

DUAL-USE INFORMATION: ISSUES FOR NSABB

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What is Dual-Use Technology?

- Technology that has both military and civilian uses.
- Today, 'military' includes actions by non-state actors, such as terrorists.
- Biotechnology is intrinsically dual-use.

Controls on Dual-Use Information

- Cold War Precedents
 - The policy response was an international export control regime that still exists.
 - Dual-use information and ‘know-how’ are covered under the export control regime.

Dual-Use Controls on Biotechnology

- Biotechnology not imagined as part of the problem until recently.
- The Australia Group promotes harmonized export controls for technologies relevant to chemical and biological weapons.
- These control regimes aimed at states, not individuals; they are of limited utility in combating terrorism.

The Challenge of Safeguarding Biotechnology

- Pathogens are everywhere, and even a small amount may be enough to do harm.
- The number of trained biologists is huge and they work in many different kinds of institutions.
- There is scant recent history of cooperation between the life sciences and the security establishment.

Challenge, cont'd

- The channels for communicating knowledge are also numerous and diverse:
 - Over 10,000 journals in the life sciences;
 - Informal circulation of pre-prints, conference papers, and research proposals;
 - A culture of sharing information within international networks of scholars.

Recommendations of NAS Report for Monitoring Information Flows

- A system of self-regulation, modeled on the Asilomar process adopted for biosafety:
 - Local Institutional Biosafety Committees (IBCs) to review research proposals for possible problems ('Experiments of Concern')
 - Review at the publication stage by journal editors.

Benefits of Proposed System

- Relies on existing and trusted institutions.
- Gives an important role to scientists.
- Provides a kind of consciousness raising to the life sciences community.
- Avoids the imposition of blanket regulations; problems will be addressed on a case-by-case basis.

Some Remaining Issues for NSABB

- What kinds of information need to be restricted?
 - The tacit component of cutting-edge research offers some protection against bioterrorists.
 - However, it reinforces the importance of the insider problem.

NSABB Issues, cont'd.

- Scope of the regulatory regime
 - Not all industry and government research is covered by IBC review, which is tied to NIH funding.
 - What kind of monitoring for biosecurity is appropriate for research outside the biosafety net?

NSABB Issues, cont'd.

- Need to affirm the importance of free exchange of information
 - Sensitive but unclassified (SBU) category is problematic.
 - Classification issues:
 - Scope of information covered by classification
 - Political (mis)-uses of classification

Conclusions

- There is a lot of work to be done.
- There are useful models that have worked in other control regimes.
- It is important to get the right balance: the costs of too little or too much control are both very high.
- Finally, any solution must be acceptable and workable in countries around the world.