



Promoting Responsible Stewardship in the Biosciences: An International Perspective

Shana Dale

Deputy Director for Homeland and National Security

Office of Science and Technology Policy

National Science Advisory Board for Biosecurity

Hyatt Regency Bethesda

July 1, 2005



Office of Science & Technology Policy





Today's Discussion

- 1. Balance of Science with Security within the U.S**
 - Historical**
 - Present Day**
- 2. Responsible Stewardship in the Life Sciences:
Perspectives within the International Community**



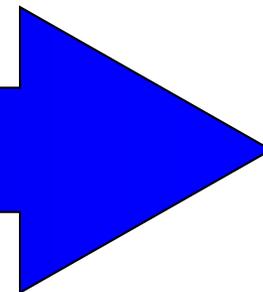
The tensions between science and security are deeply rooted

- 1947 President's Scientific Research Board report on "Science and Public Policy"

“Strict military security in the narrow sense is not entirely consistent with the broader requirements of national security. To be secure as a Nation we must maintain a climate conducive to the full flowering of free inquiry. However important secrecy about military weapons may be, the fundamental discoveries of researchers must circulate freely to have full beneficial effect. Security regulations, therefore should be applied only when strictly necessary and then limited to specific instruments, machines or processes. They should not attempt to cover basic principles of fundamental knowledge.”

1947

WWII





Science versus Security

- 1949 American Association for the Advancement of Science Committee on Civil Liberties for Scientists

“Experimentation there may be in many things of deep concern, but not in setting boundaries to thought, for thought freely communicated is the indispensable condition of intelligent experimentation, the one test of its validity.”
-Judge Cardozo

19411949

WWII



Science versus Security

- 1980 National Academies Suspends Bi-lateral Exchanges
- 1980 DoD-University Forum (1980-1981)

The Government, Secrecy, and University Research

- Promising signs of change.
- Apply visa controls.
- Classify the technology.
- Enable universities to decide in advance.
- New burdensome regulations will cost the nation more than it can be worth.

1949

1980

Korean War

Space Race

Viet Nam

Soviet Threat

WWII



Science versus Security

- “Security by Secrecy” will weaken U.S. technological capabilities.
 - There is no practical way to restrict international scientific communication without also disrupting domestic scientific communication.
 - Build “high walls around narrow areas” in pursuit of “security by accomplishment”.
-
- 1982 Corson Panel of NAS/NRC
“Scientific Communication and National Security”

1949

1980

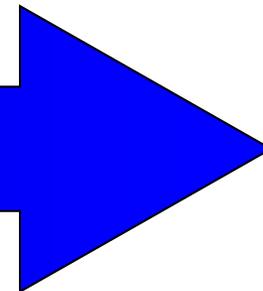
Korean War

Space Race

Viet Nam

Soviet Threat

WWII





Science and Security

- 1984 DoD Forum Working Group convened by OSTP issued the *DeLauer Memorandum to the Services and DARPA*

- Must distinguish science from technology; technology from know-how.
- Nature yields her secrets to anyone.
- Ideas cannot be stopped at national borders.
- Benefits of open publication far outweigh the risks.
- Ultimately the relationships among academia, government and industry will depend on the trust and understanding among the people who work together and depend on one another.

1949

1980

Korean War

Space Race

Viet Nam

Soviet Threat

WWII



Science and Security

- 1985 National Security Decision Directive (NSDD)- 189, September 21

“It is the policy of this Administration that, to the maximum extent possible, the products of fundamental research remain unrestricted. ... that where the national security requires control, the mechanism for control of information generated during federally-funded fundamental research in science, technology, and engineering at colleges, universities and laboratories is classification.”

1949

1980 1985

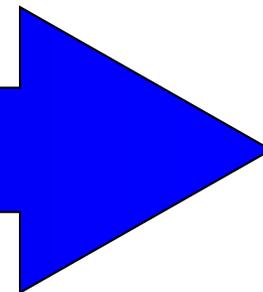
WWII

Korean War

Space Race

Viet Nam

Soviet Threat





Science and Security

- 1985 National Security Decision Directive (NSDD)- 189, September 21

“Each federal government agency is responsible for:

- a) determining whether classification is appropriate prior to the award of a research grant, contract, or cooperative agreement and, if so, controlling the research results through standard classification procedures;
- b) periodically reviewing all research grants, contracts, or cooperative agreements for potential classification.”

1949

1980 1985

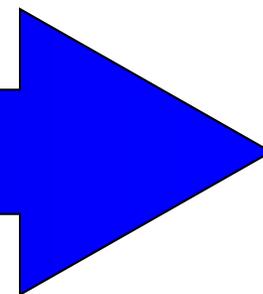
WWII

Korean War

Space Race

Viet Nam

Soviet Threat





Science and Security

- 1985 National Security Decision Directive (NSDD)- 189, September 21

“No restrictions may be placed upon the conduct or reporting of federally-funded fundamental research that has not received national security classification, except as provided in applicable U.S. Statutes.”

-Ronald Reagan

1949

1980 1985

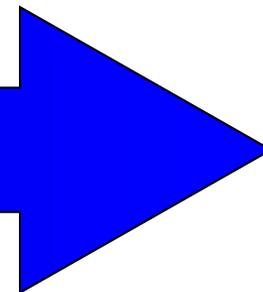
WWII

Korean War

Space Race

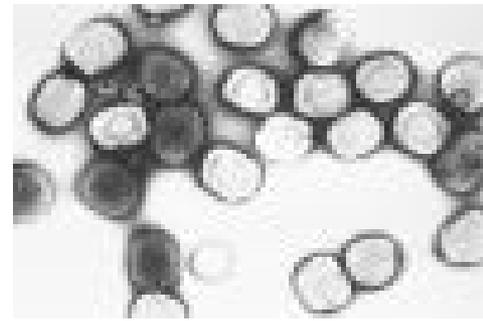
Viet Nam

Soviet Threat





Today's Concerns...



1949

1980 1985

2001

WWII

Korean War

Space Race

Viet Nam

Soviet Threat

9/11



Governance of Research post 9-11

- Dr. Condoleezza Rice letter to Dr. Harold Brown, CSIS, 11-1-01
- Dr. John Marburger has reaffirmed this at NAS and in congressional testimony

“In the context of broad-based review of our technology transfer controls that will begin this year, this Administration will review and update as appropriate the export control policies that affect basic research in the United States. In the interim, **the policy on the transfer of scientific, technical and engineering information set forth in NSDD-189 shall remain in effect**, and we will ensure that this policy is followed.”



Intent of a U.S. Biosecurity Policy

- “Dual use” potential of certain life sciences research
Requires consideration of new biosecurity measures
- The goal is to enhance biosecurity protections for life sciences research while ensuring that any impact to the free flow of scientific inquiry is minimized.



International Biosecurity Efforts

- The Royal Society “*The individual and collective roles scientists can play in strengthening international treaties*”
- The United Nations Foundation, Nuclear Threat Initiative and National Academies peer review round table on *Biological Threats to Security*
- NATO’s *Security Through Science Programme*
- IISS-CBACI’s “*The Future of the Life Science: Reaping the Rewards and Managing the Risks*”
- European Commission conference “*Ethical Implications of scientific research on bioweapons and prevention of bioterrorism*”



International Biosecurity Efforts

Repeated Concerns/Issues

- What is the threat to my country?
- “Dual-use” tension – risk versus benefit analysis
- Challenges to international cooperation
- Allocation of economic resources – costs associated with biosecurity



International Biosecurity Efforts

Repeated Concerns/Issues

- Global nature of science
- The involvement of the public in the decision making process
- Common terminology
- Codes of conduct



International Biosecurity Efforts

Organisation for Economic Co-operation and Development (OECD) International Futures Programme (IFP)

In September 2004, 55 participants selected from government, academia, industry, public research organisations, scientific societies, the science publishing field gathered in Frascati, Italy for three days to discuss the promotion of responsible stewardship in the biosciences and means of avoiding the potential abuse of research and resources. The meeting was divided into four sessions.

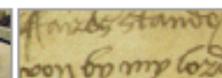
Session I – Exploring the Balance of Risks – Openness and Precaution

Session II -A Review of Legal, Administrative and Regulatory Approaches

Session III -Roles of the Academic and Industrial Scientific Communities

Session IV-Options and Next Steps

Home Enter a search topic

							
About us	Who's who	Events	What are Codes?	Glossary	Legislation	Background Materials	Contacts

"Biosecurity oversight and codes...

... biosecurity information on the web."

This site is brought to you by the International Futures Program of the OECD and dedicated to providing an active resource of global information on oversight mechanisms - particularly codes-of-conduct for the biosciences research community – to help advance these efforts and promote responsible oversight of the biosciences. This site is a "work in progress" and will eventually include all the players in biosecurity oversight. If you or your organisation feel you should be included, please send an e-mail to contact@biosecuritycodes.org.

Biosecurity updates

Are you interested in getting all the latest news on Biosecurity from this web-site? [Sign up](#) to receive free updates to make sure you know what's going on the world of biosecurity.

What's happening where?



[More >](#)

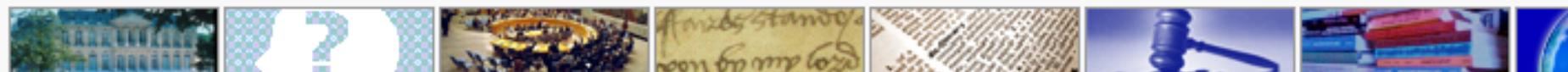
[Sign-up here for news!](#)

Brought to you by the [International Futures Program](#) of the OECD



Home

Enter a search topic



North America

Canada	Who's who	Events	Legislation
Costa Rica	Who's who	Events	Legislation
Cuba	Who's who	Events	Legislation
Guatemala	Who's who	Events	Legislation
Mexico	Who's who	Events	Legislation
United States	Who's who	Events	Legislation



International Biosecurity Efforts

International Forum on Biosecurity

- IAP, InterAcademy Medical Panel, ICSO, and NAS hosted the forum
- Held in March 2005 in Italy
- Participants attended as individuals, not in official capacity
- Forum held because of recommendations in NAS report, “Biotechnology Research in an Age of Terrorism” (Fink Report)



BWC Experts Meeting 2005

- **Final Meeting of the 2002-2005 Work Program agreed to at the BWC Review Conference in 2002**
 - International opportunities to gather experts on potential BW-related activities and raise awareness of the importance of effective national awareness, including criminal legislation for BW creation and use, and pathogen security
- **“Scientific and Professional Responsibility”**
 - Generate a greater understanding of emerging Codes of Conduct and their role in promoting scientists’ professional responsibilities and maintaining the norm against biological and toxin weapons



BWC Experts Meeting 2005

- **Participation**

- US Government: Agriculture, Defense, Energy, Health and Human Services, Homeland Security
- US NGO: Nuclear Threat Initiative, Center for Biosecurity at Pittsburgh, American Medical Society, American Society for Microbiology, Center for Strategic and International Studies, Center for Arms Control and Non-Proliferation, International Council for Life Sciences,...



BWC Experts Meeting 2005

- Listed Government Participants: Germany, UK, South Africa, Bulgaria, Russia, Australia, China, Argentina, Netherlands, Indonesia, Japan, Pakistan, Jordan, Malaysia, Nigeria, India, Canada, Poland, Sweden, Cuba
- International/Foreign NGO: UNESCO, International Committee of the Red Cross, OECD, FAO, OIE, International Council for Science, International Union of Biochemistry and Molecular Biology, Nature, Institute of Medical Microbiology,...
- University and Pharmaceutical Representation



BWC Experts Meeting 2005

- **Common Points of Discussion:**
 - Heighten awareness and attention to life sciences research and dual-use applications
 - Codes are useful to educate and promote responsible behavior
 - Codes can facilitate compliance with the BWC
 - Countries are already developing own codes, through advisory or regulatory bodies
 - Involve scientific community in developing and implementing codes
 - Balancing transparency with security



BWC Experts Meeting 2005

- **Controversial Points:**
 - Obligatory codes of conduct for all scientists, including government researchers
 - Mandatory multi-tiered review of all dual-use experiments, including international review committees
 - Codes of conduct applicability to industry
 - Registration/licensing of scientists
 - Universal codes vs. National codes



Conclusion

- Progress being made
- The need for more dialogue, understanding, and sharing of ideas
- Obstacles
- Gratitude to the NSABB Members