

## **GENOMICS AND BIOSECURITY**

**Workshop: ESRC Genomics Policy & Research Forum, Edinburgh, 13-14 November**

**For further information:** Jonathan Suk, Research Fellow, ESRC Genomics Policy Forum, [jonathan.suk@ed.ac.uk](mailto:jonathan.suk@ed.ac.uk).

### **The ESRC Genomics Policy and Research Forum**

The ESRC Genomics Policy & Research Forum is a novel initiative working to widen the reception of social science research beyond existing audiences and to enhance the policy engagement of social science research, particularly the research conducted by the ESRC Genomics Network (EGN). We seek to integrate diverse strands of social science research and connect it to policy-makers in the UK and abroad, as well as relevant people in business, the media and civil society. We also seek, through our various work programmes, to develop links between social scientists and scientists working on genomics in areas as diverse as plant and animal genetics, pathogen genomics, embryonic stem cell research, and associated health applications.

### **Introduction: Genomics and Biosecurity**

International concern over the threat of naturally occurring infectious diseases as well as the potential malevolent use of biological knowledge, either through state-sponsored bioweapon development or through bioterrorism, has dramatically increased in recent years. The boundary between 'bioweapon' and 'biodefence' has blurred amidst a political environment in which traditional notions of national and global security have broadened so as to now also include global 'biosecurity'.

Numerous actors have pursued initiatives designed to enhance global biosecurity by mitigating the potential misuse of biological knowledge. At the international level, several actors have called for a strengthening of the 1972 Biological and Toxin Weapons Convention (BTWC), which currently lacks a mechanism for confirming state adherence to the Convention. A strengthened BTWC is not widely expected to emerge from the upcoming 6<sup>th</sup> Review Conference, however. Perhaps owing to this reason, a variety of additional measures have been explored, each with the aim of preventing the misuse of biological knowledge. National governments and other relevant actors (e.g. OECD, WHO, IAP, NGOs, professional & scientific organizations) have pursued and debated mechanisms such as professional codes of conduct, export and biosecurity controls, and even the censorship of scientific articles with findings that could be applicable to the development biological weapons.

Each of these initiatives could significantly alter the trajectory of global biomedical and genomic research, and each initiative embodies a range of technological and political expectations and commitments.

### **Objectives of the Workshop**

This workshop will explore the emergence of biosecurity controls and the possible impacts that these might have on the trajectory of genomics and biomedical research. By encouraging sustained interaction between policy-makers, social scientists and scientists, this workshop seeks to integrate multi-disciplinary perspectives in exploring the following questions:

- How can the current governance landscape for bioweapons/biosecurity be contextualized?
- How is the threat to biosecurity from biowarfare/bioterrorism being perceived by key policy actors? Are advances in genomics altering this threat?
- How might governance tools designed to enhance biosecurity impact the trajectory of genomics research, and vice-versa?
- In exploring these and similar questions, what can this work programme contribute to broader debates on the relationship between science and its governance by global and national governments?

### **Outcomes of the Workshop**

The diverse range of expertise represented in this workshop will help to develop an informed analysis of the topic. In addition, current research needs that could be usefully pursued by the ESRC Genomics Policy & Research Forum will be identified.

The key findings from the workshop will be presented as a report on the Forum's website and, possibly, submitted as a briefing paper/letter to relevant academic and biomedical journals. Additionally, the Genomics Forum will be editing a special journal issue on the topic.

### **SCHEDULE**

*The workshop will begin 10:30am, Monday, 13 November and is scheduled to finish by 4pm on Tuesday, 14 November.*

#### **MONDAY, NOVEMBER 13 (10:30 – 18:00)**

##### **10:30 – 10:50 Welcome and Introduction**

Steve Yearley, Director, ESRC Genomics Policy Forum

Jonathan Suk, Research Fellow, ESRC Genomics Policy Forum

##### **11:00 – 13:00 Session 1**

##### **Biosecurity as a Contemporary Concern**

##### **Chair: Donald MacKenzie**

11:00-11:40 Malcolm Dando, Dept. Peace Studies, University of Bradford: 'The Implications of the Lemon Report of the NAS for the Widening of the Threat Spectrum'

11:40 – 12:20 Brian Rappert, University of Exeter: 'Biosecurity and Bioterrorism from a Sociological Perspective'

12:20 – 13:00 Roland Dannreuther, University of Edinburgh: 'Biosecurity and Bioterrorism: from Security Studies/International Relations Perspective'

##### **13:00 – 14:00 Lunch**

##### **14:00 – 17:45 Session 2 –Establishing Biosecurity Controls: Policy Spaces and Themes**

##### **Chair: Malcolm Dando**

## **DAY 1 (Cont'd)**

14:00-14:40 Jo Husbands, Committee on International Security and Arms Controls, NAS: 'Responsible Stewardship' of Advances in Life Science Research: Developing Governance in the International Scientific Community'

14:40 – 15:20 Iain Gillespie, OECD Biotechnology Division: 'Biosecurity as a Complement to Innovation in the Biosciences'

**15:20 – 15:45 Coffee**

**Chair: Iain Gillespie**

15:45 – 16:25 Ronald M. Atlas, Graduate School and School of Public Health, University of Louisville: 'The Need for International Harmonization to Control Dual Use Biothreat Agents'

16:25 – 17:05 Caitriona McLeish (& Daniel Feakes), Harvard-Sussex Programme, SPRU: 'Biosecurity, Stakeholders and Networks'

17:05 – 17:30 *Open Discussion*

**End Day 1.**

**DINNER: 19:30**

## **TUESDAY, NOVEMBER 14 (09:30 – 16:00)**

**09:30 – 15:00 Session 3 – National and Local Experiences in Establishing and Implementing Biosecurity Controls**

**Chair: Jo Husbands**

09:30 – 10:10 Jez Littlewood, Mountbatten Centre for International Studies: 'Governing Biological Disarmament: the UK experience'

10:10 – 10:50 Alastair Hay, Royal Society, UK: 'The roles of codes of conduct in preventing the misuse of scientific research'

**10:50 – 11:20 Coffee Break**

**Chair: Ron Atlas**

11:20 – 12:00 Filippa Lentzos, BIOS, LSE: 'Biosecurity Regulation: Factoring in Local Contexts and Configurations'

12:00 – 12:40 Kathleen Vogel, Cornell University: "Synthetic Genomes and Public Policy: Discourses on Bioterrorism Threats"

**12:40 – 13:40 Lunch**

**DAY 2 (Cont'd)**

**Chair: Steve Yearley**

13:40 – 14:20

Caitriona McLeish (& Paul Nightingale), SPRU: 'The governance of bio-sciences as a new security challenge.'

14:20 – 15:00

Brian Rappert (& Malcolm Dando): 'Educating scientists about Biosecurity'

**15:00 – 15:20**

**Coffee**

**15:20 – 16:00**

**Session 4 – Concluding Remarks**

Open discussion: key findings from meeting and next steps

*End Day 2.*