

# Strategies for Managing Dual Use Research of Concern

Session at the 3<sup>rd</sup> Annual AfBSA Biological Safety Conference: Strengthening Regional Capacity for Biorisk Management

Johannesburg, South Africa

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Dual use research of concern (DURC) is 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. Researchers in developed and developing countries alike need to be aware of what dual use research is and understand their responsibilities in this area as one important component of responsible conduct of research globally. The recent controversy about the publication of manuscripts dealing with the virulence and transmissibility of the H5N1 bird flu in mammals emphasized the importance of DURC and its communication. Additionally, WHO's involvement highlights the necessity to confront this issue globally.

The goals of this session were to: 1) explore biosafety, biosecurity and dual use research (DUR) and DURC issues as they relate to the intersection of science and security by engaging life scientists, laboratory directors, and government officials, and others 2) explore the relationship between biosafety and biosecurity, 3) understand regional perceptions of biosecurity and the DUR and DURC issues in Africa, 4) discuss the current state of DUR and DURC activities in Africa, including progress and plans, 5) discuss strategies in different countries for managing the risks posed by DUR and DURC, and 6) encourage a heightened and sustained interest among participants in identifying and managing DUR and DURC in Africa.

The session began with introductory remarks provided by the moderator, Dr. Murray Cohen, followed by brief presentations from the panelists, who are experts in various aspects of this topic, and concluded with an interactive discussion session among the panel members and session attendees.

## Moderator

- *Dual Use Research/biorisk Management Issues Panel*

Murray Cohen, Ph.D.  
Member, National Science Advisory Board for Biosecurity  
President and Chairman  
Frontline Healthcare Workers®  
Safety Foundation, Ltd.  
Atlanta, GA

## Presentations

- *H5N1 Avian Influenza Virus Manuscripts and Dual Use Research Concerns: U.S. National Science Advisory Board for Biosecurity*

Joseph Kanabrocki, Ph.D., C.B.S.P.  
Member, National Science Advisory Board for Biosecurity,

Assistant Dean for Biosafety  
Associate Professor of Microbiology  
Biological Sciences Division  
University of Chicago  
Chicago, IL

- *Sustainable Education and Awareness Raising of Life Scientists on Biosecurity and Potential Misuse Issues*

Giulio M. Mancini  
Research Fellow, Program Officer  
Landau Network - Centro Volta  
Como, Italy

- *Role of Biosafety Professionals in Dual Use Research of Concern*

Willy Tonui, Ph.D.  
President, African Biological Safety Association  
Health, Safety, and Environment Coordinator  
Principal Research Officer  
Kenya Medical Research Institute (KEMRI)  
Nairobi, Kenya

- *Responsible Life Sciences Research for Global Health Security*

Emmanuelle Tuerlings, D.Phil., M.Sc.  
WHO Consultant  
Dar es Salaam, Tanzania

## **Main Discussion Points**

- Differences in language and the influence of cultural nuances in the interpretation of the words biosafety, biosecurity, biorisk were discussed at length. Overall, it was concluded that due to the differences in how these terms are employed in different parts of the world, it is critical that these terms be defined as needed depending upon the context in which they are used.
- The application of the term *biosecurity* is greatly influenced by local value systems. Genetically Modified Organisms (GMOs), particularly in the realm of agriculture in this region, were of great concern to session participants. The term *biosecurity* in Africa is viewed largely from the perspective of protecting natural biodiversity from external “artificial” influences, such as GMOs.
- A distinction was made between *diagnostic* laboratories (which serve a vital role in local public health matters) and *research* laboratories, as it relates to DURC issues. The participants expressed greater concern about what happens in *diagnostic* laboratories than in *research* laboratories. Diagnostic laboratories are perceived in Africa as presenting biosecurity concerns especially in regards to the training and reliability of staff who will be handling diagnostic samples, waste management (i.e. insuring that infectious materials are appropriately treated and disposed), etc. Research-related DURC issues seemed to be less of a concern.
- There is a great need for the establishment of a code of ethics; training alone is insufficient.
- A comprehensive, global solution demands that attention be paid to specific regional priority needs. Although the issues and problems of DURC are the same globally, fundamental approaches to solutions require consideration of varying regional priorities.