: a systematic review of published cases

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Objective: The areas of Research Ethics (RE) and Research Integrity (RI) are rapidly evolving. Cases of research misconduct, transgressions related to RE-RI and various forms of ethically questionable behaviours have been frequently published. As part of the EnTIRE project, the aim of this systematic review is to identify and assess RE-RI cases that have been published in the academic literature. We developed a comparative assessment of the cases to identify the potential overlaps and differences in the conceptualization of RE and RI.
Methods: The following inclusion criteria were applied in this systematic review. The search includes cases involving a violation of, or misbehaviour, poor judgment or questionable research practice in relation to, a normative framework and the cases of traditional research ethics violation. Non-fictional and fictional cases were included. Cases unrelated to academia, scientific activities and institutions or academic and industrial research and publication were excluded. An electronic search was conducted in the PubMed, Web of Science, SCOPUS, JSTOR, Ovid and Science Direct by March 2018, without any language or date restriction. In order to include both RE cases and RI cases, two parallel searches were performed. The terms used in the databases: ((“research ethics”) AND (violation OR unethical OR misconduct)) and ((“research integrity”) AND (violation OR unethical OR misconduct)). After the screening process, the included RE and RI cases will be analyzed and tagged independently and then a comparative assessment will be conducted focusing on the similarities and differences in the terminology used and the emerging overlaps.
Results: The RE search strategy resulted in 9804 findings and RI resulted in 1985 findings after the removal of duplicates. The final selection of identified articles and the comparative qualitative assessment of the cases were not finalized at the time of writing this abstract. The results are expected to be completed by February 2019, before the dates of WCRI.

PT-107

A survey of tertiary hospital new employees’ awareness and attitude on scientific integrity

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Objective: The primary goal of the study is to gauge the awareness and attitude of new employees on scientific integrity in tertiary hospital.
Method: The questionnaire of awareness and attitude on scientific integrity was tailor-made. The electronic questionnaire was distributed to a WeChat group of a tertiary hospital’s 123 new employees of 2018.
Results: The total number of respondents is 87, of which there were 26 doctors, 46 nurses, 15 pharmacists, technicians, administrative staffs and fundamental researchers. 28.74% respondents hold doctor degrees and 10.34% are with master degrees. 54.02% respondents had experience in researching and 41.38% respondents published one paper or more as first author or corresponding author. 45.98% respondents received training about scientific integrity by means of lecture (72.5%), courses (67.5%), college-issued documentation regarding integrity (40%) and some other ways. Only 14.94% respondents were familiar with the documentation on scientific integrity issued by regulatory authorities. Regarding awareness of scientific integrity, 36.78%, 36.78% and 37.93% respondents were familiar with the definition of fabrication, falsification and plagiarism. 42.53%, 42.53%, 40.23% and 29.89% respondents were aware of the authorship, multiple submission of one paper, duplicate publication of one paper and faking peer review. 33.33% respondents knew the correct trial record **Method:** and 35.63% respondents knew the right way to preserve trial record. Regardding attitude towards scientific misconduct, 9.20% · 12.64% and 20.69% respondents held supportive or neutral opinion towards fabrication, falsification and plagiarism while the other respondents were against FFP. In the case of fabricating data in paper, 77.01% participants thought all authors should take penalty. If the researchers violated scientific integrity, 80.46% respondents voted for suspending his or her promotion, 81.61% participants agreed for suspension of his or her application for being a mentor, 58.62% participants thought those researchers should be banned for life for conducting any research.

Conclusion: Most new employees in tertiary hospital don't know much knowledge of scientific integrity. Part of participants held positive or neutral attitude towards scientific misconduct. Therefore, it is necessary to provide traning on scientific integrity to new employees in tertiary hospital.

Poster Walk: Publication ethics/reproducibility 1

PM-108

Equal co-lead authorship: a(nother) reason for contributor listings

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Objective: This presentation will argue that the growing use of equal co-lead authorship (ECLA), in which two or more authors claim equal first authorship credit for a work, is an unfortunate albeit understandable response to the increasingly inappropriate fit between the traditional model of scientific authorship and the way science is currently being done. The ECLA phenomenon is a good reason to favor a contributorship model for research publications, in addition to reasons for contributorship already articulated in the research ethics literature.
Methods: The standard model of authorship in science, in which the lead or first author is given the largest share of credit for the work, stems from traditional conceptions of authorship originating in the humanities (Biagioli & Galison, 2002). As science has become more collaborative and multi-disciplinary, the standard model has become increasingly problematic as a means of attributing credit for the work. The growing use of ECLA is a response to this awkwardness of fit, as it is spurred by the difficulty of comparing contributions to multi-disciplinary projects as well as the emphasis on lead-authored articles in a very competitive job market.
Results: The chief problems with ECLA are that it diffuses and obscures responsibility for the work, it allows for a kind of "gaming," insofar as allows additional first author credit for articles, it can motivate certain research projects at the expense of others that promise greater scientific merit, and it conveys a false quantifiability of the relative scientific significance of disparate aspects of a research project.
Conclusion: We argue that equal co-lead authorship is a good reason for favoring a contributorship model, as contributorship better respects key scientific ethical values of transparency and accountability as compared to the standard model. We argue that the drawbacks of contributorship, such as the problem of adequate contribution taxonomies, are best overcome by allowing different disciplines and journals to develop preferred systems, a suggestion in keeping with COPE's recommendation that specific authorship guidelines should be provided by individual journals.

PM-109

Ignorance and abuse of authorship criteria have increased over 15 years

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Objective: In 2002, we interviewed 39 investigators of clinical research programmes from the university hospitals in Lyon about their authorship practices (J Med Ethics 2005;31:578-581). We observed that ICMJE (International Committee of Medical Journal Editors) authorship criteria were ignored. In 2018, we conducted the same interviews.
Method: We randomly selected clinical researchers and conducted telephone interviews (HM was the sole interviewer) using the original 2002 questionnaire. We examined the process of choosing authors of a publication, knowledge of the ICMJE authorship criteria, and attribution of gift and ghost authorship. The data for 2018 and 2002 were compared.

Results: We conducted 14 interviews in September/October 2018 (20 more are planned by November end). Overall, 57 % of the respondents stated they were aware of criteria for authorship, and 46% knew about ICMJE criteria. All agreed with the first two criteria (substantial contribution, drafting the work), 93 % with the 3rd criterion (final approval of the manuscript), and 46 % with the 4th criterion (to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated). Gift authorship was a very frequent practice, and 64% acknowledged granting gift authorship. To decrease such attributions, contributorship was assessed as the most efficient (64%), and 71% valued the decision to list the author(s) in the protocol of a trial. Some 86% know of cases of ghost authorship and the majority considered it as questionable. Most respondents said have been either victim or responsible for questionable practices at least once; 43% discovered that they were an author after publication; 57% estimated that they should have been identified as the author of a paper; 64% mentioned that they were listed as author while not fulfilling authorship criteria; and 64% felt it necessary to add an unjustified author on a paper.
Conclusion: No improvement was observed between 2002 and 2018; even worse, gift and ghost authorships have become more frequent. The main reason cited for questionable authorship practices is the pressure to publish. The main solution proposed lies in finding ways to change the research culture.

PM-110

Mass pre-registered replications project of classic findings in judgment and decision-making
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Background: Reproducibility and replicability are at heart of science yet increasing evidence from recent years suggests that many of the findings in psychological science are irreproducible and non-replicable in what some termed as a "replication crisis" and a new movement calling for significant changes in the way we do science. How can we do better? How can we inform colleagues and students about these issues and train students for rigorous replicable reproducible science?
Objective: Present a mass pre-registered replication project on classic findings in judgment and decision making conducted and ongoing at the University of Hong Kong, and invite collaborations with other researchers.
Method: I am heading a mass-replication effort at the University of Hong Kong (HKU) undergraduate psychology courses to conduct pre-registered replications of classic findings in judgment and decision-making literature. In these pre-registered replication projects, students analyze articles and attempt to reproduce methods and materials to conduct effect-size calculations and power analyses, design online Qualtrics experiments, and adopt latest tools and templates, with a pre-registration of the replication plans on the Open Science Framework. We then ran the experiments on (1) samples of HKU students and (2) high-power (0.95-0.99) Amazon Mechanical Turk American online samples. Courses also cover the replication crisis and involve students in thinking of its implications and improving.
Results: In the project so far we completed 14 successful, three semi-successful, one inconclusive, and three unsuccessful replications, with 21 other replications currently ongoing and planned to be concluded by December 2018. The findings, together with datasets, code, course designs, and a summary of main take-aways are in the process of being made available on the open science framework.
Conclusion: I conclude the experience as an invaluable learning experience, not only for the students, but also for the research and teaching teams, with valuable insights and contributions to the literature and the academic community. Materials and open-science: All studies have been pre-registered prior to data collection. A summary of the findings will be presented, and a summary with updates and shared open procedures, datasets, and code can be accessed at http://mgto.org/pre-registered-replications/

PM-111

With great CRediT comes great responsibility: researcher response to CRediT across >200 Elsevier journals in all research disciplines

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The average number of authorships per article increased from 3.5 to 4.15 authors from 2003-2013 (Plume, 2014). Papers with thousands of authors led Faulkes to create the term "kilo-author" and suggest replacing authorship with a 'credits' system. This new world of 'hypercollaboration' challenges the traditional author list to ascribe fair and clear attribution of credit to all authors. It is perhaps to be expected then that authorship disputes are one of the largest increasing reasons for retractions (Singh 2014).
In response to these challenges, a 2012 workshop hosted by Harvard University & Wellcome Trust led to the collaborative development of CRediT by funding agencies, CASRAI, NISO & publishers (including Elsevier's Cell Press). CRediT is a taxonomy of fourteen standard, clearly defined author contributions intended to give author greater recognition for their work, reduce authorship disputes, and facilitate collaboration (Brand et al 2015). Cell Press started to offer CRediT as an option to authors in 2015 and Elsevier extended the implementation to 150 further journals across all scientific disciplines during 2018.
In a pre-implementation survey of 295 researchers, 70% had never heard of CRediT before and only 2% had direct experience with it. Increasing clarity around authorships was seen as the main benefit (57% respondents) and 15% did not see any benefit. 63% researchers preferred contributions to be listed per author versus 37% who preferred listing per contribution type.
Author and editor responses to CRediT varied considerably between journals and disciplines. 20% of journal editors chose to make CRediT mandatory. In journals where editors decided it make it optional, author uptake varied from 1-33%. Relative distribution of the fourteen roles also differed between disciplines.

PM-112

Editorial advice did not improve poor statistical reporting, inadequate data presentation and spin in two major biomedical journals

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Objective: Many published research findings are not reproducible. Communication of scientific discovery relies on transparent reporting of methods and results. In an attempt to improve the standards in statistical reporting and data analysis the Journal of Physiology and British Journal of Pharmacology jointly published an editorial series of guidelines in 2011.
Methods: To determine whether reporting practices changed following the editorial advice, we conducted a cross-sectional analysis of reporting practices in a random sample of research papers published in these journals before (n = 202) and after (n = 199) publication of the editorial advice. Ten questions and scoring criteria were developed to assess statistical reporting, data presentation and spin in the text and figures of the extracted papers.
Results: We found no evidence that reporting practices improved after the editorial advice. Overall, 76-84% of papers with written measures that summarised data variability used standard errors of the mean, and 90-96% of papers did not report exact p-values for primary analyses and post-hoc tests. 76-84% of papers that plotted measures to summarise data variability used standard errors of the mean, and only 2-4% of papers plotted raw data used to calculate variability. Of papers that reported p-values between 0.05 and 0.1, 56-63% interpreted these as trends or statistically significant. Implied or gross spin was noted incidentally in papers before (n = 10) and after (n = 9) the editorial advice was published. There were no major differences in results for the two journals.
Conclusion: Overall, poor statistical reporting, inadequate data presentation and spin were present before and after publication of the editorial advice. While the scientific community continues to strive for effective strategies to improve reporting practices, our results show that stronger incentives or enforcements are needed.

PM-113

A systematic review of literature on ethical issues in scientific authorship, mentioned causes and offered solutions

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Objective: This study presents a literature review of the ethical issues associated with scientific authorship. Furthermore, three subsidiary questions are addressed:

- What are the main violations of widely accepted norms as identified in the literature?
- What are the main causes of violations and motivations of wrongdoers as identified in the literature?

What solutions are suggested in the literature to safeguard research practices from the identified violations?

Method: The Web of Knowledge Core collection was searched for English resources published between 1945 and 2018. To retrieve resources about the issues of scientific authorship, two groups of terms were used that led to the development of 21 unique search strings.

Rationale	Key terms
Context	1- scien* (scientific/science/scientist)
	2- research* (research/researching)
	3- scholar* (scholarly/scholarship)
Authorship	1- author* (authors/authoring/authorship)
	2- report* (report/reporting)
	3- communicat* (communicate/communication)
	4- disseminat* (disseminate/dissemination)
	5- writ* (write/writing)
	6- publishing
	7- publication

In limiting results to those that are dealing with ethical issues, four core terms relevant to normative ethics were used to search titles and abstracts:

- ethic* (ethically/ethics/ethical)
- moral* (morally/morality/morals)
- norm* (norms/normative)
- responsib* (responsibly/responsible/responsibility)

A total of 210 items (including articles/commentary/editorials/chapters) matched the inclusion criteria and were selected for full-text analysis.

Results: This study identifies 10 kinds of ethical issues, ranking them on the basis of the frequency of occurrence:

- Attribution: Claims about entitlements and recognition of contributions (77 times)
- Bias: Disinterestedness and scrupulousness (51 times)
- Violations: Unacceptable behaviour, and solutions for preventing them (49 times)
- Responsibility and accountability: Personal and collective responsibility (34 times)
- Authorship order: Dividing the benefits and burdens of cooperation (34 times)
- Definition of authorship: Specification and use of definitions in practice (29 times)
- Citations and referencing: Respect for previous research (24 times)
- Publication strategy: Questionable actions purely aimed at improving success (24 times)
- Originality: Genuine progress deserving publication (19 times)
- Sanctions: Regulations on non-compliance and undesirable behaviour (11 times)

Conclusion:

The ethical issues of scientific authorship are often analysed in an isolated and narrow way, without consideration of their interconnectedness. Furthermore, very few studies provide a thorough analysis of these issues using moral theories.

PM-114

Gender and publication statistics, institutional bibliometric analysis in Dublin City University

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Objective: This study aimed at conducting a quantitative and qualitative analysis of the research output of scholars at Dublin City University (DCU).
The following questions will be answered:
• How quantitative factors, such as; total number of publication, citation
• statistic, author's position, and publication patterns in term of collaborations. can disclose gender disparities in academia?
• How such disparities are sustained in academia?
Methods: The research is composed of two parts. Firstly, using a gendered list of staff affiliated with different schools and their registered publications between 2013 and 2018 found on the Scopus database, it analyses the number of publication, citations, the author's position in the byline, and their collaboration patterns. Secondly, through interviews, it adds more context to the quantitative part and delve into the factors that cause gender disparities in academia.
Results: The analysis of research output of staff from three schools including:; School of Computing, Electrical Engineering, and Mechanical and Manufacturing Engineering shows the following:
• Male scholars publish more often and all six scholars who published more than 100 publications in a five-year period were male
• Overall, when looking at the body of work of male authors, the average number of authors per publication is higher.
• Female authors seem to prefer working with authors affiliated with Irish institutions, and authors from DCU in particular. In contrast, male authors, collaborated far more with authors from international institutions.
These findings are consistent with the results of similar quantitative studies but they do not explain why these disparities exist. In order to add more context and examine the causes of these trends, interviewing faculty members is planned.
Conclusions: A quantitative analysis of gender disparities in authorship is not revealing local dynamics, and hence, a qualitative analysis that delves into the personal experiences reveals much more. After interviewing several female faculty members and adding a layer of personal information to the quantitative analysis, this study argues that gender disparity in authorship is affected by two different factors, namely, personal choices and institutional barriers.

PM-115

Repeating probability of authors with retracted scientific publications

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The number of retracted papers has increased dramatically over the past 20 years and now comprises about 0.02% of the 2 million papers published each year. There are certain numbers of "scientists" who are repeating retractions and responsible for a disproportionate number of overall retraction. We analyzed retractions of scientific publications using the Web of Science (WoS) and PubMed databases. We found that a power law is applicable to distributions of retracting authors and retracted publications with exponents of about -0.6 and -3.0, respectively. Application of a power-law model for retracted publications implies that retraction is not a random event. Analysis of the retraction distributions suggests that a small fraction （1-2 %）of retracting authors with ≧5 retractions are responsible for around 10% of retraction. The probabilities for their repeating retraction are calculated using a statistical model: 3-5% likelihood of repeat retraction for authors with a single retraction at five years after the latest retraction and 26-37% for authors with five retractions at five years after the latest retraction. By focusing on those with repeated retractions, this analysis could contribute to identification of measures to reduce such repetition of retractions.
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PM-116

Impact of editorial and peer review on study limitation reporting in randomised trial reports

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Objective: According to Horton, editorial review can be seen as a negotiation about scientific claims. Herein, discussion of limitations can play an important role. A survey (2016) showed that insufficiently reporting limitations of one's own study is a detrimental research practice. The CONSORT reporting guideline for trials recommends acknowledging study limitations. Goodman et al (1993) found that mentioning limitations was a poorly scoring item in manuscripts. Here, we report on the number of sentences expressing study limitations before and after editorial and peer review.
Method: In discussion sections of RCT reports published in 2015, we determined the differences in the number of sentences dedicated to study limitations between submissions and corresponding publications. Journals' editorial teams helped us securing submissions and the corresponding publications. Sentences on self-acknowledged limitations were counted using dedicated software. We used multivariable mixed models to calculate mean before-after differences for each journal. We explored the effect of number of days between submission and acceptance, journal's impact factor, editorial board size and authors' English proficiency on the likelihood of mentioning at least one limitation among those publications that had none in the submitted manuscript.
Results: 446 research articles from 27 BMC journals and BMJ Open were selected. The median number of manuscripts per journal was 10.5 (interquartile range: 6.5 - 18.5). The average number of limitation sentences increased by 1.39 (95% confidence interval: 2.48 - 3.87). 202 research articles (45.3%) did not mention any limitations in the manuscript. 63 (31%) of these mentioned at least one after peer review. Out of 244 manuscripts that mentioned at least one limitation, 8 (3%) mentioned none in the publication. Every additional month of reviewing time increased the odds that a manuscript mentioning zero limitations listed at least one in the publication by 32% (OR 1.32; 95%CI 1.11 - 1.58).
Conclusion: We found that editorial and peer review led to a modest increase in attention to study limitations. Still, 33% of final reports were published without mentioning any. Editors should insist that authors carefully discuss limitations of their own work.

PM-117

Do journals instruct authors on research integrity topics? A cross-sectional study across all disciplines

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Objective: To determine, across all scientific areas, if journals, in their Instructions to Authors (ItAs) instruct and inform authors about research integrity topics, and which factors are associated with them doing so.
Methods: We conducted a cross-sectional machine-assisted analysis of journals' ItAs, downloaded between 14 December 2017 and 24 January 2018, from a representative sample (n=835) of journals across all scientific disciplines. The ItAs were analysed on the following 19 topics: conflicts of interest, the Committee on Publication Ethics (COPE), data sharing, errata, ethics approvals, the International Committee of Medical Journal Editors (ICMJE), image manipulation, acknowledgments of study limitations, publication of studies with null or negative results, Open Researcher and Contributor ID (ORCID), plagiarism, peer review type, pre-print servers, study registration, replication studies, reporting guidelines, shared/equal contributionship, specific statistical requirements (Bayesian statistics, confidence intervals, effect size and sample size) and the Transparency and Openness Promotion guidelines. Using logistic regression analyses, we explored if scientific area, journals' Source Normalized Impact per Paper (SNIP) values, registration in the Directory of Open Access Journals (DOAJ) database and publisher were associated with the mentioning of these topics.

Results: Sixteen out of nineteen topics were addressed in less than a third of ItAs (0-31%), with plagiarism being addressed in 46%, the type of peer review in 52%, and conflicts of interest in 63%. Health and Life Science journals, journals published by medium or large publishers, and those registered in DOAJ were more likely to mention most of the topics we analysed, while Arts and Humanities journals were least likely to do so. Journals with higher SNIP values were more likely to address only three of the topics: data sharing, errata and image manipulation.
Conclusion: Transparency in reporting and research integrity topics are insufficiently addressed in journals' ItAs. Further research should determine the barriers editors and publishers face when implementing changes to ItAs, and ways ItAs can be used to raise awareness and prevent detrimental research practices.

PM-118

Publishing ethics in developing countries: education, awareness and norms
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Objective: In order to promote awareness of academic integrity in developing countries, here focus on a few points.
Method: Considering the logical relationship between education, honesty and academic norms, we must pay attention to three facts based on an analysis of data and website survey: 1. United Nations Population Data (2018) shows that the world population has exceeded ~7.5 billion, of which, half of the young people under the age of 30 are in the developing countries; up until now, registered members of COPE (Committee of Publishing Ethics) total about 12095 worldwide. 2. According to their data, the ratio of the populations to COPE membership in the six continents is distributed as follows: 5472 members/742 million in Europe, 4438/364 million in North America, 1995/4504 million in Asia, 568/41 million in Oceania, 283/ 1256 million in Africa, and 109/646 million in South America. 3. When compared with developed countries, there are few written cultural standards for academic integrity or published institutional policies on the websites of the top universities in many developing countries.
Results: From the above series of data, we can be certain that across the six continents, there is a serious imbalance in education on publishing ethics and research integrity.
Conclusion: Even though Asia and Africa are the two continents with the highest population density and contain a large number of developing countries, we find hope in the fact that Asia is making progress in this effort.

PM-119

Reporting research integrity concerns to institutions at an open access journal publisher
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Objective: At Hindawi, the Research Integrity team has been regularly contacting the institutions of those involved in serious publication ethics/research integrity issues since 2016. These are mainly authors, but also some editors and reviewers. I wanted to look at how often we contact institutions or are contacted by them, why this was done, how responsive institutions were, the outcomes of any investigations, and what factors are associated with this.
Method: A retrospective record review of the Hindawi Claims Tracking System, extracting timings, the nature of the claims, what actions were taken by the publisher, whether institutions were contacted, and the response of the institutions.
Results: Record extraction has begun and the analysis will be complete by the conference.
Conclusions: I intend to give an insight into how often we have formal contact with institutions, what kinds of issues are involved, and whether the outcomes are satisfactory.

Poster Walk: Publication ethics/reproducibility 2

PT-120

Early stage publication strategies: will they work?
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Objective: Enabling PhD students to develop a viable publication strategy (PS) early on is an integral part of the mandatory research integrity course taught at most Danish universities. The purpose of this paper is to analyze to what extent PhD students follow their early stage PS and to identify what characterizes a successful PS.
Method: 40 randomly selected PS assignments will be analyzed, from among the 2014 cohort of PhD students enrolled in the research integrity course at our university. The course is mandatory for all newly enrolled PhD students.
We will identify similarities between early stage PSs that have been followed and those that have been abandoned. We will end up concluding whether it is meaningful to expect PhD students to come up with a viable PS at an early stage. The analysis will be carried out and finalized in early spring 2019. Results will be ready for presentation at WCRI 2019.
David Kolb's reference model for learning styles will be used as theoretical framework. The model depicts learning as an outcome of the dynamics of experience, observation, conceptualization and experimentation. We have selected this model since we consider it highly likely that PhD students meet all four modes when developing their PS.
Results and conclusion: The publication pressure on young scientists has increased tremendously over the last decade. While publications 'make or break' a scientist, there is not much room for 'trial and error' and young scientists must have a relatively precise PS at a very early stage of their career. For these reasons, learning how to produce a PS, while considering the principles of responsible conduct of research, is a crucial part of doctoral training.
The analysis will contribute evidence-based knowledge to further improve the quality of research integrity training targeted at PhD students.

PT-121

Abstract reporting bias: How our preference to report positive findings in an abstract could bias systematic reviews
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Objective: Scientific publications report mainly positive findings in their abstract, especially if multiple associations are studied. We call this 'abstract reporting bias'. Search queries in academic databases are generally limited to these abstracts (and to titles and keywords). This means that negative findings are less likely to be identified by systematic searches, and also less likely to appear in meta-analyses. In our case-study on abstract reporting bias, we will focus on the association between diesel exposure and bladder cancer.
Our Objectives are: a) to introduce a new concept and research method; b) to assess how many relevant publications report 'bladder' in their abstract/title/keywords and are thus identifiable by regular search, and c) to assess the quantitative impact of abstract reporting bias in meta-analyses.
Method: In order to catch all the relevant literature, including those in which bladder cancer was not reported in the abstract/title/keywords, we set up a broad search query related to diesel exhaust and cancer in general. We searched Web of Science Core Collection and PubMed. We scanned the full-text of these publications and included those that used a cohort design and mentioned the association between diesel exhaust and bladder cancer.
Preliminary Results: We identified 28 cohort studies. Only nine publications had mentioned bladder in their abstract/title/keywords. In three cases, Web of Science had manually added 'bladder-cancer' to their Keywords Plus, leading to a total of 12 identifiable publications (43% of all relevant publications).
A meta-analysis based on identifiable publications only, yielded a pooled risk estimate of 1.10 (95% confidence interval [CI] 0.97–1.26), whereas a meta-analysis based on all relevant publications yielded a pooled estimate of 1.04 (CI 0.97–1.11). A meta-regression showed that abstract reporting increases the size of the pooled estimate but this was not significant (odds ratio 1.15, CI 0.97–1.35).

Conclusion: This case-study on abstract reporting bias showed that: a) many relevant publications were missed by a regular systematic search, and b) this led to a small, non-significant overestimation of the pooled effect in a meta-analysis. The power of our study was limited. More research is therefore needed, also for replication in other research fields.

PT-122

Publication pressure among academic researchers in Amsterdam

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Objective: To assess the level of publication pressure for academic researchers in Amsterdam, stratified for academic rank and disciplinary field.
Method: Participants were invited to complete an online survey that included the revised Publication Pressure Questionnaire as part of the academic research climate in Amsterdam project (www.amsterdamresearchclimate.nl). The PPQr is a valid and reliable instrument to measure publication pressure and consists of 3 subscales of 6 items each (Publication Stress, Publication Attitude, and Publication Resources, respectively). A typical Publication Stress (Cronbach's alpha = .804) item would be: "I feel forced to spend time on my publications outside office hours"). An exemplary Publication Attitude (Cronbach's alpha = .777) item is: "Publication pressure harms science". Finally, Publication Resources (Cronbach's alpha = .754) contains items such as: "When working on a publication, I feel supported by my co-authors").
Results: Response rate was 17%. PhD students, postdocs and assistant professor have a significantly more negative attitude towards the publication culture than full professors (MD = .181, CI = .049, .314) and MD = .282, CI = .139, .426, respectively). Postdocs and assistant professors perceive significantly more publication stress than both PhD students (MD = .237, CI = .103, .371) or associate and full professors (MD = .384, CI = .219, .549). Stratifying for disciplinary field, researchers in the humanities perceive more publication stress than those working in biomedicine and natural sciences. However, researchers from biomedicine and the social sciences perceive a greater lack of resources, compared to the natural sciences.
Conclusion: Researchers in the middle of their academic career (postdocs and assistant professors) perceive most publication stress and have the most negative attitude towards the current publication climate. PhD students perceive the greatest lack of resources to alleviate publication pressure. Regardless of disciplinary field, all researchers have a pronounced negative perspective on the publication pressure. Yet, fields like the humanities that suffer from heavy publication stress may look to their natural sciences colleagues to see how publication resources may be stimulated. Our findings emphasize the need to move the debate forward towards a healthy publication climate, where researchers are incentivised to publish innovative yet responsible research.

PT-123

Increasing reproducibility – recommendations by the Deutsche Forschungsgemeinschaft (German Research Foundation)

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Objective: In 2018, the Senate Commission on Key Questions in Clinical Research of the German Research Foundation (DFG) published a statement "Reproducibility of **Result:**s in Medical and Biomedical Research" which addresses the so called "reproducibility crisis" in the life sciences.
Method: A group of biomedical, medical and basic scientists conceived the statement by a discussion process between May 2017 and March 2018.
Results: The group identified research challenges that are inherent to the life sciences, such as the limited capacity for standardization in living organisms, infrastructure that limits access to human patients and biological material as well as German laws that restrict certain experiments on animals and human subjects.

Furthermore, the group of scientists made concrete suggestions, how reproducibility in the life sciences research could improve. Some of the specific measures are already in the process of being implemented by the DFG. The recommendations address all stakeholders in research – the scientific community, funding bodies, journal publishers and lawmakers. As an example, a clear recommendation to replace misleading metrics and increase incentives to conduct studies to reproduce data is given with the statement.
Conclusion: This statement paper – coming from within the research community – increased the commitment to improve and reshape the research landscape in Germany.

PT-124

Epistemic and sectoral differences in the valuation of ownership and authorship
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The ways in which an array of norms and values are mobilised in research practices under the heading of research integrity are far from universal. This research offers insights in the various fault lines that traverse actual research practices and introduce discord, even when the ambition to do good research is shared. It draws from qualitative data collected through observations, interviews and focus groups across multiple research projects studying cohort management in epidemiology, birth care in midwifery and credit in nutrition science, with a focus on real-life articulations of research integrity in actual practices.
The fault lines that are most salient differ per concrete practice. Managing epidemiological cohorts requires interdisciplinary collaboration, especially if one's cohort represents a population and data that offer research value across epistemic boundaries. Data, its production, management, use and storage are a key issue in such data-intense research practices. However, the attribution of value to that data differs radically between disciplines, and, consequently, so do perceived responsibilities and requirements to care for that data. Midwives and gynaecologists are, as groups, struggling over power to articulate good birth. Which evidence is considered legitimate and which is dismissed directly influences perceptions of each other's moral character and/or commitment to research integrity.
Research practices in nutrition science are characterised by yet another fault line exposing differences in moral evaluation of particular actions. In nutrition science, significant amounts of work involve for-profit partners. Researchers working in food companies collaborate with researchers in public universities, jointly producing knowledge for which credit is shared. However, credit distribution infrastructures between food companies and universities are not the same and neither are their respective valuations of credit to begin with.
Research practices are particulars and display particular choreographies of how and how much value is attributed to specific actions or procedures. This includes moral valuation in research practices. Disagreements about how to attribute moral value are rooted in cultural differences in practices, yet emerge as struggles over research integrity.

PT-125

Trends in text-overlap: a publisher's perspective
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Frontiers is one of the largest and fastest growing Open Access publishers. Since 2013, Frontiers has been using the CrossRef Similarity Check powered by the iThenticate software to screen every manuscript submission for text-overlap. In this presentation, we will share our experience of text-overlap reports from submissions in recent years.
The presentation will be based on a quantitative analysis from the database of our manuscript submissions since 2013, with a focus on the following:
- Text-overlap per country (of corresponding author)
- The extent of text-overlap i.e. minor versus major
- Text-overlap per manuscript type i.e. research and review papers
- Text-overlap per academic field
- Whether manuscripts flagged for text-overlap subsequently proceeded to publication following necessary revisions

First results from a database currently being built by Retraction Watch show that plagiarism accounted for 16% of retractions between 2014-16. Using the unique Frontiers dataset, we address whether the observed decrease in retractions due to plagiarism across publishing is reflective of a reduced incidence of textual overlap at submission. Importantly for editorial burden, we will discuss the eventual outcome of cases of substantial overlap and the time added to the peer review process.
In many manuscripts, manual verification of text-overlap by editorial staff deems it acceptable (e.g. common terminology in Methods and Materials) or resolvable through paraphrasing and improved citation practises. As a member of COPE (Committee on Publication Ethics), Frontiers employs an educative rather than punitive approach. Corresponding with authors during pre-screening, the editorial office has worked to reduce text-overlap and improve citation practises. The data demonstrates the efficacy of this process, showing no major correlation between high- or low-overlap and manuscript acceptance or rejection.

PT-126

Plagiarism in biomedical and social science papers of one Colombian university
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Objective: To rate the most common type of plagiarism in one Colombian university.
Method: We conduct a documental review of papers with Turnitin software. We randomly select 10% of each research group papers, published by a Colombian university between 2016 and 2017. Each paper was uploaded in Turnitin to identify the following practices: appearing in two or more journals; self-references without proper citation; textual similarity with other authors without credit; duplication of sentences in two or more papers of the same author; similarity with a Master Sciences (MSc) or Doctor of Philosophy (PhD) Thesis.
Results: There were a total of 31 research groups and 615 papers published between January 2016 and December 2017. We selected 61 papers, having representativeness of each research group. We classified the paper into one of two research areas: biomedical sciences (62,3%) and social sciences (37,7%). 13 papers (21,3%) had no particular findings of plagiarism. 26 papers (68,4%) of biomedical science showed: appearing in two or more journals (2 papers); self-reference without proper citation (14 papers); and textual similarity with other authors without credit (5 papers). In social science papers, 95,5% had at least one finding, as follows: self-reference without proper citation (4 papers); textual similarity with other authors without credit (5 papers); duplication of sentences in two or more papers of the same author (2 papers); similarity with a MSc or PhD Thesis (6 papers).
Conclusion: Plagiarism is a common type of research misconduct, found in at least 9 of each 10 papers in social science papers of this documental review. We found self-reference without proper citation as the most common type of plagiarism, followed by similarity in a MSc or PhD Thesis. These results could reflect a lack of knowledge in proper citation rules and a need in evaluating the factors leading the investigator to omit this important practice.

PT-127

The Null Hypothesis Initiative – promoting write up and publication of negative, inconclusive and replication studies
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Objective: The Center for Biomedical Research Transparency (CBMRT) - a NY-based 501c(3) non-profit with a mission to promote and facilitate the transparent reporting of biomedical research - is presenting an interim report on its Null Hypothesis (H0) initiative - for well-designed yet negative or inconclusive studies, and replication work that is often difficult to publish through traditional scholarly channels. The Null Hypothesis Initiative aims to create an annual open access journal special issue published across a network of different therapeutic areas in partnership with major scholarly societies and journal publishers to source, peer review and publish papers. The first special edition of Neurology® Null Hypothesis will be printed in 2019.

Method: Neurology® Null Hypothesis was launched at the American Academy of Neurology meeting in April 2018. A special editorial highlighting the initiative was published in Neurology, and an interview published in Neurology Today. The editorial board were briefed on the initiative. Data from the submissions process through the Neurology® manuscript submission website has been obtained from the editorial team at Neurology® on submission of target papers, in an area previously under-represented.
Results: From April to August 2018, 23 papers were submitted on topics including stroke, cognition, ALS, autism, pain, genetic diseases and myopathies. The status of these papers in the Neurology® peer review process is as follows: 2 were accepted, 6 are pending revision and 5 are under review. Ten papers did not meet Neurology® standards or criteria and were rejected.
Conclusion: Specifically calling for negative and inconclusive papers to be submitted to Neurology for a Null Hypothesis special edition has produced a good response from authors. Publication of papers online and circulation of the printed collection as a special edition will continue to build awareness of the H0 initiative, the need to address publication bias together, and promote submission of further articles.

PT-128

The frequency of scientific plagiarism measured by a text matching software: a systematic review and meta-analysis
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The aim of this study is to assess the frequency of plagiarism in a scientific community. For this purpose, a systematic review and meta-analysis of studies that detect the frequency of plagiarism in scientific articles using text matching software are conducted.
The literature search of 39 bibliographic databases was conducted in September 2018 resulting in 10 005 articles. Eligible studies were studies that detect plagiarism in published articles or in manuscripts submitted to scientific journals or conferences using the text-matching software. Nine studies were eligible for meta-analysis and they analyzed 4927 scientific articles for plagiarism.
A meta-analytic pooled weighted estimate of scientific articles that have instances of plagiarism is 15% (95% CI: 12% - 19%; N=9 studies). Six studies separately reported proportion of articles with text-recycling and true plagiarism which resulted in meta-analytic pooled estimate of 6% (95% CI: 3% - 12%), and 7% (95% CI: 6% - 8%), respectively. Only four studies separately reported the proportion of major and minor plagiarism, resulting in 7% (4%-12%) for major and 9 (7%-13%) minor plagiarism.
Subgroup analysis was conducted to explain variability in results. Following criteria were used: a country where a study was conducted (Anglo-Saxon countries vs. other), sample size (N>599 vs. N<599), scientific discipline (medicine vs. other) and status of analyzed paper (published vs. not published). No statistical differences were noticed in the frequency of plagiarism considering these characteristics.
The definition of plagiarism differ among the included studies in several points: authors disagree on the exact amount of similar text that represent plagiarism, on inclusion/exclusion of the method section from the textual analysis, or whether a citation of sources is relevant criteria to define plagiarism.
The results of the meta-analysis indicate high rates of plagiarism in scientific articles. The absence of a unified process to determine plagiarism in a scientific article indicate that researchers should reach consensus on the definition of plagiarism (minor and major, text-recycling and true plagiarism). Furthermore, procedure to report plagiarism detection process should be standardized.

PT-129

African biomedical journals: survey of policies and author guidelines
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Objective: To describe policies and guidelines in African biomedical journals on authorship, conflicts of interest and funding sources, and evaluate author compliance in research papers.

Methods: We evaluated all biomedical journals indexed on the African Journals Online database if the editor-in-chief and publisher were based in a low-or middle-income country, if author guidelines and policies were published in English, and if the journal published an issue in 2016. Policies were obtained on their websites, and we randomly selected five articles published in 2016 from each journal. We used standardised forms to extract data and SPSS for analysis.
Results: One hundred journals were included, published by non-commercial institutions or associations (59), or commercial publishers (41). Sixty-nine were open-access journals. Articles we examined numbered 495 (290 non-commercial, 205 commercial).
For authorship, 52 journals provided guidelines (39% non-commercial and 78% commercial), but only four used the latest International Committee of Medical Journal Editors (ICMJE) authorship criteria. Forty-eight had a policy on contributorship (32% non-commercial and 71% commercial). In sampled articles, only 12% (60/495) reported contributorship, and only 13 (3%) of the contributorship statements addressed all the ICMJE criteria.
For conflicts of interest, 63 journals provided a guideline (46% non-commercial and 88% commercial), but only 36 defined conflicts of interest. Fifty-two journals provided a guideline on disclosure of funding sources (36% non-commercial and 76% commercial). More than half the articles did not disclose conflicts of interest (54%, 266/495) or funding (61%, 303/495). Of those declaring conflicts of interest, all but two articles declared no known conflicts. Adherence to guidelines where they existed was poor for disclosure of authorship (11%), conflicts of interest (58%) and funding sources (56%).
Conclusion: African biomedical journals, particularly non-commercial journals, lack explicit guidelines on authorship, conflicts of interest and disclosure of funding sources. Where guidelines are available, they are poorly implemented.

PT-130

Privacy issues and citation from non-academic online sources: a case study of the online flaming incident in Japan

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In recent years, privacy issues arise in academic fields concerning the way to deal with information from social media platforms like Facebook Instagram or Twitter as many people use them and leave trails of various aspects of their everyday lives. This paper aims to focus on new potential harm in a citation from a kind of online posts in academic publication through the examination of the internet 'flaming' case in Japan in 2017. The citation source included no typical personal information like real name or face photography, but belonged to fan fiction with sexual descriptions in the genre of BL (Boys' Love), whose fans in Japan usually intend to share their works only with the same cultural community members. There is a conflict between honesty and accuracy in research achievements and vulnerability of marginal social group. While citation sources must be explicit as a responsible research behavior, it can be offensive for people in minority community to be made to disclose their work outside their territory.
This paper examines the incident as one where privacy was compromised, adopting the taxonomy of privacy violation activities proposed by D. J. Solove. According to the analysis, it is revealed that the citation falls into the category of 'increased accessibility' and 'disclosure' in the information dissemination classified by the taxonomy. The former is a harmful activity because many people have more chances to access the information at ease. The latter is as sensible contents are exposed despite being concealed. Based on this analysis, this paper proposes that researchers had to consider their description of the data of non-academic citation sources while also considering the viewpoint of privacy, which may help establish a comprehensive guideline for researchers to require a citation from social media resources.

PT-131

Retraction: the "other face" of research collaboration

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Objective: The latest two decades have witnessed the rising prevalence of both co-publishing and retraction. Zooming in on research collaboration this paper investigates factors contributing to retraction probability and elapsed time utilizing a unique dataset.
Method: Our core dataset for analysis consists of 6,057 records with 2,087 WoS indexed retracted articles and 3,970 associated control articles based on nearest-neighbour matching.We also supplemented the data with retraction reasons, journal impact factor, and ranking information of research universities.
Results: Our analysis reveals that the majority of retracted papers are multi-authored, and repeat offenders are collaboration-prone. Yet ceteris paribus collaboration does not increase the likelihood of producing flawed or fraud research, at least in the form of retraction. Collaborated research takes longer time for this self-correction mechanism to work if being retracted. That holds for all retractions and also retractions due to falsification, fabrication and plagiarism (FPP). The research also finds that publications with authors from elite universities are less likely to be retracted, which is particularly true for retractions due to FPP. Interestingly China stands out with the fastest retracting speed compared to other countries.
Conclusion: Our study suggests that jointly published research, especially with contributions of primary authors from top universities, is less likely to be retracted. This finding offers empirical support for policy proposals that endorse research collaboration, especially that involving elite scientists at top universities. Our findings are relevant to current performance evaluation policy in some countries that highly de-incentivizes collaboration.

PT-132

Selective citation is present in epidemiological studies on phthalates: a citation analysis

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Introduction: Selective citations can lead to skewed knowledge development and a biased scientific consensus. If citations are associated with study outcome this is called citation bias. We will study selective citation in a broader sense, including also other factors can influence the chance of being cited, e.g. study design, journal impact factor or the funding source of the publication. As a case study we assess which factors drive citation in the human literature on phthalates, specifically the metabolite mono(2-ethylhexyl) phthalate (MEHP).
Methods: A systematic literature search identified all relevant publications on human health effects of MEHP. Data on potential determinants of selective citation were extracted in duplo. Specialized software was used to create a citation network, including all potential citation pathways. We applied random effect logistic regression to assess whether these determinants influence the likelihood of citation.
Results: 112 Publications on MEHP were identified, with 5684 potential citation pathways of which 551 citations occurred. Reporting significant results and an authors' conclusion that indicates a harmful effect of MEHP did not influence the chance of being cited. Factors that were associated with a higher chance of citation are: reporting a harmful point estimate, the journal impact factor, authority of the author, a male corresponding author, research performed in North America and self-citation.
Conclusion: In the literature on MEHP, citation is mostly driven by a number of factors that are not related to study outcome. Although the identified determinants do not necessarily lead to bias, it does show selective use of published literature.

Poster Walk: Tackling unethical practices 1

PM-133

Evidence pyramid on the verge of collapse: a systematic review and meta-analysis iatrogenics
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Researchers and clinicians acknowledge the role of systematic reviews and meta-analyses as a crucial element in everyday clinical practice. Unfortunately, majority of currently produced systematic reviews and meta-analyses in biomedical fields disseminate the following characteristics: flawed beyond repair (20%), unpublished (20%), redundant and unnecessary (27%), misleading abandoned genetics (13%), decent but not useful (17%). Only 3% published systematic reviews and meta-analyses are decent and clinically useful (Courtesy: JPA Ioannidis). A harsh reality is that currently more systematic reviews of trials than new randomized controlled trials are published annually. This issue is pandemic across the scholarly publishing and the illness could be considered a potential iatrogenic in publication industry and academia. A systematic review and meta-analysis cannot be better than its included studies allow. In other words, a good systematic review and meta-analysis recapitulates the ingenuity of the eligible studies and trials. The major driving force towards this practice is the notion and adoption that conducting meta-analysis has become an easy way to get published and a profound urge to write up a meta-analysis merely to feed one's own scientific impact number. Another concern is the methodology in conducting the systematic reviews that aligns to a cookbook approach. Anyone can possibly generate a systematic review on any topic irrespective of the topics' scientific value and expertise of the scientist. A major overhaul is needed on the generation of biomedical evidence and its credible synthesis.
The presentation also highlights certain remedial courses to reduce the crisis: Authors should be dissuaded from conducting meta-analysis with a restricted number of trials, including a limited number of participants; Irrespective of the citation impact of the journal, editors and reviewers are responsible for implementation of a stricter criteria adoption as to when and how meta-analysis should be accepted; Render methodological high-yield training certification to the scientists and form a consortium within the respective journals; Adopt "realist reviews" to provide a primer between meta-analysis and narrative reviews; Adopt GOBSAT approach within the journal comprising trained scholars in synthesising the meta-analysis, and that is open only to journal's domain and other researchers are refrained from any submission.

PM-134

Can presentation vocabulary influence the perception of research misconduct: a randomized study
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Objective: We will perform a randomized controlled trial to assess whether the vocabulary used to describe cases of detrimental research practices can influence the perception of research integrity.
Method: Randomized controlled trial will be performed on a non-expert population. The task for the participants will be to assess the appropriateness of the behavior described in the scenarios that describe three different types of misconduct: data fabrication, authorship manipulation and non-publication. The intervention in the trial is the language used in scenarios. Scenarios will be described using the vocabulary related to Moral Foundations Theory. In one group, the case will be described using words associated only with Harm or Fairness moral foundations, and in the other using words associated with Authority, Ingroup and Purity moral foundations. All scenarios will be standardized in terms of the number of words and emotional tone. The participants will also be asked to provide the reasons for their decision after reading each scenario and assessment of appropriateness of the behavior. The analysis of their free text responses will be made using natural language processing software LWIC – Linguistic Inquiry and Word Count.
Results: The scenarios were piloted on a small sample of medical students (N=46). No issues in clarification of the content or other changes were needed, and based on the pilot results we calculated that we will need 52 participants per group to obtain the 10% difference between groups with α=0.05 and 80% power.
The groups in randomized controlled trials will be analyzed using t-test for independent samples (if the distributions of results are normal) or Mann Whitney test (if the distributions are not normal). Qualitative answers about the reasons for their decision will be analyzed and compared between two groups regarding the word characteristics, usage of moral foundations vocabulary and emotional tone.

Conclusion:
The outcomes of this study will help to explore whether there are differences in perception of misconduct depending on the vocabulary used in the description of misconduct. This finding will be relevant for informing training and policy interventions for research integrity and responsible conduct of research.

PM-135

Reflections on handling research misconduct complaints: the HKU experience
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Objective: The Objective of this presentation is to share experiences on how research misconduct complaints are handled by The University of Hong Kong (HKU) and to share reflections on issues that have arisen in the handling of such complaints.
Method: Issues are identified. For each issue, different alternative approaches to resolving the issue, including the approach generally used by HKU, are also identified. Reflection is made on the pros/cons of different approaches and the rationale behind the HKU approach. Reference will be made to fairness/natural justice, and court proceedings.
Results: The issues identified include: how anonymous complaints are handled; whether we are obligated to inform complainants the results of investigations; how we can protect complainants against retaliation; to what extent can respondents rely on legal representatives in formal proceedings; the scope for informal resolution of research misconduct cases; sanctions for academic staff; sanctions for students; membership composition of investigative committees; the role of preliminary investigations; efficiency of investigations; the standard of proof applied; following up on recommendations made by the committees; etc.
Conclusions: will be made regarding how the complaint handling system at HKU could be improved for research misconduct cases, and the elements of an ideal complaint handling system.
Disclaimer: The views expressed are entirely the views of the presenter and not of HKU and are drawn from the experience of the presenter in handling complaint cases.

PM-136

GOT-IT – new guidelines on target validation for innovative therapeutics
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Objective: There are several reasons why clinical trials are unsuccessful, but, in many cases, clinical failures can be linked to insufficient preclinical validation of the drug targets. Initiated by the German Federal Ministry of Education and Research, the GOT-IT (Guidelines On Target Validation for Innovative Therapeutics) project aims to address this issue by developing a new set of guidelines for target validation (TV) procedures in biomedical research. This will ultimately improve the comprehensiveness and robustness of preclinical research data.
Method: The GOT-IT project focuses on i) analyzing current TV practices in industry and identifying gaps between industrial and academic TV projects, ii) developing a fit-for-purpose, flexible set of guidelines suitable for implementation in an academic setting, iii) refining the guidelines through communication with a broad research community, and iv) preparing means to facilitate dissemination and sustainability of the guidelines (e.g. educational program, online expert platform).
Results: Essential TV elements have been defined for the following 4 TV categories: a) Link between the target and disease, b) Safety, c) Technical Feasibility and d) Degree of Innovation. The GOT-IT guidelines outline a ranking system for estimating the quality of evidence in selecting the 'right' target, and identified TV elements are ranked (in collaboration with TV experts from Academia and Industry) according to their importance for building confidence in the selected target.
Importantly, one of the core elements of the TV guidelines are recommendations related to data robustness, rigor and reproducibility and the GOT-IT guidelines will facilitate the practical implementation of "confirmatory research" standards in academic TV procedures.
Conclusion: The guidelines will help to correctly prioritize research activities within TV projects. This will lead to a more efficient use of resources and reduce waste. In addition, the guidelines will provide a continuing source of reference for academic scientists who plan studies on target validation and drug discovery.

Once published, the new GOT-IT TV guidelines will support Academia-Industry interactions by aligning quality criteria in preclinical research. Such collaborations are increasingly favored from both sides but are often challenged by different target validation quality expectations and requirements.

PM-137

The psychological predictors (motivations) support opinion of researchers to make fake in scientific works

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Objective: It is very interesting "Why any researchers don't make false results of researches and other make (in dissertations, articles, chapters in monographies)?". Exactly it is if no external control or checking (re-checking) of the process of researches and its results. This situation is typically for some post-soviet countries. Many attempts of fighting against making false in science conducted by official persons in this moment are in vain.
Method: Interviews were made with researchers in such spheres as medicine, psychology and biology according special scheme with included questions concerning making false of the results of research.
Each interview were conducted in such methods that people didn't know and guess that the main aim of the conversation were to receive information about reasons of making false of research data.

Results: Estimated the following thoughts in mind of researches which support their behavior to make fraud in the results of research. Its not in order of frequently its like simple list:
"Nobody guess that I falsified the results"
"No time for doing whole completed research so I multiply the number of participants in several times"
"According the hypothesis it should be statistical difference between data and I have not so I'll correct its for making statistical differences"
"No money and possibilities to make completely research"
"Other makes false in research so I will"
"They (he/she) pays so I will make such as they (he/shy) want (because next time they (he/she) refuse to pay for research"
"Other has such data so I will write the same"
"My bosses like other results"
Besides asked people note that there are some researches who have habits for every time to make false.
Detected personal psychological factors of researchers which support their decision to make false for scientific results.
Conclusion: Estimated the motivations for making false by researchers. Its propose the complex approach for fighting against falsification in science. First - Its should be constantly control during researching and its results and punishment for who makes false. Second – it needs in forming anti-falsifier consciousness by growing and special educational programs.

PM-138

Standardizing the ethical management of clinical research papers published in Chinese pediatric academic journals

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Objective: To explore the current status and problems of ethics management of clinical research papers published in Chinese pediatric academic journals, and to put forward corresponding suggestions. **Method:**s A total of 1 872 clinical research papers published in 2017 among 16 kinds of pediatric academic journals from Source Journals for Chinese Scientific and Technical Papers and Citations were selected as research subjects. The ethical approval and the issues of subject protection were analyzed among the papers.

Results: ①Among 1 872 papers, 33.9% of them were approved by the ethics committee, 6.5% of them provided the approval number, 38.1% of them were informed by the subject or family members, and 5.0% of them achieved these 3 conditions. The approved ethics committee was not described clearly in one paper. And the identifiable information of the subject's face photo of five papers has not been processed specially and was suspected of infringing the subject's privacy. ②The proportions of papers approved by the ethics committee, providing the approval number and obtaining informed consent from the subject or family members of Chinese Medical Association journals were significantly higher than those of non-Chinese Medical Association journals, and the differences were statistically significant ($P<0.05$). There were statistically differences in the three indicators among the prospective, cross-sectional and retrospective research papers ($P<0.05$). And the proportions of papers approved by the ethics committee and obtaining informed consent of the subject or family members of prospective research papers were higher than those of cross-sectional, retrospective research papers. **Conclusions:** The ethical management of clinical research papers published in Chinese pediatric academic journals still needs to be strengthened and improved. We should construct scientific ethics, medical ethics and editorial ethics through standardizing ethical review of the publication of papers.

PM-139

Best practices in management of research integrity: lessons from a South African university

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Objective: We describe some best practices in the management of Research Integrity in a specific university setting.
Methods: We made a benchmarking visit to a university in South Africa in order to understand research integrity management practices. Primary data was collected in July 2018 through qualitative oral interviews, observations and group discussions with a purposive sample of employees at the University involved. The data were manually managed and themes identified and analysed in relation to the objective of the research. Secondary data was collected.
Results: Research Integrity is promoted not just within the University but throughout the South African Higher Education landscape. The Department of Higher Education and Training requires both quality scholarship and a high degree of academic and research integrity from all institutions of higher education in the country. However, the high level of national and institutional investment in research and scholarship in the form of research incentives paradoxically increases the risk of research misconduct for both individual researchers and the University. The University's research integrity management approach is founded on clear structures, policies, and SOPs, all of which work harmoniously at all levels. Lessons learned: i) administrative and financial support of structures from top to grassroots is critical, ii) promotion of research integrity into a culture matters, iii) integration of research integrity into all university structures in a cohesive and consistent manner is paramount; and iv) focus on formation and prevention rather than punitive approach promotes academic integrity. Research Integrity makes good business sense.
Conclusion: Best practices that may be replicated at Moi University include: strengthening existing and creating new structures, and developing policies and SOPs of Research Misconduct. This requires buy-in by the highest level university management and consequent policy advocacy.
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PM-140

Stemming the tide of plagiarism in Nigeria: advocacy by the Nigerian Young Academy
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Objective: The Nigerian Young Academy (NYA) is a unified platform for interaction among brilliant young researchers from diverse disciplines and regions. It seeks to nurture outstanding and aspiring youthful academics and professionals towards improving the state of the nation. Integrity is one of the core mandate of the academy which is expected in all researchers. However, the spate of plagiarism among researchers both locally and internationally calls for concern. Therefore, the objective of this work is to describe the effort of the academy in fighting the scourge of plagiarism.
Methods: In order to create awareness among stakeholders, the academy organises anti-plagiarism workshops, lectures and seminars, among many of its programmes. Till date, three of these workshops have been organized to sensitize young researchers and academics of the dangers inherent in plagiarism. More than 500 researchers from various disciplines and different regions of the country have participated in these workshops. During these workshops, feedbacks were generated via question and answer sessions, sharing life experiences and practical tips of avoiding plagiarism.
Results: The results from these workshops revealed that plagiarism is very rampant among researchers due to a variety of factors. These include ignorance, publish or perish syndrome, poor mentoring and lack of research infrastructures. Editorial rigour of the Editorial offices of local journals has also been found to be largely culpable in nipping plagiarism related problems. It was also observed that this evil cuts across all strata of the academic community including male and female, old and young, as well as in the sciences and humanities. What is more worrisome during these programmes is that many researchers do not know what constitutes plagiarism.
Conclusion: Consequent upon the above findings, we recommend that all researchers and upcoming researchers (undergraduate and postgraduate students) be educated on research integrity and dangers of plagiarism. More attention should be focused on novel, quality and impactful researches rather than the number of publications. It was also recommended that government and other related institutions should provide adequate infrastructure and conducive environment for quality researches. More effort is needed to create awareness on the forms and evils of plagiarism.

PM-141

Research misconduct in medical profession in India: reasons and solutions
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Objective: Research misconduct is being defined as the "Behaviour by a researcher, intentional or unintentional that do not meet or fulfil the scientific and ethical standards. The study was conducted with objective to determine status of research misconduct, its reasons and possible solutions in medical profession in India.
Materials and Methods: In depth interviews were conducted with eminent researchers in medical institutions in Delhi, India. Data was collected about their experience regarding research misconduct in their career, reasons to growing research misconduct in medical education and possible solutions to them. Younger researchers were also interviewed about their experiences in medical research and their views about research misconduct.
Results: A majority of senior researchers admitted that research misconduct is rising in Indian scenario. All types of research misconduct were reported like fabrication, falsification, plagiarism, conflict of interest etc. Possible reasons for the same being necessity of good publications for promotions, reputation/status issue, competition with peers, pressure of funding agency etc. Young researchers cited reasons like importance of research publications in hiring process, linking publications to future professional growth, academic promotions and pressure of supervisor to show positive results for falsifying data and publishing less than accurate results. When asked for possible solutions to preserve research ethics and integrity in existing scenario, many solutions were given - including topics of research integrity and ethical aspects in curriculum of undergraduates and postgraduates medical students, keeping commercial funding agencies out of research funding, strict vigilance of research process by external agencies, mandatory registration of all research studies, mandatory training of all researchers in research integrity etc.
Conclusion: A integrated approach should be promoted and practised in the medical research focussing on the minds and preferences of young researchers. Senior faculty members should educate and motivate young researchers to undertake honest and ethical research practices to preserve the research integrity.

PM-142

Impact of China's new policy on strengthening research integrity

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Abstract: On 30 May, 2018, the General Office of the Communist Party of China's Central Committee and the General Office of the State Council jointly published the Several Opinions on Further Strengthening Research Integrity (referred to as Several Opinions). The Several Opinions call for a zero-tolerance policy against academic dishonesty. National Center for Science and Technology for Evaluation, Ministry of Science and Technology of China is conducting a monitoring on the implementation of Several Opinions and their impact. The monitoring compared the change before and after the release of Several Opinions by using questionnaire survey to universities and public research institutes (PRIs) and internet mining. 200 universities and PRIs were submitted questionnaires. The results of monitoring showed that the new policy has had impacts in some aspects after it is released, which could improve the research integrity in China. Firstly, about 2/3 provincial governments have published new policy on strengthening research integrity in line with requirements by Several Opinions. Also a majority of provincial departments of Science and Technology have established new division which is responsible for managing research integrity and dealing with research misconducts at provincial level. Secondly, universities and PRIs have established dedicated body or updated new function of existing body to dealing with research integrity. Also education on research integrity for graduates even for undergraduates has also been enhanced. This paper will analyze more impacts both qualitative and quantitative.

PM-143

How differently do we define and handle research misconducts?

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Objective: Institutional regulations of research integrity can help to promote research integrity, to shape the institutional research culture, and to prevent and punish research misconducts. However, due to the diversity of research practices and research culture, institutional regulations from different countries may present a variety of differences. In this comparative study, regulations of universities from Europe and China were selected to investigate how research integrity is preserved: (1) how research misconduct is defined; (2) what research value is strengthened; (3) what their procedures of investigating research misconduct allegations are like; (4) what measures are taken to optimize the research misconduct allegations and investigations.
Methods: 43 universities were selected by using cluster sampling and random sampling, and 37 institutional regulations were retrieved from websites of the sample universities. To analyze the retrieved documents, a content analysis was conducted.
Results: By the submission of this abstract, the concrete data is still under analysis. At the time of the conference, the following contents will be presented: similarities and differences in defining research misconduct between the Chinese and European universities; their retrospective procedures; criteria of research integrity committees and investigation panels; their mechanisms in encouraging reporting suspected research misconducts; their target groups; etc. On top, national regulations or frameworks will be used to compare the differences across countries as well. Though the deep structure of the heterogeneity cannot be easily derived from the regulations themselves, the contents of regulations still show the different statuses and roles of research communities in different societies.
Conclusion: A heterogeneity might exist in both the definitions of research misconducts and the investigation procedures. If so, these differences can be explained by the diversities of research cultures. The findings might contribute to a better understanding of research practices and research cultures in different cultures and to the improvement of regulations.

Poster Walk: Tackling unethical practices 2

PT-144

New classification of research misconduct from the viewpoint of betrayal of truth and trust

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FFP (fabrication, falsification, plagiarism) and QRP (questionable research practice) have been used worldwide in the classification of research misconduct. However, FFP comprises two distinct categories of misconduct namely; FF is extreme research misconduct that betrays truth, while P betrays trust. It would seem logical, therefore, to separate FF from P, classifying FF as Class I Misconduct, betrayal of truth, and P as Class II Misconduct, betrayal of trust.
Betrayal of trust covers many types of research misconduct that can be defined in terms of plagiarism, irreproducibility and inadequate research practice.
Research misconduct in terms of betrayal of truth and trust has the potential to cause serious damage to life and health. This type of misconduct is placed in a third Class.
The proposed classification system is outlined below.
Class I misconduct: Betrayal of truth
(1) Fabrication
(2) Falsification
Class II misconduct: Betrayal of trust
(1) Plagiarism of text
(2) Irreproducibility
(3) Inadequate research practice
Class III misconduct: Impairment of life and health due to betrayal of truth/trust
(1) Disregard for medical ethics
(2) Inadequate practice of clinical medicine
The author hopes that this classification makes clearer understanding the nature of misconduct and easier analysing and taking actions for prevention than the conventional classification, i.e. FFP and QRP.

PT-145

Twelve countermeasures to research misconduct at the levels of researchers, laboratories, organizations and society

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As with many issues involving social injustice, there is neither an absolute answer nor effective countermeasure to research misconduct. Many factors such as the competitive mindset of the researcher, misbehavior of scientists and bad management of laboratories etc. are intricately intertwined and lead to misconduct. Research misconduct is generated from underlying issues within the scientific framework and from the nature of human beings.
Countermeasures to eliminate research misconduct should be put in place wherever it is likely to occur: at the level of the individual researcher, the laboratory, the organization and society in general.
The twelve countermeasures listed in Table have been formulated after analyzing the misconduct cases and are grouped according to the four levels shown. Compliance with these measures will be one of the best ways to ensure sound scientific achievement.
Researcher Level
1) Education on research integrity
2) Deep understanding of science, society and humanity.
3) Resilience to stress and pressure
4) Avoiding inadequate research practice
Laboratory Level
5) Psychological safety of team members
6) Condemning bullying and harassment
7) Guidance by team leaders

8) Data sharing and communication
Organization Level
9) Misconduct in corporations
10) Avoiding groupthink
Society Level
11) Participation by official authorities
12) Concerns of the community

PT-146

Potential harms/risks in implementation research in Papua New Guinea
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Introduction: Implementation research in public health is to translate research findings and results into action for greater impact and benefits at wider population level. The implementation research is important because it may provide guidance to policy review and development as well as informed decisions to address public health problems. The main aim of the study is to identify potential risk or harms in implementation research.
Method: The research is proposed to begin in February 2019 in Papua New Guinea. It will be a descriptive cross sectional study which will be conducted early next year for my master thesis hypothesis on tropical disease implementation research and then build on this research for higher qualification.
The following are some of the risks that are proposed for study for this study. The five proposed risks are; individual harms, social harms, financial harms, communal harms and harm to the health system.
Results: The results of this study will be analyzed accordingly to the proposed predetermined risks as; (a) In individual harms where there is sometimes risks of intervention and the control groups or standards of care is considered. The continuation of care after study also is not considered and not done to study population and the researcher does not feel responsible of the risk during and after the research.(b) In Social harms there is stigmatization of groups of subjects involved. There is also excess burden to marginalised groups especially if they are not consulted. (c) Financial harm occurs when incentives or vouchers used for research may destabilise the local economy d) Communal harms sometimes cause cultural insensitivity of an intervention. (e) Finally the study involving established government or existing system causing working staffs being overworked, overwhelming health workers and diversion of resource allocation to research area may occur in implementation research.
Conclusion: The result of this study will be shared with relevant partners and researchers. It will be useful for any proposed thesis and further studies especially in improving the implementation research.

PT-147

The state of the global discussion on questionable research practices: a bibliometric analysis
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Objective: This presentation investigates the evolution, overall state, and intellectual base of discussions around questionable research practices (QRPs) in the scientific literature. More specifically, we aim to show in which countries, disciplines and journals and by whom specific QRPs are discussed, how these discussions relate to each other, and how they relate to the perceived prevalence and seriousness of these QRPs by researchers.
Method: We will use bibliometric methods to analyse all publications in the Web of Science between 1980 and 2018 mentioning the different QRPs identified from a thorough screening of the literature on QRPs. This dataset will provide information on the country, disciplines, journals, and authors taking part in the discussion on QRPs, and on the literature cited in these discussions. We will complement it with data on the perceived prevalence and seriousness of specific QRPs obtained through the PRINT survey, sent to 55,000 researchers with a PhD-degree employed at 18 universities in Denmark, Austria, Croatia, UK, and the US.

Results: After showing the evolution over time of the number of publications mentioning QRPs, we will present a world map displaying in which country these are taking place. We will also use maps to show which disciplines discuss QRPs, the intellectual base of these discussions, and the perceived prevalence and seriousness of the QRPs in those disciplines. Finally, we will use different bibliometric indicators to describe the journals where QRPs are discussed (e.g., what are the main journals? Are they journals with high or low impact factors?), and the individuals that are engaging in those discussions (e.g., are they junior or senior scholars? Are they high impact, prominent researchers?).
Conclusion: This large-scale analysis of discussions around QRPs will provide insights on the growing importance of QRPs, or at least of the growing attention given to QRPs by the scientific community. Our results may help identify areas where needed discussions may be lacking and show how the relevance and importance of QRPs may be determined by the cultures (national or epistemic) in which these practices are taking place.

PT-148

Authorship: professional, ethical and operational issues
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Objective: The objective of the study was to determine the professional, ethical and operational issues for assigning authorship.
Method: The data was collected from the Pubmed, Nature journals, International Committee of Medical Journal Editors, The Committee on Publication Ethics, British Educational Research Association, The British Psychological Society, Medical Research Council, Oxford University, University of Cambridge, British Educational Research Association and Academy of Management.
Results: From the literature, it is discovered that there are no all around guidelines for assigning authorship. Authorship standards, traditions and practices vary from one discipline to another. Responsibility for selections concerning the authorship of publications lies with people who administrated the work according within the publication. Contradictions frequently happen when authors put in comparable measures of exertion on various parts of a task. One individual may have built up the thought for the venture and the other performed the majority of the information examination. The power of the question normally rotates around the inclination that whatever they did could really compare to what the other individual did. The authorship can be misused when there is cash to be made. One review found that guest and ghosts, frequented 21% of papers distributed in six driving therapeutic journals in 2008. Numerous journals currently require explanations that clarify author's role in their publications. Scientific categorizations and institutionalized vocabularies for depicting the author's job have been produced and such progressions are making a difference. There have to work out better approaches to represent author contributions.
Conclusion: There is no immaculate methodology, yet choosing who gets an initiation credit, and how they are positioned, is an essential piece of doing science responsibly. In the event that we disposed of first creator last creator and the battle for credibility we can see more innovation.

PT-149

Publish or perish: research integrity in Indian academics
U.P. Singh
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The translation of effective research into productive and useful knowledge is cornerstone for any academic background. However, in past few years, the rise of predatory journals have put serious question on the authenticity of research results, and as matter of fact, significant instances of research misconduct have appeared. The recent study showed academics in countries like, China, India and other developing nations are more at risk of their researchers falsifying or fabricating data because of increasing pressure to publish. Particularly, in India, now the authorities are became more vigilant for encouraging research integrity and discourage misconduct in academic settings by number of means. The present paper enumerates the various recent steps taken by the Indian authorities to curb the menace of research misconduct to bring more credibility to the research being conducted. In addition, I will briefly discuss the steps taken by our University for promoting ethical research.

PT-150

Statistical integrity in biomedical research – A questionable practice/conduct

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Objective: Statistics forms basis in all research studies. Appropriate usage of statistical techniques for analysis of biomedical research data is of utmost importance in order to make rationale and reliable inferences.
The present study explores critically the usage of various statistical methods and analysis along with their inappropriateness usage in publications of biomedical research.
Methods: The primary data for the study was collected from MedIND indexed biomedical journals. We scrutinized all original research publications in the latest volume of available journals on MedIND website. Editorials, letters, case reports and review articles were excluded. There were 137 available journals having 1191 articles. All 1191 publications were manually reviewed for their statistical content and data were systematically recorded for analysis.
Results: Of the 1191 scrutinized research publications, 39.4% publications did not specify the design and type of study. 36.2% of publications did not mention the place of study. There were 65.9% publications in which sampling techniques was either mentioned or described. A total of 733(61.5%) publications described statistical methods used in the methodology. Statistical software used was mentioned only in 54.9% of studies, of which SPSS was the commonest (86.7%). There were only 47.3% of studies in which approval of IEC was mentioned and subject consent taken was mentioned only in 48.1% publications. 68.1% of publications described the results with proper statistical explanation whereas 31.9% either lacks statistical explanation or described it partially. Surprisingly 98.8% of publications did not specify/acknowledge the statistical consultation.
There were 85.7% publications in which either of statistical method was applied. Of the 550(46.2%) publications which applied Chi square test, 64(11.6%) did not check the assumption of test and used Chi square test with zero and/or <5 as one of the observation. ANOVA was used in 185(15.4%) studies, none of which followed the assumption of ANOVA. Despite the use of statistical software, exact p value was not mentioned in 170(14.3%) of publications.
Conclusion: It is seen that statistical methods are widely used in biomedical research. However, there seems to be a significant issue for the scientific misconduct for study design, sampling technique(s) and usage of appropriate statistical method(s) with applicable assumptions.

PT-151

Managing research misconduct: national institutional structures for research integrity in 23 countries in Europe with a comparison of the Austrian and Luxembourgish structures

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ENRIO/ENERI, Amsterdam

The objective of the presentation is giving an overview of the different national institutional structures for research integrity in 23 European countries in managing research misconduct with a comparison of the Austrian and Luxembourgish structures.
The results to be presented follow from a search from 2016 till 2019 by ENRIO (The European Network of Research Integrity Offices) on the existence and lack of national institutional structures for research integrity in its 23 member countries in light of the European funded ENERI-project (European Network of Research Ethics and Research Integrity).
The results are based on a comparison and analysis of answers to a member's questionnaire and meetings with its members and public information. These show that the majority of countries has a national institutional structure for research integrity, however, that the term national can differ in scope from country to country on whether institutions where science misconduct occurs fall under the national institution's authority. Also, differences appear in tasks these national institutions perform (investigatory/supporting/mediating) and in cases it handles, on request, own initiative, in first instance and/or appeal. The results, too, show that Europe still holds countries without a national institutional structure for research integrity. These struggle with the question how to implement which structure.

The Austrian system is mentioned as a good example to follow for countries that are in the process of creating systems ('Fighting Fraud, An Austrian success story shows one way to tackle misconduct', Nature, Editorials, 20 September 2018, Volume 561, p. 285-286). Earlier, the in 2016 created Luxembourg Agency for Research Integrity (LARI) already decided to follow the Austrian system in its unique characteristic to establish a national commission for research integrity with only expert members from abroad to guarantee its independency. Luxembourg did not follow the Austrian system 1:1, though.
The presentation aims to show that in managing research misconduct different national institutional structures for research integrity can exist and countries (can) learn from its similarities and differences. A comparison of the Austrian and Luxembourgish national structures shows this and also that in succeeding it is important to establish a structure that fits the country best.

PT-152

Interventions for ethical climate: a scoping review
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Objective: The objectiev of this study is to explore, collect and synthesize existing research regarding interventions to foster ethical climate. Ethical climate influences both the decision-making and subsequent behaviour in response to ethical dilemmas and is usually measured using Victor and Cullen Ethical Climate Questionnaire (ECQ). While evidence shows that ECQ has good theoretical and practical value in determining the type of climate, there is a lack of research regarding interventions to strengthen ethical climate.
Methodology: Search strategy will be developed in collaboration with a librarian who has experience in systematic reviews. We will include all published articles describing development, piloting and/or evaluating interventions for improving ethical climate in organizations, including academic institutions. We will search the reference list of all identified reports and articles and search for registered studies in Open Science Framework. Grey literature search will be performed using specialized databases (base-search.net, opengrey.org and science.gov).
Two independent reviewers will assess documents for eligibility, initially reviewing titles and abstracts, and then the full text of articles selected during screening. Any disagreements will be resolved by a third reviewer. We will then conduct the synthesis of available evidence.
Results: A preliminary search of "ethical climate" as a term retrieved 131 items in PubMed, 584 items in Web of Science and 628 items in Scopus. A more detailed search strategy is currently under development. The type of study design that will be included are randomized trials, controlled before and after studies and interrupted time series analysis as non-randomized experimental designs.
Conclusion: Our findings will help synthesize evidence of effective actions to foster ethical climate as a prerequisite for responsible conduct of research and will give recommendations on the development of possible future interventions.

PT-153

Internal versus external approaches for research integrity program evaluation: reflections following a self-initiated review
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Macquarie University is a research-intensive university in Sydney, Australia. As a publicly funded institution which receives government research funds, it's policies and procedures can be externally audited, and a research misconduct inquiry can be reviewed by a national committee. This accountability and audit requirements help ensure procedures are in place that are transparent and fair. Even so, as with the management of any program, there is a need for substantial periodic performance review and evaluation. The choice of an evaluation pathway depends on factors such as cost, knowledge, flexibility, objectivity and accountability. Program evaluation is commonly conducted informally and internally, perhaps reflecting an underlying assumption that external evaluation entails higher reputational risk - but electing an external evaluator can have distinct advantages. Here, we discuss our recent experience of a self-initiated review of our research integrity program by an expert external to the University.

In early 2018, a review of Macquarie University's Research Integrity Policies and Procedures was undertaken. This evaluation was to (i) ensure that a minimum standard was being attained that was both appropriate to the National framework and proportional to risk, (ii) identify areas that may require improvement or resourcing, and (iii) facilitate exemplary practice in this area.
A shared approach to program evaluation was adopted, combining the benefits of an external auditor with some of the qualities of an internal review process. The strengths of this approach versus the qualities inherent in fully-internal reviews or fully-external audits were numerous and included: gains in specialist skills and expertise, enhanced objectivity (both actual and perceived), access to information that wouldn't be available internally and greater legitimacy. Because the external evaluator worked closely with internal stakeholders, the ability to communicate information from the review in an appropriate manner was maintained (versus an external audit) and the external evaluators findings were transferred into tangible responses and integrated strategies that are currently being implemented.
Our reflections, both positive and negative, are outlined to assist other research integrity units determine suitable evaluation pathways, along with recommendations to help streamline the evaluation activity.

PT-154

Why are undergraduates vulnerable on academic integrity violations in Taiwan? Poor writing skills may be the key

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National Cheng Kung University, Tainan

Objectives: This study is to test the hypothesis that undergraduates would be vulnerable on plagiarism, especially when they lack adequate practice of writing skills like paragraphing, summarizing, and citation.
Method: The authors will conduct the research during the spring semester, 2019. A test and an evaluation will be done at the same time and be repeated three times in the semester. The test will require students to recognize the difference among copy, paraphrasing, summarizing and quoting. The evaluation will include two parts: students will be required to practice the writing skills of paraphrasing, summarizing and quoting, and then be required to self-evaluate and evaluate their two classmates, giving scores from 1 to 5 (1 means the worst and 5 means the best). The 1st test and evaluation will be conducted at the beginning of the semester, the 2nd one will be after teaching the types of paraphrasing, summarizing and quoting, and the 3rd one will be after practicing the three writing skills.
Results: After data collection, results may show which method indicates better improvement on students' writing skills, which may lead to least commitment of plagiarism. Keeping practice rather than just knowing will be the main factor to improve students' the three writing skills. Moreover, keeping practice is the key to recognize that the three writing skills are different from changing few words in an original sentence or in an original paragraph.
Conclusions: The pervasive RCR courses in Taiwan may go in a wrong direction if the research participants of this study are proved to make a significant progress in avoiding plagiarism owing to actual practice of writing skills. It is because the courses merely let undergraduates "know" the different types of plagiarism, but rarely aim at the writing skills and equivalent exercise. Furthermore, the governmental funding agencies have actively encouraged universities to promote RCR courses for the past year. Most research-oriented universities develop their RCR policies for graduates and faculty but not for undergraduates. The trend of making RCR policies in universities seems to lead undergraduates to be more vulnerable on academic integrity violations.

Poster Walk: Transparency 1

PM-155

Did awarding badges increase data sharing at BMJ Open? A randomised controlled trial
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Objective: To examine if adding badges to published papers to reward authors for sharing their data increases data sharing rates at BMJ Open.
Method: We ran a parallel group randomised controlled trial among health and medical researchers that publish with BMJ Open. Researchers could opt-in to the study upon submission of their manuscript to BMJ Open. The trial has two arms, control and intervention, with 83 research articles per arm, 166 in total. The primary comparison is the data sharing rates for those who were (intervention arm) and were not (control arm) promised an Open Data Badge.
Results: There were some technical difficulties with rewarding researchers with badges. Articles must have their data available at the production phase in order to be eligible for a badge. Some researchers might have their datasets under embargo until the article is in publication phase, which will mean they cannot receive a badge.
The results of the trial are not yet available as data collection is still underway and will be complete in late 2018. The findings will be ready to present at the 6th World Conference on Research Integrity in June 2019. This trial has the potential to influence the reward system to incorporate data sharing as a measure of high-quality research. Open Data Badges could be adopted more widely, further increasing collaborations in the scientific realm and progressing the advancement of health and medicine.
Conclusion: No previous trial has investigated an incentive for data sharing among health and medical researchers. Simple incentives to increase data sharing might provide the change needed to increase data sharing rates in health and medical research. Due to the opt-in method of participant recruitment, the trial results may overestimate the effect of badges, as researchers who are more sympathetic to data sharing may be more likely to participate in the trial. The estimated impact of badges might also be reduced due to the technical difficulties of rewarding badges at the production phase when some researchers might have their datasets under embargo until the publication phase.
Note: A report on the research study will be included in the presentation – once the report has been drafted, it will be pre-printed at medRxiv or bioRxiv.

PM-156

A French new agency, the French Office of Scientific Integrity (OFIS)
Alnot Alnot
HCERES, Paris

The French office of scientific integrity (OFIS, Office Français de l'Intégrité Scientifique) is a national and independant structure, founded in 2017 by Circular Letter of the French Ministry of research and higher education. The team is operational since 2018, and based as a Department within HCERES (Haut Conseil de l'Evaluation de la Recherche et de l'Enseignement Supérieur).
Its recent implementation results from a French growing awareness, involving major public organizations concerned by research integrity in the field of superior education and research. That is why, since 2015, the French context has followed a substantial evolution, and some figures underline this fast and recent evolution: 8 of these public institutions signed initially a national charter of deontology in research, and they are 35 in 2018. Jointly, 5 research integrity officers were appointed in 2015, and they reach currently 81.
More and more French universities, research organisms, and recently the French Funding Agency (Agence Nationale de la Recherche) are now committed by this charter.
The aim of the French Agency is to develop research integrity in three main levels:
• Share information and knowledge, by producing reports, advice, drawing up guidelines published on the Department's web site

• Supporting national commitment within French operators (universities, research bodies, agencies, etc) in cooperation with the integrity officers, with researchers and other partnership, by training, workshops, meetings,…
• Build up relationship with other organizations with European or global interests in research integrity
The goal is to adopt a coherent national policy, and to develop a real « scientific integrity culture » with the scientific community as a whole: identifying misconducts, but also preventing and promoting best practices.
By becoming recently member of the European Network of Research Integrity Offices (ENRIO), the OFIS is now in position to engage dialogue and share knowledge and experiences on integrity issues in the aim to enhance practices and guideline.
The road map of the French Agency is quite large, with critical issues, requiring consequently harmonization, exchanges of best practices, facing these important challenges.

PM-157

Scientific integrity and animal welfare: status of animal research legislation in South America
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Objective: Describe the status of animal research legislation in South American countries.
Principles and legislations for the welfare of animals used for research are now available in most of the developed world countries but not so in Latin America.
Methods: A review on animal welfare legislation in South American countries was conducted following a search in PUBMED, Science Direct, Google Scholar and GAL. Search terms used were: research integrity, animal welfare, legislation, with no language restriction. Additionally, reviews and currently laws are included.
Results: Six off the 14 South American countries, only Argentina, Brazil, Chile, Colombia, Uruguay and Venezuela are members of the Federation of South American Associations for Laboratory Animal Science (FESSACAL). FESSACAL is made up by the animal welfare promoting societies in South America. AAALAC is the international accreditation body for institutions using animals in science, ensuring high standards for animal welfare and scientific integrity. AAALAC International has accredited the animal care and use program of more than 1000 organizations around the world. However, only six of those are research institutions in South America (4 in Brazil, 1 Chile and 1 Peru). Only Brazil and Uruguay have specific animal research legislations. Laws for animal protection that includes a section specific for research animals are available in Argentina, Paraguay and Venezuela. Legislation in Chile and Peru do mention IACUCs and the welfare of animals used in research. In the case of Peru, the law is not in effect. Colombia is the only South American country with a Constitution that refers to animals as sentient beings. Legislation in Ecuador and Guyana discuss exclusively pets and animal larceny, but ignores the topic about animals used in research. To this date, Suriname, Trinidad and Tobago do not have regulations about animal welfare.
Under these circumstances of scarce legislation, South American animal welfare groups have implemented international standards in an effort to comply with funding requirements and peer review journal practices.
Conclusions: Only two countries have specific laws for animal research in SA. The key aspect about legislation is that it must promote responsible animal research in compliance with the highest and most stringent international standards when it comes to animal use, care and welfare.

PM-158

Research integrity components in ehics codes, a review of Peruvian universities
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Objective: To identify the ethical principles most frequently used in the codes of ethics of 54 universiies licensed by the Peruvian Superintendence for Higher Education (SUNEDU).

Methods: From July to October 2018, we conducted a search on the SUNEDU web page (www.sunedu.gob.pe) to identify the universities that had been certified so far. There are a total of 54 out of 140 universities, licensed by SUNEDU. Searches in each university webpage were conducted, looking for their by-laws, ethics codes, intellectual property and research instructions. Then, we identified a list of 10 research integrity (RI)components and proceeded to review the documents of all 54 universities to see if these RI components were mentioned and how many in each school.
Results: A total of 54 Peruvian universities were licensed by SUNEDU and although, ethics codes are a mandatory part of the licensure process, we only found ethics codes in 40/54 (74%). However, we found Research Integrity components mentioned in some of the other documents, such as the Research Instruction.
Publications and Science and Society were the most frequently mentioned components with 41/54 (76%) and 39/54 (72%) respectively. Mentoring, Collaborative Science and Peer Review were the least frequently mentioned components with 21/54 (39%), 20/54 (37%) and 18/54 (33%), respectively. Additionally, Human Subject Protection was mentioned by 34/54 (63%), Research Misconduct by 33/54 (61%), Research with Animals in 29/54 (54%), Conflicts of Interest and Data Management were mentioned in 23/54 (43%) each.
Most of these documents in each university were published between 2015 and 2018, as a result of a new accreditation process mandated by SUNEDU. Versions identified in their web pages may not be the latest version.
Conclusion: This is a preliminary review of RI components mentioned in Peruvian university documents. Publications and Authorships and Scientist and Society were the most frequently mentioned components, along with Human Subject Protections. Mentoring, Collaborative Science, and Peer Review were the least frequently mentioned.
Further research is needed to identify how these components translate into the institutional integrity culture, strategies used for community awareness and compliance with these codes and why some components are not mentioned at all.

PM-159

The Hong Kong shareability of Hong Kong research experiment
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Objective: Appreciating the importance of data sharing in increasing reproducibility and reducing research misconduct journals, research funders and universities are implementing policies to address this. Hong Kong Universities (HKU's) policy on Research Data and Records Management was announced in May 2015, and PLOS One's strong mandate on the sharing of supporting data came into effect on in March 2014. Inspired by the Arizona Repeatability in Computer Science Experiment, where students examined the extent Computer Systems researchers share their research artifacts, the HKU MLIM MSc students undertaking the data curation module performed a literature curation exercise where the assessed the data availability of HKU's papers published in the open access PLOS and Scientific Reports journals between 2016-2017.
Method: All of HKU's 98 PLOS One papers from 2016 and 2017 were checked for data availability and compliance with PLOS's policy. As a comparison of a journal with less stringent policies, all of HKU's 53 papers in Scientific Reports were also assessed.
Results: Of the PLOS One publications, 59% had full and 15% of papers partial access to the supporting data, and 23% of papers with restricted access. The smaller Scientific Reports dataset had 44% with full and 32% with partial access to supporting data, and a lower proportion of data available on request - not all because it was clinical data. Breaking any mandates regarding data sharing, 3% of PLOS One papers and 16% of Scientific Reports papers were based on data but did not provide any access to it.
Conclusion: PLOS has more stringent and followed data policies than Scientific Reports, but still is being ignored by a small proportion (3%) of authors. "Data available on request" and restricted access to clinical data is even less scrutinised and enforced, with even data access committees of large cohort studies unresponsive. While the 2015 HKU policies were at that point encouraged rather than mandated, a number of authors are not meeting journal-level guidelines regarding data sharing. With policies finally implemented by HKU in September 2017 (albeit for postgraduates only), following this crowdsourced approach it will be able to see how strongly they are followed.

PM-160

Research data management – does one funding regulation fit all?
Experiences of the German Research Foundation (DFG)

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German Research Foundation (DFG), Bonn

Objective: Careful planning and comprehensive documentation of research data management and free access to this data are without doubt inevitable in making research processes transparent and verifiable. There are significant differences in the way this is practiced in distinct disciplines.
Method: In addition to publishing Guidelines on the Handling of Research Data in 2015, the DFG called on learned societies to specify these guidelines. Since then, several subject areas have developed and published their own specific regulations. In comparison to other funding agencies, the DFG decided for a highly differentiated approach. In a roundtable discussion held in September 2018, the impact of this strategy was critically discussed with representatives of the review boards who assess funding proposals on behalf of the DFG.
Results: Nearly all research areas have now engaged with the topic, such that basic concepts on research data management can be expected from all researchers. The implementation of subject-specific minimum requirements was particularly effective in cases where appropriate infrastructures for research data and software solutions for processing or visualising data were established. The funding programmes offered by the DFG in this area have proved extremely valuable in that respect. A striking example is GFBIO. This initiative, funded by the DFG since 2013, supports researchers in biodiversity science with the preparation of data management plans, the representation and processing of research data and the transfer of data to repositories, thus establishing an essential basis for the reusability of data. The introduction of more precise requirements for applicants and reviewers is supported at a very practical level and results in a sustained transformation of research culture.
Conclusion: These experiences show that process in small, specific steps rather than strict requirements in research data management suitable for only a particular section can be extremely effective. Cultural change requires both patience and support.

PM-161

Implementation of Data Management Planning (DMP) as a key tool in the promotion of Good Research Practice
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Nanyang Technological University, Singapore

Nanyang Technological University (NTU) sees data collection, processing and archival as key elements in its promotion of good research practice (GRP) and responsible conduct of research. In 2016, DMP filing became mandatory and more than 1,000 DMPs for all new projects have been submitted and captured in an in-house database. Has NTU achieved its objectives? This presentation is the basis for potential indicators to demonstrate whether the University has achieved its objectives.
There was an attempt to score DMPs based on the level of comprehensiveness. Scores were made based on coverage of key points suggested in the guide of each of the ten questions in the NTU template. While it is not hard to agree that an overly brief DMP will not help the research team to optimise the benefits of data management planning, however, a comprehensive DMP does not necessarily guarantee research integrity and long-term availability of research evidence. The aim is now to use DMPs as the basis for GRP compliance audits of research teams. During an audit, the research teams will be asked to provide evidence of carrying out of the DMP in actual research data lifecycles. Putting into practice a thoughtful DMP demonstrates good research practice, and forms the basis for reproducibility and replicability. This is especially so when a DMP includes a plan for long-term availability of research data through open access.
As of September 2018, there are more than 100 published datasets with 700 data files and 200 unpublished datasets with more than 1,000 data files in the NTU research data repository which was launched in November 2017. Perhaps the real test is when the University looks to see if the data are made available in accordance to the FAIR Principles (Findable, Accessible, Interoperable and Re-usable), a notable requirement under the new European Union Framework Programme.

Having a DMP is a good start. A plan that says how the research data will be made available based on the FAIR Principles is great. Data that is made available in the FAIR way will be even greater.

PM-162

Chinese-European research collaborations and the protection of personal data

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Researchers from Europe and China carrying out ethnographic studies have different methodological training. During hands-on collaborative work, these differences manifest in divergent approaches to consent from research participants and to the storing and sharing of personal information. This paper discusses the challenges of dissimilar research cultures as they manifested in a joint Chinese-European writing project based on ethnographic fieldwork among Africans living in Guangzhou, South China. The analysis takes a perspective 'from below' on the more general question of how joint research can be carried out under different data protection standards. This issue has taken on added relevance after the EU General Data Protection Regulation (GDPR) was passed, impacting how data can be shared between EU and non-EU researchers. Research collaborations is particularly demanding when there are no clear rules and procedures for the use of personal data including in research, as is the case while China's new personal information protection law is pending.

PM-163

Endorsement of financial conflict of interest disclosure by peer-reviewers in China: a survey of 2,130 reviewers from Chinese Medical Association Publishing House

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Chinese Medical Association, Beijing

Objective: To demonstrate the endorsement of financial conflict of interest (COI) disclosure by peer-reviewers from high-impact medical journals in China.
Methods: An electronic questionnaire was distributed via network survey platform between June 1, 2018 and August 31, 2018, to 17,469 peer-reviewers from Chinese Medical Association Publishing House. The anonymous questionnaire contained five questions: (1) The gender and age information; (2) Whether financial COI exists when playing a role as peer-reviewers?; (3) Did you know about the requirements for financial COI disclosure by medical journals before taking this survey?; (4) Do you disclose financial COI when conducting peer-review work?; and (5) The concerns about financial COI disclosure as a role of peer-reviewers. The information obtained from the responses was extracted and analyzed; the $\chi 2$ test was used to determine the performance of financial COI disclosure between male and female peer-reviewers.
Results: A total of 2,130 peer-reviewers (12.2%) of 17,469 responded; of these, 1,514 reviewers (71.1%) were male. Two hundred and ninety-four reviewers (13.8%) reported that financial COI exists when they play a role as peer-reviewers, 1,468 (68.9%) stated that they knew about the requirements for financial COI disclosure, and 1,311 (61.5%) disclosed financial COI when conducting peer-review work. Compared with the male peer-reviewers, the females had statistically significantly fewer financial COI (9.6% vs. 15.5%, $\chi 2=13.002$, $P<0.001$), and showed significantly lower awareness rates (58.4% vs. 73.2%, $\chi 2=44.424$, $P<0.001$) and disclosure performance (54.2% vs. 64.5%, $\chi 2=19.667$, $P<0.001$). Most peer-reviewers in China aged 41–60 years (81.3%) while the least ranged 20–30 years (0.3%). Financial COI mostly exists in the reviewers aged 31–70 years, while less in those aged ≤30 or ≥71 years. It is noted that, the younger the reviewers are, the more they know and perform the COI disclosure. The peer-reviewers concern most about how to disclose the COI comprehensively and precisely.
Conclusions: The rate of financial COI disclosure by peer-reviewers from high-impact medical journals in China is not high. Discrepancies in peer-reviewers' gender and age on COI disclosure exist. Medical journals in China should make efforts to help foster the policy of COI disclosure.

PM-164

Beyond the dual use divide – strengthening Europe's innovation potential

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Objective: The objective of this work is to present the outcomes of a study financed under special actions of the Horizon 2020 and drafted best practices for identifying Dual Use (DU) issues and potential within the key enabling technologies research boosting DU synergies in a transparent and structured way.
Method: The study was based on: (a) literature survey, (b) face-to-face and on-line interviews with experts in DU related research and Research Ethicists, structured via a questionnaire containing multiple choice and open ended questions and (c) case studies, one from H2020 and one from European Defence Agency (EDA) financed research projects.
Results: While synergies between civil and defense research and industrial sectors are being forged throughout the industrially developed states, Europe seems to lag behind. This poses a threat to Europe's innovation potential. The reasons why DU synergies in Europe are relatively low are: (a) the fact that the European Union has emerged as a purely civilian organization by charter, (b) the omnipresent structural differences between civil and defence market and (c) the lack of dissemination of results and technologies between civil and defense research sectors. The engagement process applied aimed at drafting best practices to boost DU synergies in a transparent way, without compromising security. The engaged stakeholders suggested that the establishment of annual conferences dedicated to DU research, a DU oriented European Council, openness of research data and organization of joint training programs on DU issues for researchers in civilian and defense sectors would help overcome existing differences in research culture. The above measures must be supported by an update of defense policies, since they usually restrict engagement of SMEs, which carry a significant part of Europe's innovation capacity. The new defense policies should provide a base for discussion, concerning the upcoming Horizon Europe legal framework that governs DU research.
Conclusion: Currently, there is a lack of information exchange between civil and defense research and industrial sectors. Policy makers, research enterprise, SMEs and industry, need to adapt current knowledge/data sharing and dissemination strategies for DU related research, to achieve the minimum of transparency needed to strengthen Europe's innovation potential.

PM-165

How regulation-compliant informed consent processes misinform research participants

A. Yarborough
University of California Davis, Sacramento

Objective: Evidence reveals that a substantial amount of ethically suspect clinical trials gets conducted each year, posing the question: why do people volunteer for them? Flaws in the informed consent process must be a significant contributing factor. This presentation will identify the nature of those flaws, trace them back to government regulations about what needs to be disclosed in informed consent processes, and recommend ways to create the transparency needed to reduce the numbers of ethically suspect clinical trials.
Method: Publications regarding the quality of preclinical research used to justify the launch of early phase clinical trials were reviewed which suggested that an alarming number of early trials may be launched on the basis of false positive findings. Other publications reveal high numbers of late Phase trials whose commercial purposes push their social value below minimal ethical thresholds. EU, Canadian, and US regulations about informed consent disclosures were reviewed to determine why information about these problems are not disclosed to research candidates.
Results: A close reading of the required informed consent disclosures reveal a parsimony at odds with the original disclosure aims found in the Nuremberg Code. The latter suggests fulsome disclosures about the nature of benefits sought in research, as well as how research can impact participants as people, whereas the former focus more on how research participation might physically affect participants. The result is that there are no required disclosures that would shed light on the quality of preclinical studies used to determine that benefits outweigh risks or what the commercial drivers of clinical trials are, how those drivers can skew results, and how results might be contrary to the economic interests of the volunteers who make the trials possible in the first place.

Conclusion: In order to create a degree of transparency sufficient to reduce the numbers of ethically suspect clinical trials, we need new informed consent disclosures that shed light on the overall prospects for benefit from trials, salient features of preclinical studies used to justify new clinical trials, and disclosures about the potential social value of clinical trials.

PM-166

With what frequency do research ethics review committees deserve the public's trust? The evidence suggests that too often that trust is misplaced

A. Yarborough
University of California Davis, Sacramento

Objective: This presentation reviews evidence showing that thousands of people enroll each year into clinical trials approved by Research Ethics Committees (RECs) that are ethically deficient. A likely explanation for this is that REC members are unaware of the extent and gravity of the evidence. This presentation will highlight the ethical salience of the evidence and explore strategies for strengthening that review so that we can be more confident that RECs deserve the trust people currently invest in them.
Method: A prior study reveals that sectors like biomedical research that require the public's abiding trust promote accountability measures meant to support that trust and look for any weaknesses that might exist in those measures so that they can be rectified. Accordingly, a range of publications that speak to the reliability of accountability measures in biomedical research were reviewed.
Results: There is a vast literature demonstrating that research participants often cannot trust that RECs will approve trials only when their benefits outweigh their risks or which meet minimal thresholds of positive social value. Consequently, thousands of people enroll in REC approved trials where it is not known whether benefits outweigh risks, whether the evidence used to assess risks and benefits is reliable enough to be used, or whether trials have sufficient social value. The fact that RECs routinely approve trials plagued by this evidence means that REC review cannot be trusted to protect research participants from unwarranted risks and exploitation.
Conclusion: This presentation sheds light on troubling evidence about deficiencies in REC processes in hopes that doing so will spur concerted efforts to identify and implement urgently needed reforms. It also explores why the REC community will need to reach consensus both that RECs cannot delegate rigorous review of the scientific merit of protocols to others and that they must require that clinical trials meet minimal standards of social value if those reforms are to materialize. So long as the REC community resists such consensus, it will not be able to properly vet clinical trials nor deserve the trust of the people who make clinical trials possible in the first place.

Poster Walk: Transparency 2

PT-167

Improvement of a transparency indicator for tracking clinical trials' publications

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Hospices Civils de Lyon, Lyon

Objective: Clinical trials data must be made public less than 12 months after the end of the trial. The TrialTracker website ranks sponsors according to their unpublished clinical trials' rate by extracting data from www.clinicaltrials.gov. Low rates could be explained by failure to disclose data or a poor fill of the clinicaltrials database by sponsor. The objective is to assess if a targeted action could improve the unpublished trials' rate of an institutional sponsor
Method: A first trialtracker extraction will be realised to settle basal rate for Hospices Civils de Lyon (HCL). Then, we will update clinicaltrials database using a comprehensive search, and the trialtracker will be rerun to check if the rate has improved.

Results: After the first trialtracker extraction, a comprehensive search on the HCL 85 trials which are currenty unpublished will be made to track if data were made public. The research team already has the agreement of the HCL to access its database, to enter clinicaltrials and to contact investigators. If a publication is found, the reason why it doesn't appear on clinical trials will be searched (published in a non indexed journal, absence of mention of NCI number in the publication, absence of updating by the sponsor,..). If the principal investigator confirms that there is no publication, neither a publicity of the main data, the reason for non publication will be retrieved.
The clinicaltrials database will be updated with these data, and the trialtracker will be rerun to check if the rate has improved. We will therefore be able to distinguish how much of unpublished trials is truly related to an absence of publication.
To ensure validity, this targeted action requires to be completed within 1 month, therefore the results will be available at the time of the conference.
Conclusion: Our hypothesis is that we will find that some part of unpublished trials' rate is only related to a lack of administrative data filling in clinical trials, and we will assess to what extent. The results found here might not be transposable to private sponsors.

PT-168

Clinical innovation practices and research integrity at Macquarie University
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Macquarie University, Sydney

Objective: The presentation will outline the collaborative work undertaken in embedding research integrity into Clinical Innovation and Audit review process at MQ Health, a fully integrated university-led health sciences centre at Macquarie University.
It will focus on examples of research integrity promotion amongst clinicians who conduct innovations or new surgical procedures.
Method:
• The Clinical Innovation and Audit Committee (CIAC) at MQ Health was established to provide governance oversight of clinical audit, quality assurance activities, and new technologies and innovations being conducted at Macquarie University Hospital.
• The CIAC application form has a research integrity statement embedded in it, including reference to the Australian Code for the responsible conduct of research (2018) and the Macquarie Code.
Results:
• Most of the clinicians don't have experience with conducting clinical innovations and need guidance about the processes and frameworks underpinning the process.
• Information about the research integrity principles is well embedded in the CIAC process;
• Innovations are important activities conducted at MQ Health and research integrity awareness is integral part of the conduct of these activities.
• As the process is still relatively new, one of the next steps is to evaluate its effectiveness.
Conclusion:
• Macquarie University commitment to research integrity includes promotion of a culture that encourages responsible research and establishment of good governance and management practices.
• An example of raising awareness, is the implementation of research integrity into Clinical Innovation and Audit review process.
• Clinicians will need guidance about the processes and frameworks underpinning the conduct of clinical innovations.

PT-169

ILSI's journey in scientific integrity

A.J. Kretser
ILSI North America, Washington

Scientific integrity is fundamental to the mission and work of the International Life Sciences Institute (ILSI). Specifically, ILSI North America and its partners throughout the scientific community have been leaders in defining principles, guidelines, and best practices for establishing and maintaining the integrity of the scientific process when diverse stakeholders collaborate - now ILSI and its 16 entities are building on this work. As ILSI is a global organization that is present on the 5 continents, it faces challenges of implementing these findings of ILSI North America in regions of the globe where there are different cultures and ways of working. Nevertheless, ILSI continues to challenge themselves by building on its expertise and strengthening its efforts. This presentation will provide an overview of the expansive range of activities undertaken by ILSI as part of ILSI's journey in scientific integrity. ILSI's commitment to a culture of scientific integrity is further demonstrated by the work accomplished over the last 18 months with the formation of a global scientific integrity group that has set priorities for ILSI's work on scientific integrity. ILSI's revised Mandatory Policies include ILSI's Principles for Scientific Integrity, which commits all members of the ILSI network to "the highest standards of scientific integrity in all their activities." To facilitate compliance with these obligations, training will be made mandatory for staff and board members as a condition of continued employment or association with the ILSI entity. ILSI North America began implementation of the Center for Open Science Transparency Openness Promotion (TOP) Guidelines, fully embracing the scientific community's movement to greater transparency through open science.
In 2019, ILSI has made great headway in the development of new training materials that can be used broadly within the scientific community. The poster will include an overview of the training materials, learnings gleaned from implementation of the TOP Guidelines within ILSI North America and plans to adopt them across the ILSI network. It is hoped that new collaborations among sectors will be formed.

PT-170

Concept analysis of shared decision-making

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Objective: Nurses are vital patient advocates and consultants. Nursing care is expected to assist the patient in achieving the best effect from shared decision-making in partnership with their nurses. The purpose of this study is to bring this concept closer to real-world application in clinical practice and further research.
Method: This study applied Walker and Avant's (2005) concept analysis **Method:**ology to review several conceptual definitions of shared decision-making, characteristics, antecedents and consequences, and to construct examples and establish empirical measurements. Data was extracting from a literature review of seventeen papers.
Result: The results indicate that the defining attributes of shared decision-making include: (1) participation of medical personnel and patients is equal, and the powers and responsibilities of the two are equal; (2) there are options with pros and cons, benefits and harms; and (3) the communication process includes information support or information exchange, and patient preferences and values. Antecedents are "have treatment or option". Consequences include patient satisfaction, a good relationship between the professional and the patient, the number of repeated consultations reduced, the demand for second opinions is reduced, and patient compliance with the treatment improves, along with improved treatment results over the long run. Nine empirical measurements were found and were primarily based on the patient's point of view regarding the decision-making process. A few are from the perspective of the physician or third-party observation by another physician.
Conclusion: Shared decision-making concepts could help nursing staff improve understanding, and provides critical thinking and reflection in an assessment of client needs, which should be done as early as possible to provide adequate support for decision-making and to enhance safety and satisfaction.

PT-171

Advantages in conducting research using the first innovative electronic stroke registry SITS in Kyrgyzstan

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Kyrgyz State Medical Academy, Bishkek

Objective: To describe the advantages in the conducting of research on the SITS stroke registry in Kyrgyzstan (Safe Implementation of Treatment in Stroke) in the framework of the Stroke Roadmap development and optimisation of the e-health system in Kyrgyzstan.
Method: We compared the research findings of the SITS Registry with the publications on stroke in Kyrgyzstan before the electronic registry implementation.
Results: SITS-Kyrgyzstan was established in Kyrgyzstan in 2015 and has the data of 1200 patients with stroke. The data are received by National Coordinator in unified file with demographic and clinical variables, the data of patients are encrypted and GDPR-protected. The SITS data permit to operate the variables on functional outcomes (NIHSS, modified Rankin scale (mRS) and monitor the improvement of stroke patients, while this was not described in previous publications on strokes. Scale variables (age, NIHSS score, mRS score) made it possible to detect the age-stroke score correlation in Chi-Square test. Multivariate analysis of risk-factors with adjusting for age and Kaplan-Meyer curve were firstly possible with SITS.
Conclusion: SITS is the first registry in Kyrgyzstan which is able to reflect the rigorous data and to monitor stroke patients' condition in the acute and subacute period by telephone monitoring and reflects the first correct interhospital statistics on stroke epidemiology. Electronic registries allow clinicians and policy makers realistic planning of health policies and stroke best practice implementation.

PT-172

Automated tools for increasing transparency and openness of funding
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Amsterdam University of Applied Sciences, Amsterdam

Objective: To obtain a state-of-the-art overview of existing and emerging automation tools (e.g. statistical check tools, image or text similarity tools, study protocol adherence tools) that may be adopted by funding agencies or grant applicants for increasing the transparency and openness of the funding processes and grant allocation, and assess their applicability.
Methods: We will conduct a scoping review of bibliographic databases, registered protocols and projects, grey literature, and scientists' social networks, supervised by an information search expert. Additionally, we will organize meetings and workshops with stakeholders surrounding (semi)automation in funding, as well as benefits, barriers, and possible impact of the use of these tools on processes such as research assessment and scholarly communication.
Results: Our project is currently ongoing, and full results as well as the projects finalization are expected in March 2018, which will allow us to present the full findings at the conference.
Conclusion: Once finished, we will provide an inventory of existing and emerging tools that could potentially allow grant applicants and funders to optimize their workflows. We will also provide insights on possible consequences on scientific publishing of the use of these tools.

PT-173

Reporting of ethics committee approval and consent in two Indian dermatology journals
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Objective: To evaluate the reporting of ethics committee (EC) approval, consent and five-year authorship trend in two Indian dermatology journals.

Methods: Original articles published from 2014 to 2018 in two Indian dermatology journals (Indian Dermatology Online Journal [IDOJ] and Indian Journal of Dermatology [IJD]) were screened. 2018 data was collected only till issue 5 for both journals. Each article was reviewed and data was collected to note EC approval and consent for study participation. Number of authors in each article were also noted. Data was collected in an excel sheet, analysed and presented using descriptive statistics.
Results: A total of 247 original research articles were published from 2014 to 2018 in these two journals. Thirteen non-clinical studies were excluded. Of the 234 articles, 148 (63.25%) reported EC approval and 155 (66.24%) articles reported consent for study participation. Overall, the reporting of EC approval increased from 42.55% in 2014 to 85.42% in 2018. Similarly, the reporting of consent increased from 61.70% in 2014 to 77.08% in 2018, with slight decrease in 2015 (57.45%). The reporting of EC approval was slightly higher in IJD than IDOJ; however, reporting of consent was generally similar between two journals with few variations between years. Number of authors among these journals ranged from one to 11, with more than 60% of articles having 3-5 authors. The authorship trend from 2014 to 2018 was similar with majority of articles having 3-5 authors.
Conclusion: Results showed increasing trend of reporting of EC approval and consent in two leading Indian dermatology journals. This could be further improved by increasing awareness.

PT-174

Should research ethics committees deliberate on societal implication of research?
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The increased emphasis on research integrity globally also includes expectation to assess societal implications of research. Drawing on Norwegian experiences, we argue that research ethical committees can play a key role in supporting researchers to meet these expectations, and we propose how such a role can be justified.
We build on a case where the Norwegian National Committee for Research Ethics in Science and Technology (NENT) was asked to give an ethical assessment of petroleum research. The committee gave a conclusion after having collected and deliberated input from actors in the research system.
We argue that the committee functioned as a catalyst for deliberation across research fields and societal sectors that otherwise would not have happened, and that this is a crucial factor for justifying an advisory role. We emphasise the role it can play in engaging ethical concerns found in various sectors of the research system, and thereby further open and extend a debate.
Based on our case we identify four conditions for research ethical committees to play an advisory fuction on societal implications of research: 1) The committee has a mandate as a national research ethical committee to issue statements, and thus the committee provides a place to go – a place someone can turn to and expect an argued conclusive answer. 2) The committee's conclusion is justified with reference to research ethical guidelines the committee has been mandated to formulate in a process where the research community is consulted. 3) The committee is composed of independent researchers representing the disciplines the committee covers. 4) The committee functions as a catalyst: Valuing the committee's role as a catalyst recognise that the decisions concerning research ethics should be made by the research community and by those affected by research activities through democratic well-established procedures. Its ability to function as a catalyst rest on its reputation and ability to issue well-argued and convincing conclusions and raise key questions.
The justification of a research ethical committee with a mandate to issue statements on a broad range of issues rests on its ability to act as a catalyst.

PT-175

Promoting a culture of research integrity in low- and middle-income countries: a case study in Myanmar

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Introduction: Recent studies show an increased prevalence of research misconduct despite efforts to promote responsible conduct in research (RCR). Accordingly, many Western institutions have developed guidelines or regulations to ensure RCR and established offices of research integrity (ORI) at the national and institutional levels. However, similar efforts at enhancing RCR and managing research misconduct in low- and middle-income countries (LMICs) are lacking and face major challenges. Our objective is to propose a framework for fostering research integrity and preventing research misconduct in Myanmar.
Methods: We reviewed selected international guidelines and policy documents on research integrity; reviewed relevant literature on strategies for enhancing RCR; visited the U.S. National ORI and held discussions with officials of ORIs at two U.S. institutions. We also plan to survey researchers to determine the extent of research misconduct and conduct in-depth interviews of key stakeholders in research in Myanmar to help guide the current efforts.
Results: Our literature review and discussions reveal the following framework and processes necessary to promote research integrity in Myanmar: 1) establishment of a National Research Council that will coordinate efforts at both the national and institutional levels; 2) establishment of an Office of Research Integrity (ORI) by the National Research Council: the ORI will develop policies and processes for the promotion of RCR at institutions and conduct subsequent monitoring to confirm compliance and investigate allegations of misconduct coordinated with the involved institution; 3) support and contributions are needed from multiple stakeholders including researchers, universities, national regulatory bodies and funding agencies; 4) establishment of institutional programs that will focus on developing an institutional culture of research integrity by adopting codes of conduct and relevant policies; implementation of measures to prevent and detect research misconduct; monitoring of conflicts of interest, and further enhancement of RCR training. Educational efforts at both the national and institutional levels will complement the current efforts at developing degree programs in research ethics that have been enabled by a Fogarty International Center/NIH award.
Conclusion: Responsible conduct in research fosters credible research and public trust in the research enterprise and requires a coordinated and multi-faceted approach.

PT-176

Effect of sponsorship on dental implant trials

I.S. Sivakumar
SEGi University, Petaling Jaya

Objective: Sponsorship was found to potentially introduce research bias. Dental implants are considered the state-of-the-art therapeutics for missing teeth replacement. The aim of this presentation is to explore if research funding or sponsorship from manufacturers of dental implants affect the outcome of dental implants with respect to survival.
Methods: A systematic review was performed via MEDLINE (Pubmed), EBSCO, and Cochrane Register of Controlled Clinical Trials. Randomized controlled studies, prospective cohort studies, and retrospective cohort studies on dental implants supporting single crowns and with a mean follow up of at least 5 years were included. The design of funded, partially funded, non-funded or unknown was compared statistically.
Results: Initial search yielded 5011 studies, out of which, 59 studies that met the defined inclusion criteria were selected and data were extracted for systematic review. Data on year of publication, implant system, study design, number of patients, age, number of implants, number of recorded failures, estimated survival rate after 5 years, and funding status were extracted. 58% of studies did not mention about the funding source. The outcome of the univariate regression models indicates a significant effect of the failure rate ($p<0.05$) and the funding source ($P<0.05$). Partially funded studies had a higher survival rate of dental implants when compared to funded and non- funded or unknown studies.

Conclusion: The partially funding sources have a significant effect on the rate of failure of single tooth implants. However, poor reporting of the studies, including undisclosed funding source could hinder the use of the available evidence. The outcomes of this study strongly suggest the need for more transparency in the sponsorship of trials dealing with dental implant therapy.

PT-177

Tools for improving transparency of published articles

Chris Christopher, S.Z. Xiao
GigaScience, Hong Kong

Objective: GigaScience is an open access online only scientific journal covering large scale data from the life and biomedical sciences. It differs from other journals by the addition of the integrated GigaScience Database, GigaDB. Any GigaScience article which has data associated with it will have an accompanying GigaDB dataset containing the data and links to externally hosted data associated with the article. Since the launch of GigaScience in 2012 there has been a number of other data journals that have followed this approach, but none use a dedicated "big data" repository to host the data files as GigaScience does with GigaDB.
Methods: Trained curators at GigaDB support authors to submit all the underlying data required to ensure full transparency of their research, even in the scale of terabytes, and often going beyond the normal static supplemental files.
Results: To further the transparency of research a variety of tools to help display and navigate all kinds of data can be used to both reduce the burden on the user, and allow greater interaction with the data. GigaDB have recently added such functionality by including widgets for protocols.io, SketchFab, CodeOcean and Jbrowse by integration into the tabbed resource panel at the heart of each dataset. For those datasets that have content available in these formats there is now no need for readers to leave the GigaDB dataset page to see those contents, although there is the option to pop-out the view into a new window if desired.
Conclusions: With the aim of addressing the lack of transparency and reproducibility of research, this inspect and interact approach makes it easier for reviewers, readers and re-users to access, scrutinise and build upon the actual objects supporting "big data" research.

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Enabling research transparency via discipline specific support – reports from the TU Delft data stewardship

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Ensuring good data management is required as an institutional duty in the 2018 Dutch code of conduct for research integrity. The TU Delft Data Stewardship program aims to provide disciplinary data management support, to raise awareness of researchers' responsibility, and stimulate the creation of a transparent and open research environment.
The TU Delft Data Stewardship program is an ongoing experiment (2017-2020) with eight Data Stewards embedded in each TU Delft faculties, and a central coordination team at the university library with connections to other research support services, such as ICT, legal services, contract management, privacy, and research ethics committee. The communication between researchers and research support units is continuous and bidirectional at different levels.
For individual researchers, personalized support on planning research data management is provided by Data Stewards. Data Stewards help and enable researchers to manage research data systematically and to better understand other research support services available at the university.
Upon demands from departments or research groups, the personalized support can be extended into group information or training sessions, where common or domain-specific tools regarding data storage, archiving and reusing are introduced. Through such sessions, data stewards also collect feedback and requirements on particular needs in certain research fields and bring it up to the faculty or university level for solution exploration. These issues are also shared among data stewards across all faculties for synthesized efforts and resource sharing.

Furthermore, researchers are encouraged to become Data Champions, who can take lead in engaging colleagues to share and implement good data management practices. This university-wide initiative facilitates the creation of close communities across different faculties, not only on data management but also stimulate communication and collaboration among researchers from different disciplines.
The TU Delft Data Stewardship takes a bottom-up approach to engage researchers via daily data management activities. It brings research support services closer to researchers and creates synergies across various university units. More importantly, it also facilitates to improve the transparency of research activities at multiple levels (individual, group and community).