Communication of Dual-Use Research Results, Methods, and Technologies

Non-Traditional Publishing and Perspectives from Developing Countries

Overview of Recent International Discussions

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International Forum on BioSecurity

- Como, Italy, March 2005
- Co-sponsored by International Council for Science, InterAcademy Panel, InterAcademy Medical Panel, National Academy of Sciences
- Working groups discussed Guidelines and Principles for Professional Conduct; Dissemination and Communication of Research; and Codes of Conduct

International Forum on BioSecurity

- Scientists from more than 20 countries, from both North and South, participated
- Agenda reflected growing awareness that rapid developments in life sciences and biomedical research, while offering great benefits, also pose potential risks
- The knowledge, tools, and techniques that enable these advances might be misused to cause deliberate harm, and the scientific community has an essential role to play in efforts to address the risks of misuse

International Forum on BioSecurity

- Broadened the debate and advanced the awareness in the life sciences and biomedical research communities
- Served as a major convening and coordinating mechanism to share information about activities that are under way or being planned to address the biosecurity issue.

International Forum on BioSecurity

- Number of the participants have or will contribute as invited experts at meetings of the States Parties to the Biological Weapons Convention in the summer and fall of 2005
- First time many had seriously considered the implications of dual-use but all were convinced at the end of the meeting that they as individuals and the scientific community as a whole have a major and pressing responsibility in this area

Universality of Science

Freedom in the conduct of science covers three critical areas:

- freedom to pursue science and to publish the results;
- freedom to communicate amongst scientists and to disseminate scientific information; and
- freedom of movement of scientific materials.

Affirms the right and freedom of scientists to associate in international scientific activity without regard to such factors as citizenship, religion, creed, political stance, ethnic origin, race, color, language, age or sex.

Universality of Science

- Global questions currently on the scientific agenda require increased multidisciplinary and international collaboration
- Intrinsic nature of science is universal, its success depends on cooperation, interaction and exchange, often beyond national boundaries
- Scientists must have open access to each other and to scientific data and information

Universality of Science

- Changing international political climate and concerns about international terrorism and national security present new challenges to the Universality of science
- Threatened boycotts on scientists for certain countries, restrictions on publications and exchange of materials, withholding of travel visas and work permits, are just a few examples
- Restrictions can have a negative impact on the overall value of science, both nationally and internationally

Universality of Science

Perspective from Africa:

"AIDS/HIV is rife in Africa and many of my colleagues would argue that bio-terrorism is a distraction and we should focus our efforts on the naturally occurring infectious diseases that are currently decimating particularly the poorer populations of the World. It is a strong argument that is hard to refute. However, the point is that the two cannot be separated. Tackling AIDS/HIV requires a truly international scientific effort – the open international exchange of scientists, information and materials. This is what is under threat if we are not all vigilant and careful in considering the implications of biosecurity for international science."

Changing Nature of Scientific Publishing

Researchers:

- Face increasing pressure to publish faster and in more internationally-accessible media
- Work in environments dominated by web-based publishing
- Publish more than 315,000 biomedical articles each year

Changing Nature of Scientific Publishing

- The percentage of scientific papers with authors from more than one country increased 200% since 1981
- International collaboration accounts for more than one-third of all co-authored articles
- Almost a guarantee that every biomedical article written will be published somewhere

Changing Nature of Scientific Publishing

- Focus on the U.S. environment is not enough
- Focus on traditional publishing outlets is not enough – information is widely and instantly available on Internet, textbooks, web pages, institutional repositories, theses, and many non-peer-reviewed publications.
- Indeed, controlling this environment at all is extremely difficult, if not impossible

Como Working Group Conclusions

- Echoed findings of January 2003 meeting at NAS
- Fundamental/basic scientific knowledge is distinct from applied research
- Once peer-reviewed and published or on-line then too late to control

Como Working Group Conclusions

- The benefits of increasing access to information and openness in science are enormous and the scientific process works only in an open environment in which research results are shared and built upon
- Our best defense against those who would use it [information] as a weapon is to ensure that our own scientists have better information. This means encouraging publication." (Laura Donohue, Wash Post, 26 June 2005)

Como Working Group Conclusions

- Researchers recognize that ‘sensitive’ information does exist but efforts to control the dissemination of such information at the end of the research chain, i.e. at the publication stage, are neither desirable nor practicable
- Researchers must address public confidence issues and government concerns by taking responsibility for the knowledge they generate

Como Working Group Conclusions

- Shared ownership of knowledge is often a better safeguard than restricted access
- Researchers could do a better job of communicating with the public and with policy makers and persuading both communities of the importance of universality in science

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