



# Raising Consciousness and Transforming Cultures

**Biological Weapons Convention Experts Meeting**

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*Scientific Codes of Conduct*

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*Working for a Safer World*

**NTI's mission is to strengthen global security by reducing the risk of use and preventing the spread of nuclear, biological and chemical weapons.**

**NTI seeks to raise public awareness, serve as a catalyst for new thinking and take direct action to reduce these threats.**



# Global Health and Security Initiative

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*Working for a Safer World*



# The truths of Science

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- **Life science research is good for society**
- **Science is advancing exponentially**
- **Scientific experimentation can be unpredictable**
- **Scientific progress relies on openness and sharing information**



# The Dilemmas of Science

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- **Experimentation can lead to unforeseen results**
- **Areas of science raise concern for potential misuse**
- **Life science knowledge and technologies can be misused for malevolent purposes.**



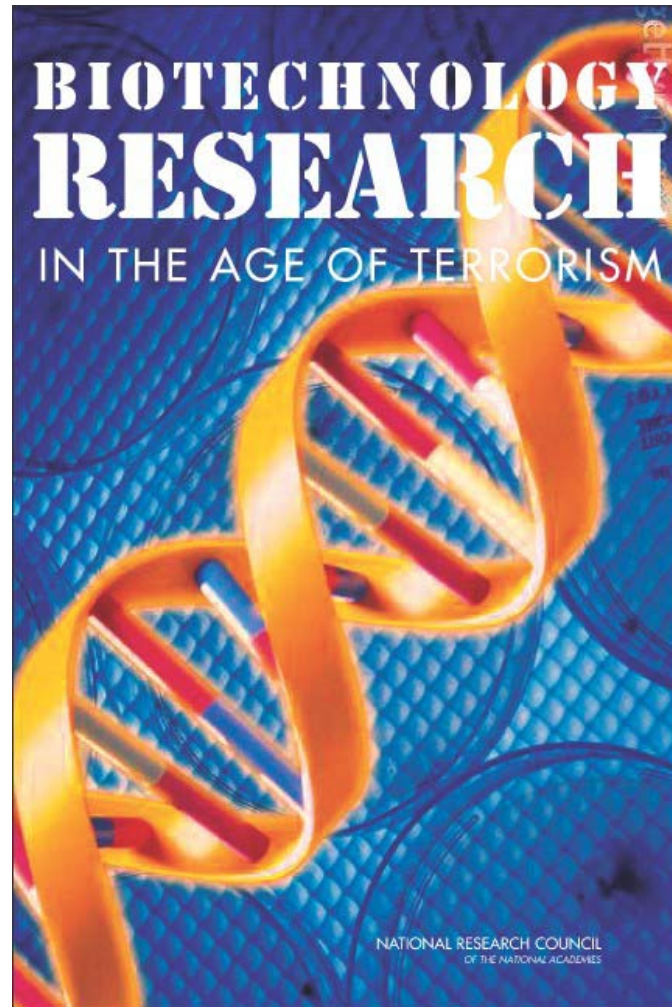
# Multi-Pronged Approach

**NTI supported projects to broadly engage multiple sectors with different perspectives both within the United States and internationally:**

- **Blue ribbon scientific panel: Study by U.S. National Research Council**
- **Academics: Study on life scientists' self-governance by Center for Civilian Biodefense Strategies, Johns Hopkins University**
- **Industry: Creation of bioindustry standards organization by CBACI and IISS-US**



# National Research Council





# NRC Recommendations

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- **Create programs to educate scientists about the nature of the dual use dilemma in biotechnology and their responsibilities to mitigate its risks**
- **Rely on self-governance by scientists and scientific journals to review publications for their potential national security risks**
- **Create an International Forum on Biosecurity to develop and promote harmonized national, regional, and international measures that will provide a counterpart to the system recommended for the United States**





# Life Sciences Self-Governance

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- **Best position to understand research implications**
- **Technical expertise to call attention to potential dangers**
- **Responsibility for safeguarding from malignant applications**
- **Require building relationships with the security communities**
- **Awareness of research “neighbors”**



# Establishment of Bioindustry Standards Organization

## International Council for the Life Sciences

**The mission of the Council is to promote public health, safety, and security by safeguarding the opportunities offered by advances in the life sciences and their application.**





# International Council for the Life Sciences

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**The ICLS is a self-sustaining global enterprise designed to:**

- **Promote necessary culture of responsibility**
- **Promote engagement on issues**
- **Facilitate effective partnerships**
- **Serve as authoritative objective resource**



# International Forum on Biosecurity

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- **Bring together leaders of international scientific community with other stakeholders ( e.g., IAP, IAMP, ICSU, WHO, ICRC)**
- **Discuss key issues, share information, and brainstorm about potential further actions**
- **Provide focal point for input to the BWC Experts meeting on Codes of Conduct**
- **Create promising linkages and engagement**



# Conclusions

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- **Impractical to monitor and regulate all bioscience research**
- **Some areas of science have a clearer potential for misuse**
- **All areas of science can produce unexpected results**
- **Danger in constraining legitimate research**
- **Danger in creating barriers to research careers**  
**In the life sciences**



# Recommendations

- **Increase awareness, understanding, and education**
- **Create institutional culture of ethos and responsibility**
- **Engage individual scientists and institutions in self-governance measures**
- **Need innovative strategies for oversight and responsible stewardship**
- **Create framework for harmonization of national and international rules, regulations, agreements and laws**



# Final Thought

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**Arriving at solutions for preventing  
the misuse of the life sciences...**

**...is *long-term* and *life-long*.**

# Thank You

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