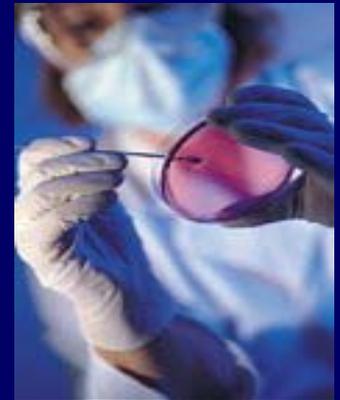
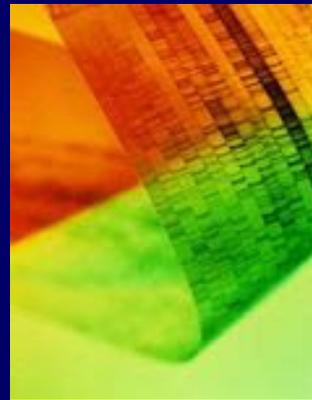


Recommendations of the NSABB



***David R. Franz, D.V.M., Ph.D.
Vice President and Chief Biological Scientist
Midwest Research Institute***

Who?

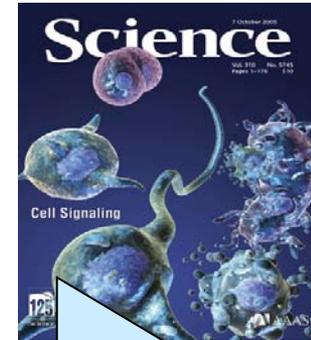
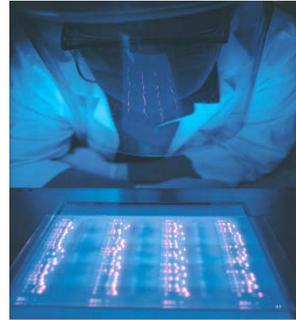
- **Researchers (Primary Investigators, Lab Staff, etc.)**
- **Institutions**
- **Research Funding Organizations**
- **Governments**
- **Professional Societies**
- **Journal Publishers and Editors**
- **International Organizations**
- **Others**



What?



When?



**Conceptualize
Project**

**Funding
Review**

**Conduct
Research**

Discuss Work:

Seminars
Posters
Abstracts

Peer Review

**Publish or
Post Online**



NSABB Reports

NATIONAL
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BIOSECURITY

ADDRESSING BIOSECURITY CONCERNS RELATED TO THE SYNTHESIS OF SELECT AGENTS

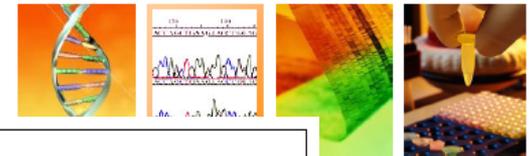
NATIONAL
SCIENCE
ADVISORY
BOARD FOR
BIOSECURITY

Strategic Plan for Outreach and Education On Dual Use Research Issues



NATIONAL
SCIENCE
ADVISORY
BOARD FOR
BIOSECURITY

ADDRESSING BIOSECURITY CONCERNS RELATED TO SYNTHETIC BIOLOGY



D:

NATIONAL
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BIOSECURITY

Proposed Framework for the Oversight of Dual Use Life Sciences Research: Strategies for Minimizing the Potential Misuse of Research Information



A Report of the National Science Advisory Board for Biosecurity (NSABB)

June 2007

Report of the
National Science Advisory Board for
Biosecurity (NSABB)

December 10, 2008

NATIONAL
SCIENCE
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Enhancing Personnel Reliability among Individuals with Access to Select Agents



Report of the
National Science Advisory Board for Biosecurity
(NSABB)

May 2009



National Science Advisory Board for
Biosecurity (NSABB)

Proposed Oversight Framework for DURC

NATIONAL
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Proposed Framework for the Oversight of Dual Use Life Sciences Research: Strategies for Minimizing the Potential Misuse of Research Information



A Report of the National Science Advisory Board for Biosecurity (NSABB)

June 2007

Role of NSABB Report

- **Not government policy**
 - The NSABB provides advice and recommendations to the USG
- **Not intended as comprehensive guidelines**
 - Intended as a framework or springboard for USG to develop a comprehensive and coordinated oversight policy



Elements of Initial NSABB Charge

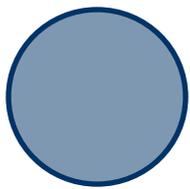
- **Criteria for identifying** dual use research of concern
- National **guidelines for oversight** of dual use research
- National **guidelines on communication and dissemination** of dual use research methodology and research results
- **A code of conduct** for scientists and laboratory workers in life sciences research



Summary of Guiding Principles

- Life sciences research, and the free and open communication of its results is essential
- Oversight is appropriate because of the potential for misuse of information
- Oversight must be
 - Balanced
 - Flexible and nimble
 - On-going
 - Subject to evaluation
- Critical role of individual investigators
- Importance of maintaining public trust



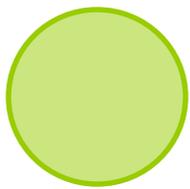


Outreach and Education

- Enhance awareness through ongoing, mandatory education about dual use research issues
- Training materials developed and used by:
 - Federal government
 - Research institutions
 - Scientific societies and professional associations
 - Private sector
- Outreach and education should have a broad reach
 - Not just college and graduate level, but also high school and junior high school
 - International audiences
 - Commercial research environment
- Example: NIH educational video, brochure, and other materials

http://oba.od.nih.gov/biosecurity/biosecurity_educational.html

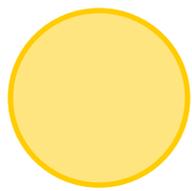




Codes of Conduct

- **Core responsibilities of life scientists**
 - “Individuals involved in any stage of life sciences research have an ethical obligation to avoid or minimize the risks and harm that could result from malevolent use of research outcomes”
- **Culture of Awareness and Responsibility**
 - Codes of conduct can foster dialogue and mindfulness regarding responsible behavior





Risk Assessment & Risk Management

- Identification of DUR/C
- Evaluation of research for dual use potential includes:
 - Review of research proposals
 - Periodic review during conduct of research
 - Review of manuscripts and other scientific communications
- Implementation of strategies to manage risks, as needed



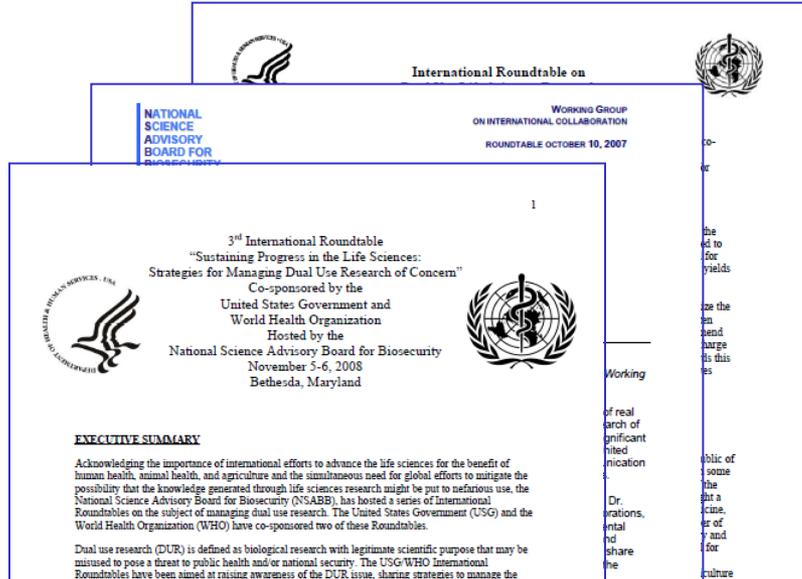
International Engagement

- **International Roundtables on Dual Use Life Sciences Research**

- February 2007
- October 2007
- November 2008

- **Series of Webcasts**

- Sustained engagement, region-by-region, with international community



International Roundtable on

WORKING GROUP ON INTERNATIONAL COLLABORATION
ROUNDTABLE OCTOBER 10, 2007

1

3rd International Roundtable
“Sustaining Progress in the Life Sciences:
Strategies for Managing Dual Use Research of Concern”
Co-sponsored by the
United States Government and
World Health Organization
Hosted by the
National Science Advisory Board for Biosecurity
November 5-6, 2008
Bethesda, Maryland

EXECUTIVE SUMMARY

Acknowledging the importance of international efforts to advance the life sciences for the benefit of human health, animal health, and agriculture and the simultaneous need for global efforts to mitigate the possibility that the knowledge generated through life sciences research might be put to nefarious use, the National Science Advisory Board for Biosecurity (NSABB), has hosted a series of International Roundtables on the subject of managing dual use research. The United States Government (USG) and the World Health Organization (WHO) have co-sponsored two of these Roundtables.

Dual use research (DUR) is defined as biological research with legitimate scientific purpose that may be misused to pose a threat to public health and/or national security. The USG/WHO International Roundtables have been aimed at raising awareness of the DUR issue, sharing strategies to manage the risks posed by DUR, and—the focus of this most recent Roundtable—sharing lessons learned from DUR awareness raising and other activities in place internationally and over 72 countries and over 72 organizations of their countries and organizations growing recognition on the importance of addressing activities in place internationally.

This Third Roundtable was an International Engagement Roundtable. The present life sciences research as a use research issues, primary concrete, practical steps, a subset of dual use research that, based on current technologies that could be agriculture, plants, animals, concrete practical activities.



Future NSABB Activities

- Recommend strategies and guidance for enhancing a culture of responsibility among individuals with access to select agents
- Develop strategies for enhancing interdisciplinary biosecurity
- Recommend outreach strategies for non-traditional synthetic biology communities
- Engage journal editors on review of dual use research of concern by: lessons learned and future directions
- Develop strategies for promoting codes of conduct
- Continue international engagement on dual use research of concern

<http://oba.od.nih.gov/biosecurity/biosecurity.html>