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## Biosecurity and how export controls impact the life sciences

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Balancing biosecurity and legitimate life science research has become a priority in recent years. The rise of biotechnology and Informatics has made rapid advances in the 21<sup>st</sup> century. Such a convergence of biology and technology increases the pace of biological findings and the emergence of new technologies. Emerging technologies that could be used for biological warfare poses a formidable challenge because of the unpredictable nature of science. Dual use research in the life sciences requires some oversight by the government and funding agencies. The published results of scientific research could be used to improve health or agricultural products or they could be used to enable bioterrorism. Life Sciences research is conducted increasingly in an interdisciplinary and international environment. Informatics, systems biology, nanotechnology, and synthetic biology are at the forefront of such endeavors. Oversight of such research is essential to continue the free exchange of information and also balance the national security concerns. One of the tools that are at the nexus of biosecurity and life sciences is export control. The session will provide an overview of the biological agents (viruses, bacteria and toxins), genetic elements (DNA, plasmids, vectors) which are currently controlled on the Australia Group Control List and Commerce Control List for exports. The Australia Group is an informal forum of countries which seeks to ensure that exports do not contribute to the development of chemical or biological weapons. Topics of discussion will include deemed exports, fundamental research and technology transfer.

## Biography

Betty Lee has a PhD from Dartmouth Medical School, USA and MS in Clinical Chemistry from the University of Windsor, Canada. She has done her second MS Biochemistry from LSU Medical Center, USA. She completed her Post-doctoral training at the National Institutes of Health, USA. She is currently working as a Licensing Officer with the US government. She educates industries and academia about the Export Administration Regulations (EAR) and participates in outreach. In addition, she participated in the policy review of the Executive Order titled "Optimizing the security of biological select agents and toxins in the United States" signed by President Obama on July 2, 2010.

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