

Nonproliferation and Knowledge Security Course

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**Nonproliferation and National Security Department
Safeguards and Nonproliferation Policy**

Brookhaven National Laboratory

U.S. Department of Energy

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NONPROLIFERATION AND KNOWLEDGE SECURITY COURSE

Global Security Through Science Partnerships

DRAFT



DRAFT May 2013

Introductions

Global Security through Science Partnerships (GSSP)



Strengthening *knowledge*
security best practices
through science and
technology collaborations,
outreach and *training*

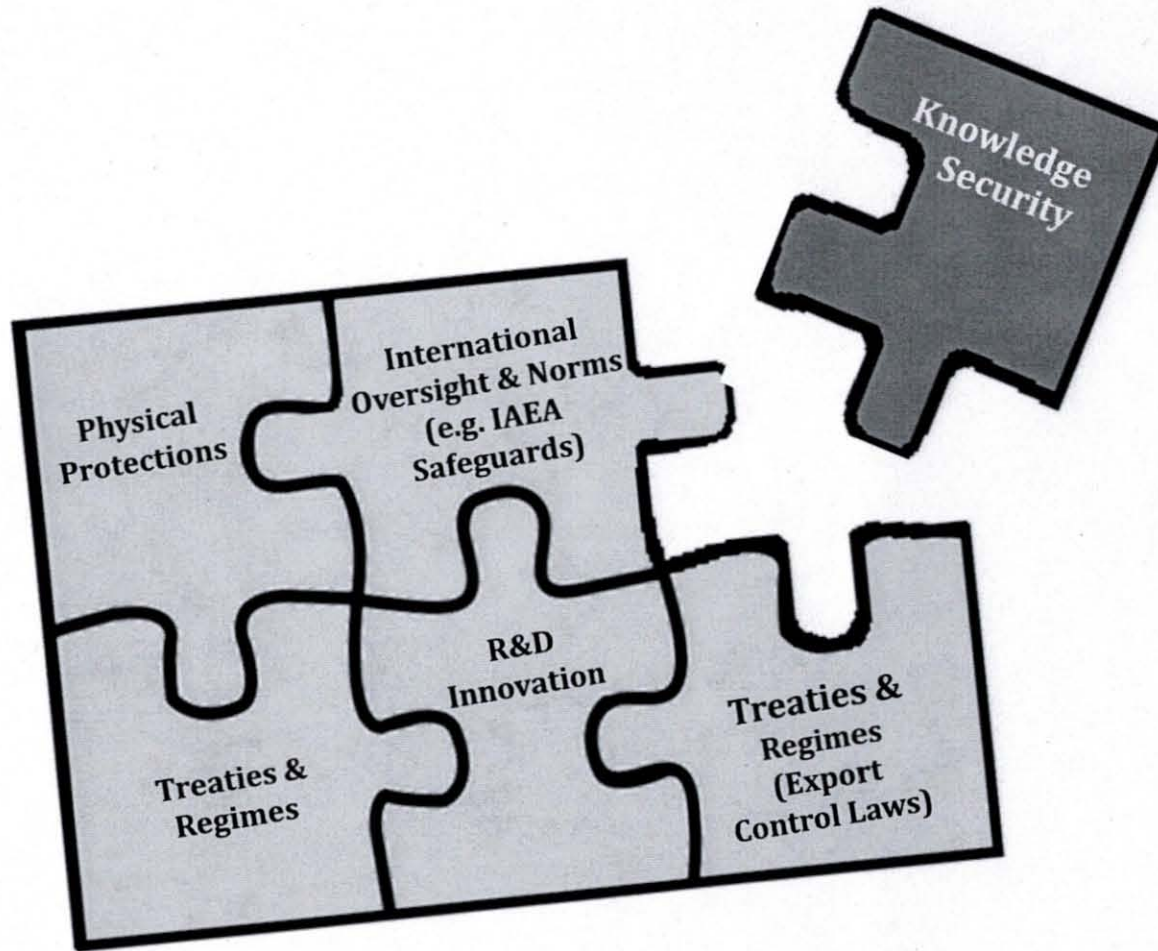
Insert Partner-Institute's
logo etc.

Weapons of Mass Destruction (WMD) Proliferation Threat

- **Keeping WMD out of the hands of those who seek to harm requires a coordinated and substantial effort**
- **Globalization, modernization, increasing trade of WMD-related technologies, materials, knowledge all intensifying threat**



Other (site) Nonproliferation Activities, Partnerships



Add logos as appropriate



Three Modules of the Course

Module 1.

**Introduction to
Nonproliferation
Concepts and
Regimes**

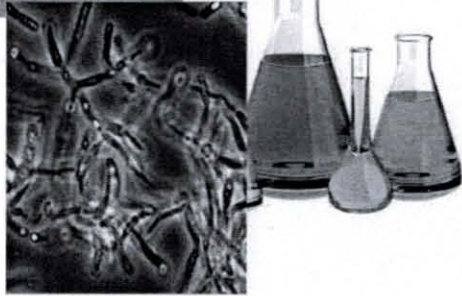
Module 2.

**Characterizing
Proliferation
Vulnerabilities for
Scientists**

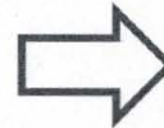
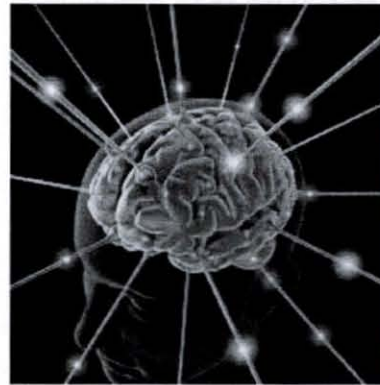
Module 3.

**Building a Knowledge
Security Network: an
Integral Component
of Responsible
Science**

Expertise is half of the equation to producing WMDs:



+



WMD materials

WMD expertise

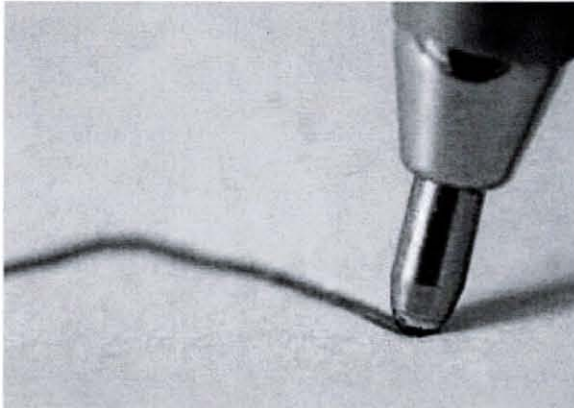
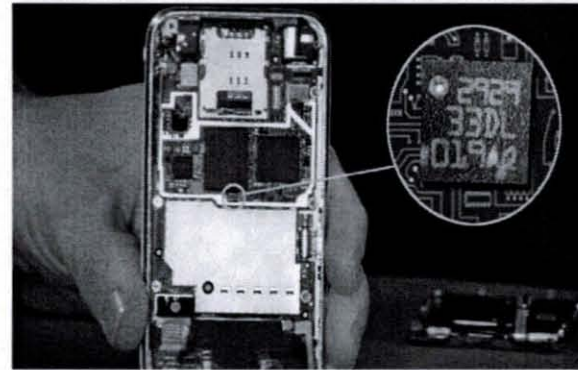
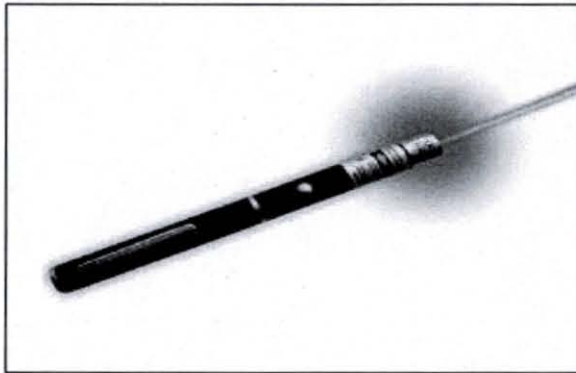
What Does “Dual-use” Mean?

- Dual use materials, technologies *and knowledge are* developed for everyday purposes, but have the potential for hostile use



What does this smart-phone have to do with WMDs?

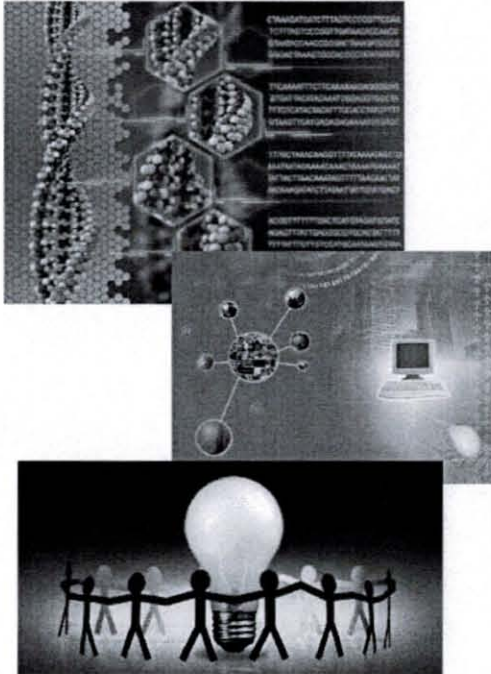
What do these Everyday Items Have in Common?



Our challenge:

To consider when our research may have WMD-applications, and if indiscriminately released, could be used in ways we didn't intend.

The Dual-use Dilemma



Information sharing leads to scientific innovations and new discoveries

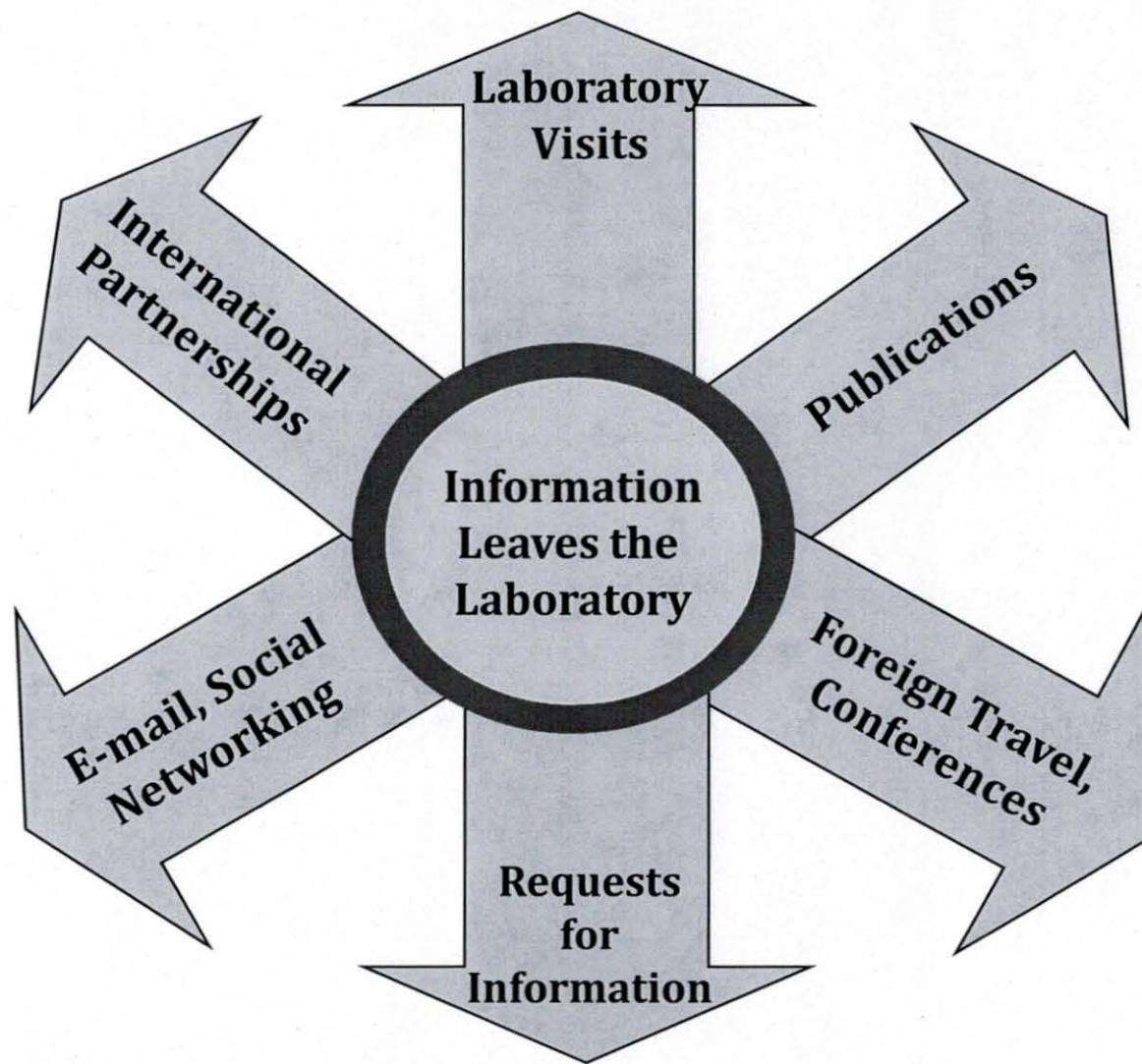
BUT



Not sharing knowledge is sometimes necessary to:

- **Protect professional reputation**
- **Protect intellectual property**
- **Comply with export control regulations and international treaties**

The Many Ways we Share Scientific Information



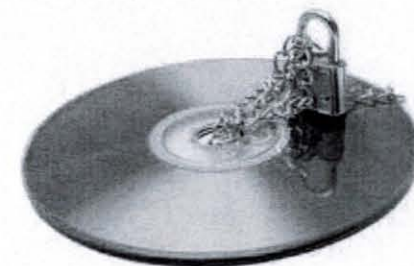
The Concept of Knowledge Security

Knowledge Security is:

A set of understandings, practices and processes that are designed to prevent proliferation of knowledge that could be applied to the development of Weapons of Mass Destruction (WMDs):

- Nuclear
- Chemical
- Biological
- *Dual-use*

protecting
YOUR
Ideas, & whatever
assets YOU
think up
NEXT...



An Integrated Knowledge Security Network

- Draws upon tried and true best practices grounding *many* related areas



Knowledge Security and Responsible Science

- **Knowledge security fits within the practice of Responsible Science**



Responsible Science: One Example is Part of Industry Compliance

Integrity and compliance program visualized at an international biopharmaceutical enterprise:



“At Novartis we believe that doing the right thing makes good business sense. We consider that ethical conduct is best assured by promoting a culture of integrity, supported by a sound management framework and assurance processes.”

 **NOVARTIS**

QUESTIONS?
