Some thoughts on
What are sensitive data?

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RDA Sensitive Data IG
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ERINHA is a RI of biocontainment laboratories which is specialized in infectious disease research

Biocontainment laboratories:
- Unique buildings with complex engineering systems maintaining ‘containment’
- Increased personnel and information security
- Nationally and internationally regulated

- ex. Non pathogenic E. coli, nonpathogenic bacteria
- ex. Influenza, Hepatitis, Salmonella, Measles, Mumps
- ex. HIV, H1N1 Influenza, Yersinia pestis, Rabies
- ex. Ebola, Nipah, Marburg, Crimean Congo Hemorrhagic Fever
Sensitive data: main types

4 points considering possible community “Risks”
• Economical risks
• Interference with security programs / tools
• Misappropriation of knowledge and data (for instance to build a weapon)
• Terrorism (plan and access to hospital, stadium…)

Environmental sensitive data
• Endangering coveted and scarce resources (including relocalisable data)

Personal data
• Endangering pearson (including re-identifiable data)
## Sensitive data within biocontainment laboratories

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<th>Examples</th>
<th>Protected?</th>
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This data comprises National Security Data and should never be required to be shared in an open-access manner.
Methods/Procedures and Results

- Previously used in bioweapons programs
- High risk of being ‘misused’ by bad-actors

How do we prevent the procedures and data generated within these laboratories from being used maliciously?
Life sciences research that, based on current understanding, can be reasonably anticipated to provide knowledge, information, products, or technologies that could be directly misapplied to pose a significant threat, with broad potential consequences, to
- public health and safety,
- agricultural crops and other plants,
- animals,
- the environment,
- materiel, or
- national security.

*As defined by the United States Government Policy for Oversight of Life Sciences Dual Use Research of Concern*
Types of research that may trigger DURC concerns

Taken from WHO Informal Consultation on Dual Use Research of Concern (2013)

• Demonstrate how to render a vaccine ineffective
• Enhance the harmful consequences of a pathogen or toxin or render a non-pathogen virulent
• Increase the transmissibility of a pathogen
• Alter the host range of a pathogen or toxin
• Enable evasion of diagnostic or detection modalities
• Enhance the susceptibility of a host population to a pathogen or toxin
• Generate or reconstitute certain eradicated or extinct pathogens or toxins
• Enable weaponization of a biological agent or toxin.
Examples of DURC data

• Demonstrate how to render a vaccine ineffective

Expression of Mouse Interleukin-4 by a Recombinant Ectromelia Virus Suppresses Cytolytic Lymphocyte Responses and Overcomes Genetic Resistance to Mousepox

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Pest Animal Control Cooperative Research Centre, CSIRO Sustainable Ecosystems,1 and Division of Immunology and Cell Biology, John Curtin School of Medical Research, Australian National University,2 Canberra, Australia

Received 25 July 2000/Accepted 13 November 2000

The IL-4 recombinant mousepox virus was lethal to all mice, including those previously vaccinated against mousepox. Potential to be used on other poxviruses
Examples of DURC data

- Increase the transmissibility of a pathogen

Created a influenza A virus with increased transmissibility
Examples of DURC data

• Enhance the harmful consequences of a pathogen or toxin or render a non-pathogen virulent
• Confer resistance to antibiotics, antiviral agents, or anti-toxins

Scientists identified a new C. botulinum toxin that could not be neutralized by known countermeasures. The journal allowed publication but withheld the sequence of the toxin (until a countermeasure is developed)
Examples of DURC data

• Generate or reconstitute certain eradicated or extinct pathogens or toxins

Both studies reconstitute viruses that are not known to be circulating and have previously caused devastating epidemics.
Examples of DURC data

- Enable weaponization of a biological agent or toxin.

Publishes methods on creating agents closely related to known WMD agents.
DURC DATA are NOT BAD DATA

Scientific advances are necessary for development of vaccines, therapeutics, diagnostics and to further scientific knowledge
Questions?

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