

Managing Dual Use Research of Concern: Report on the 3rd International Roundtable

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The US government and the World Health Organization sponsored the 3rd International Roundtable, “Sustaining Progress in the Life Sciences: Strategies for Managing Dual Use Research of Concern”, on 5–6 November 2008. The US National Science Advisory Board for Biosecurity (NSABB) hosted the roundtable. “Dual use research” is research with a legitimate scientific purpose that through misuse may pose a threat to public health or national security. “Dual use research of concern” (DURC), as defined by the NSABB, is the subset of dual use research “that, based on current understanding, can be reasonably anticipated to provide knowledge, products, or technologies that could be directly misapplied by others to pose a threat to public health and safety, agriculture, plants, animals, the environment, or materiel”.¹ Identifying DURC is subjective, but even knowledgeable and responsible scientists and editors need to be informed about when dual use research is likely to arise. Examples may include knowledge, products, or technologies that could be misapplied to create or increase harmful consequences of biological agents or toxins, disrupt the immunity a vaccine is designed to create, increase transmission of harmful substances, or alter biological agents and toxins to make them resistant to clinical or agricultural prophylactic or therapeutic interventions, or conversely to increase the susceptibility of a host population to harm.

In 2006, CSE’s *White Paper on Promoting Integrity in Scientific Journal Publications* (www.councilscienceeditors.org/editorial_policies/white-paper.cfm)² mentioned the NSABB and the concept of dual use

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Gerald W Parker, Principal Deputy Assistant Secretary for Preparedness and Response, US Department of Health and Human Services, welcomes participants to the roundtable.

research. Work on this subject, as demonstrated by the roundtable presentations, has come a long way since I wrote about this topic in the white paper, and the next edition of the white paper, which is scheduled for release at the 2009 CSE annual meeting, expands on the topic. The Secretary of Health and Human Services designated the National Institutes of Health to provide management and support services for the NSABB. The NSABB advises on and recommends strategies for the oversight of federally supported dual use biological research. The NSABB report *Proposed Framework for the Oversight of Dual Use Life Sciences Research: Strategies for Minimizing the Potential Misuse of Research Information*¹ is currently under consideration by the US government and includes tools for use in the development of a communication plan.

The roundtable brought together 137 participants from 37 countries who represented the variety of parties interested in dual use research issues, including scientists, government officials, ethicists, journal editors and publishers, and representatives of philanthropic and funding organizations. The purpose of the roundtable was to share the scope of countries’ and institutions’ activities, interests, and concerns regarding dual use research and strategies for managing DURC.

Keynote speaker Alan I Leshner, chief executive officer of the American Association for the Advancement of Science and executive publisher of *Science*, put the issues in perspective with his comments about the interplay between science and society: science is conducted within society and is intended to serve society through its advances.

The roundtable’s main thrust was that everyone has a stake in the responsible

management of DURC but especially individual researchers, institutions, and groups within them (such as institutional biosafety committees), funding agencies, government and regulatory bodies, journal editors, and the global scientific community. Roundtable presenters and participants explored strategies for managing the oversight of dual use research and for fostering international awareness and engagement on dual use research. Presentations were from representatives of countries and organizations that have taken concrete, practical steps to manage DURC.

Of particular interest for CSE members was the discussion on publications. Identification and consideration of DURC throughout the research continuum before submission of manuscripts for publication is an important first step. Although journal editors do not have sole responsibility for the management of DURC, they will inevitably be faced with submissions that could be considered to involve DURC and with the chal-

lenges that come with handling them. Considering the risks and benefits associated with publishing or *not* publishing DURC is an added task with which many editors have no experience. Suggestions that emerged during this part of the roundtable included establishing screening methods to recognize DURC and obtaining reviews for manuscripts from persons who have the requisite technical and security expertise to advise editors on the risks and benefits. It was noted that everyone would benefit from some consistency in definitions and approaches across journals. Journals could also benefit from sharing experiences, establishing best practices, and developing a registry of expert reviewers with security expertise. Discussants noted that editors can educate about and reinforce professional responsibility through their current communication frameworks to achieve the goals of managing DURC.

The NSABB and organizations around the world have worked on finding ways to ensure that science continues to be

done and communicated in an unfettered way while scientists remain mindful of and minimize the risk and consequences of misuse. The roundtable participants' open exchange of information on educational tools, codes of conduct, and procedures for the analysis of scientific communication that potentially involves DURC was evidence of collaboration in moving toward those important and common goals. 

References

1. National Science Advisory Board for Biosecurity. Proposed framework for the oversight of dual use life sciences research: strategies for minimizing the potential misuse of research information. June 2007 [Internet] [cited 19 January 2009]. Available from: oba.od.nih.gov/biosecurity/biosecurity_documents.html.
2. CSE. White paper on promoting integrity in scientific journal publications. September 2006 [Internet] [cited 19 January 2009]. Available from: www.councilscienceeditors.org/editorial_policies/white_paper.cfm.