

In the Middle of the Beginning

Research integrity has only recently become recognized by the scientific community as an important field of interest. Although it has existed for a decade, efforts are still needed to define the place of research integrity in the overall field of scientific research. The main issues research integrity deals with today are authorship, conflict of interest, teaching responsible conduct of research, roles of institutions in assuring research integrity, and various rules of conduct in cases of alleged misconduct.

Two years ago, representatives of the *Croatian Medical Journal* attended the First Research Conference on Research Integrity organized by the Office for Research Integrity (ORI), Bethesda, Maryland, USA. Our cooperation with ORI, which started in 1999 (1), helped our ongoing efforts to promote and develop research culture in Croatia and make scientists aware of research integrity (2). At that time, the first round of National Institute of Health (NIH) grants were given for the research on research integrity, concerning mostly the issues of defining misconduct and assessing integrity in research. This year, during the Second Conference at the "Bolger Center for Leadership and Development", Potomac, Maryland, 16-18 November, the efforts were mostly continued in the same direction. The conference was attended by almost 150 scientists from various backgrounds, from biomedicine to statistics, physics, and psychology. The majority of attendees were from the USA, where the discipline was born. Due to a highly professional organization and tight schedule of the conference, almost 50 presenters had a chance to present their research into research integrity. During the three days of the conference, they presented the results of their own earlier research and investigations, which stirred up many useful discussions.

After a warm welcome speech by Mr. Chris Pascal on behalf of the ORI and Mrs. Constance Atwell on behalf of the NIH, the conference started with the opening session on "Current and emerging issues". A team from the University of Oklahoma, who received a NIH grant in the first round of grants on research integrity, presented a taxonomic approach to understanding scientific misconduct. The system they offered is intended to serve as a unifying frame of reference across multiple scientific research domains. Based on such taxonomy, they started the development of psychometric instruments for measuring research ethics among individuals and institutions. Differentiating between honest errors and misuse of statistic was also addressed in this session, followed by a progress report of another NIH grant-receiving project, where the authors investigated the scientists' ideas of research misconduct, using focus groups. The session ended with a presentation on

moral climate of research in USA today and, finally, an analysis of ORI cases of causes of research misconduct.

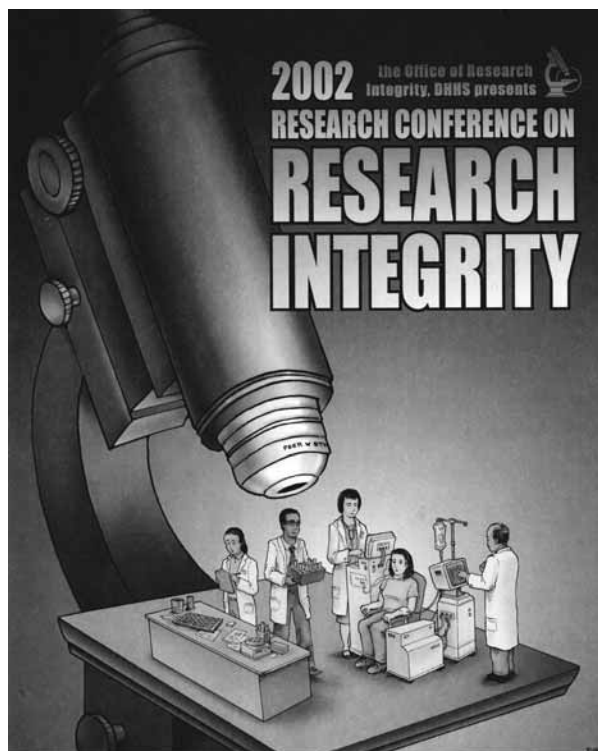
The evening panel discussion addressed the implications of the Institute of Medicine (IOM) report on research integrity. The mostly debated issue was self-assessment as an evaluation technique for the integrity of institutions. Advocating the position that external supervising methods are not necessary, IOM suggested it as a means for self-regulation in institutions. The main pitfalls of the self-assessment method, as many objected, are its lack of objectivity and openness to manipulation. Still, it was the only solution offered.

On the second day, there were many parallel sessions covering different topics, such as conflict of interest, role of institutions in research integrity, investigative techniques, students attitudes, instruction in the responsible conduct of research, ethics in clinical research, and role of IRBs in research integrity. As representatives of a scientific journal, we chose to attend the session on conflict of interest. The presentation we found most interesting was the one of findings of a BMJ research integrity randomized trial, which showed that BMJ readers find articles with declared competing interests less credible. Next session that we attended was on investigative techniques, where authors presented various methods which can be used for detecting possible misconduct, such as plagiarism and data fabrication. Two of the presentations were particularly impressive. One described the software that compares documents for matching phrases, allowing inspection and identification of recycled or plagiarized text, and the other presented a method for comparison of continuous tone images having distinct features and background, such as bands in autoradiograms and blots. Using color tagging, the latter method emphasizes features common to two images while retaining the components which differ. Both methods were demonstrated during a poster and demonstration break, after the parallel presentations on student attitudes and the role of institutional review boards in research integrity.

Two of the three Croatian presentations were a part of the session on student attitudes. We presented our investigation of students' attitudes toward science and a pilot study concerning plagiarism in biomedical sciences. Both presentations were well accepted and creatively discussed, especially because both presented a non-American perspective on teaching and improving research integrity. We received a lot of valuable feedback and continued to discuss our work with the attendees long after the session.

Last two sessions of the day were on clinical research and instruction in responsible conduct of research, which opened a whole new set of problems, such as proving that such instructions have impact on development and apprehension of responsible conduct and research ethics. The hardest part will probably be to prove that a change can be accomplished only through systematic and prolonged work and instruction on the issue.

In the evening, after the banquet and a lot of delicious food, Dr. Tadataka Yamada, a chairman of research and development in GlaxoSmithKline, gave a speech on the stand-points of pharmaceutical industry. Seriousness and competence of Dr. Yamada, combined with explanation of how pharmaceutical industry already has and continues to enhance measures for assurance of research integrity in their labo-



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ratories, raised hope and thrust among us who tend to see members of this industry as a group of merciless dollar-chasing sharks.

On the third and last day of the conference, there were three sessions: on publication, medical ethics, and assessing integrity in research. The Croatian presentation within the session on publication addressed the authors' understanding of the current International Committee of Medical Journal Editors (ICMJE) definition of authorship. We hoped to instigate a serious debate on controversiality of the definition, because our research showed that, according to the definition, 90% of authors do not qualify for authorship. However, it seemed to elicit more interest in the quality of scientists from the so-called "scientific periphery" and work of a "small journal" in Croatia.

The last session of the conference was on the topic of assessing integrity in research. Members of the Oklahoma team, who presented a taxonomic approach to understanding scientific misconduct the first day, described development of instruments for measuring research climate in scientific organizations and scientific integrity in the USA. That was the final session of the conference, after which we said goodbye to new friends and acquaintances, had one more great lunch in the Bolger Center's cafeteria, and flew home to think about the new insights and ideas and how to implement them.

The field of research integrity is very young and needs all the support it can get. We believe that this field, despite the controversies it raises today, will definitely continue to develop and that regulation and self-regulation, together with education in research ethics, will become more and more important in the years to come. Conferences like this one serve a unique purpose of connecting people, allowing them to share ideas and work jointly on the progress in the field. We are looking forward to the next conference in 2004 and the new developments and accomplishments of researchers in the field of research integrity.

Darko Hren

- 1 Scheetz MD. Office of research integrity: a reflection of disputes and misunderstandings. *Croat Med J* 1999;40: 321-325.
- 2 Petrovečki M, Scheetz M. Croatian Medical Journal introduces culture, control, and the study of research integrity. *Croat Med J* 2001;42:7-13.