

# Constructing New Security Concerns in the Life Sciences

Presentation to the National Academies Committee on  
Dual Use Research of Concern: Options for Future Management  
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# What DURC Governance Misses

- Most dual use research is not governed by extant policies
- New security concerns will not readily be apparent or governed
- All non-US, non-federally funded research

## Why?

- Based on creating a dividing line between science and society, a point where science allows the government to come in and regulate
- Designed around telling researchers what is DURC, rather than giving them tools and networks to figure it out

# Two Framings of Science and Society

## As Separate Spheres

Science produces objective knowledge independent of society

Except in rare (and knowable) cases, knowledge benefits society

The state is best placed to construct and govern security concerns

Academia should be self-governed

## As Mutually Constitutive

Science is embedded in society

Decisions about benefits and harms are always subjective and often contested

How we decide what constitutes DURC should be a subject of debate and analysis

**Both frames useful in different cases**

# Focus on fostering the opportunities, incentives, and desire to build **networks for constructing security concerns**

- Gain-of-Function publications showed both that there are **nascent networks**, and they they are **not strong enough**
- Must include **expertise from a wide stakeholder community** (IC, regulators, scientists, NGOs, industry, ...)
- Need
  - **practical implementation,**
  - **broad policy buy-in, and**
  - **norms that promote them**



# Short term: Revitalize Engagement between Life Science and Security Communities

NSABB

Reestablish regular integration of intelligence community with the NSABB and e.g. Journals



Analyze and institutionally strengthen FBI Weapons of Mass Destruction Directorate (WMDD)



Add biological expertise to the Department of Commerce Emerging Technology Research Advisory Committee (ETRAC)

# Medium term: New Statements of Mutual Assurance between Academia and the State

- Replace NSDD-189 with a statement on the mutual responsibility of scientists and the state to work together in determining objects of security concern
- Reiterate shortcomings of Asilomar-like self-governance
- Focus on how to adapt governance for varying levels of certainty in effects

# Long term: Reforming training in the life sciences



UPMC Center for Health Security's Emerging Leaders in Biosecurity Initiative (since 2012)



Synthetic Biology Leadership Excellence Accelerator Program (2012, 2015...?)

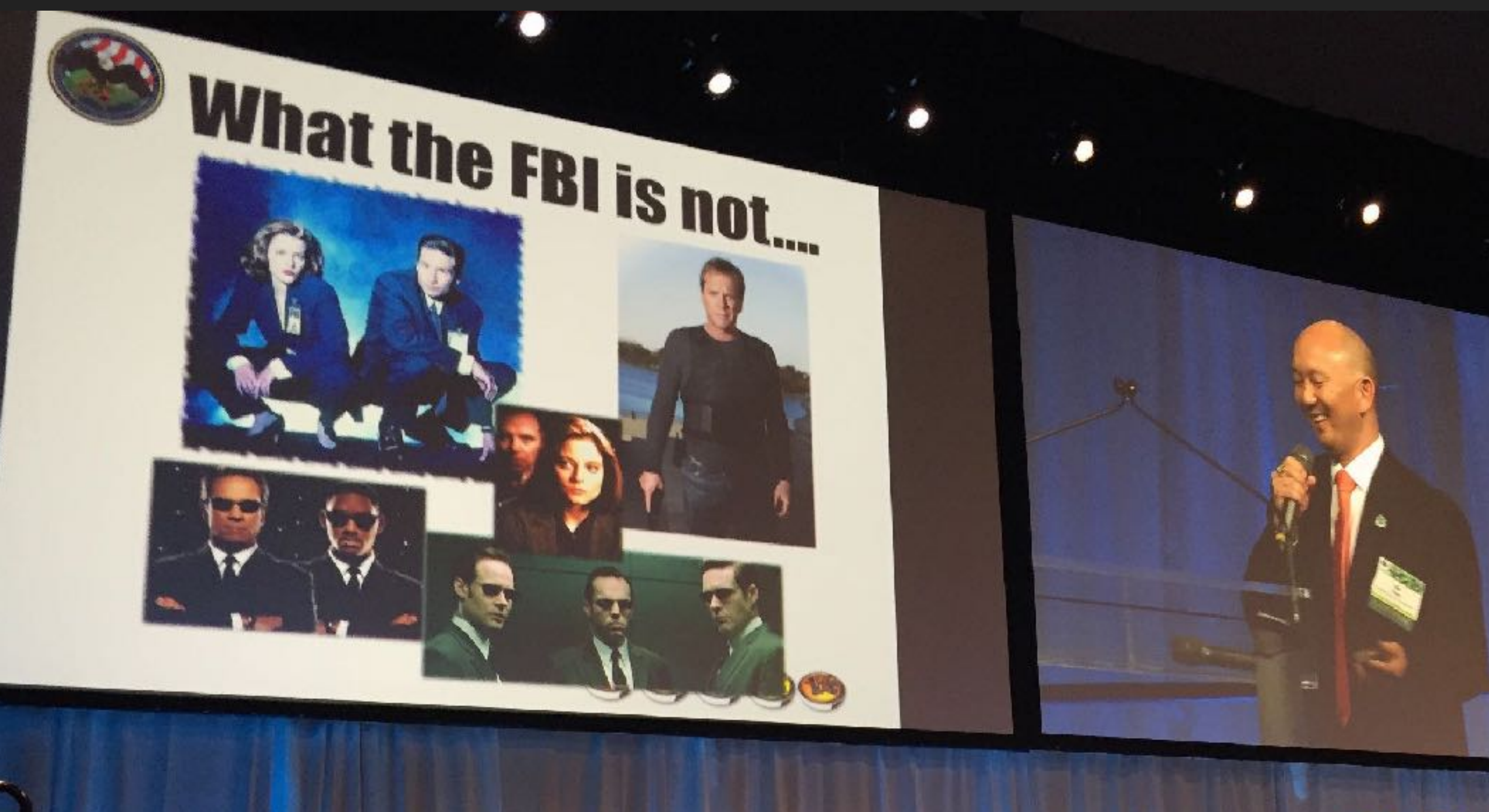


international Genetically Engineered Machines (iGEM) Competition (yearly since 2004)











# Conclusion

- How we decide what is DURC should be a point of public debate
- Establishing working networks between scientific, state, NGO, and industry enables more flexible governance for emerging concerns
- Policy, Practice, and Training must all be modified if we are serious about better governing emerging security concerns in the life sciences



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