Recognize, Respond to, and Prevent the Publication of Research Misconduct

Moderator:
Christine Casey
Morbidity and Mortality Weekly Report
Centers for Disease Control and Prevention
Atlanta, Georgia

Speakers:
Susan Garfinkel
Office of Research Integrity
Rockville, Maryland

Thomas Gerber
Mayo Clinic Proceedings
Rochester, Minnesota

Christina Bennett
American Physiological Society
Bethesda, Maryland

Remya Nambiar
Center of Excellence for Molecular Biology
Cactus Communications
Mumbai, India

Editors influence many fields through careful selection, review, and timely publication of high-quality journal articles, so they must be able to recognize, respond to, and prevent research misconduct (RM), which is defined as fabrication, falsification, and plagiarism (FFP). In this session, the speakers shared views, findings, and useful resources for achieving those goals.

In the Office of Research Integrity (ORI), Susan Garfinkel, acting director of the Division of Investigative Oversight (DIO), participates in responding to and investigating RM allegations. She presented an overview of ORI responsibilities and discussed its role in retractions and the tools that ORI uses to detect manipulated images.

ORI’s authority is limited to FFP allegations related to Public Health Service–funded research. The administrative action depends on the seriousness of the misconduct and is often imposed for 3 years but can range from 1 year to lifetime. ORI relies on the host institution to implement administrative actions. The time to a verdict can be long because allegations need to be verified before findings are published. ORI cannot disclose details of an allegation or an active investigation. Once RM is confirmed, an expression of concern, correction notice, or retraction can be published. However, retractions do not necessarily mean RM. ORI publishes its findings in the Federal Register and links them with the retractions, if any are made, in PubMed.

Thomas Gerber, associate editor of Mayo Clinic Proceedings, focused on the role of editors in identifying and preventing publication of work in which RM has occurred. He outlined the consequences of RM, including waste and misallocation of intellectual and financial resources, unfair career advancement, and ineffective and harmful uses of the flawed work by researchers and physicians. RM can be prevented or recognized before submission, before publication, and before and after peer review.

Ithenticate is a detection software that produces similarity reports for manuscripts; however, it is not foolproof and cannot supplant editor judgment in detecting plagiarism. Gerber discussed methods used by authors to circumvent automated plagiarism-detection software.

Christina Bennett, manager of publication ethics for the American Physiological Society (APS), addresses ethical concerns for journals published by the society. Her responsibilities span the entire publication life cycle. During submission and production, she facilitates the query process, updates and revises ethics policies, and promotes best practices in publication ethics. After publication, she addresses concerns raised by readers, authors, whistle blowers, or anonymous persons.

Before publication, APS conducts incorporated reviews of all digital images in accepted manuscripts. Images that seem edited or have extreme contrast adjustment are returned for correction. APS runs plagiarism checks on submitted review articles. When self-plagiarism is detected, authors are encouraged to revise their articles. Bennett assesses the ethical issues, recommends next steps, seeks clarification from authors, and evaluates their responses to reach a resolution. Her experience substantiates the findings of ORI that image manipulation is the most common type of RM. However, most image manipulation that is identified does not constitute RM and can be easily corrected. Some useful forensic tools for detecting image manipulation are available at http://www.ori.dhhs.gov/actions.

To reduce the number of publications that have ethical errors, Bennett recommends the following: increase interaction with associations, such as the Committee on Publication Ethics (COPE); determine the necessity of prepublication ethical reviews; update ethical policies in journal guidelines; and set standard processes for assessing and addressing ethical concerns.

The responsibility for avoiding RM lies with the entire scientific community, from the laboratory staff, mentors, and institutions to the journals and ORI. Journals should promote author awareness regarding RM. Their awareness can be heightened by explicit statements of a journal’s policy about RM in author guidelines.