Trends: Scientific Capacity

- Increased access to modern molecular diagnostic tools
  - E.g. HPLC, real-time PCR
- Increased ability to process more specimens for analysis each year
- Some countries developing laboratory networks
  - Integrating national, state, local, and private sector laboratories
- Motivating factors for increased laboratory capacity include:
  - International Health Regulations
  - Surveillance for avian influenza and other emerging diseases
  - Possible economic impacts from diseases, such as tourism and agricultural exports

Trends: Improving Laboratory Biosafety and Biosecurity

- Growth in the number of BSL3 laboratories
  - Construction of new facilities
  - Renovation of existing facilities
- Building capacity for emerging diseases by including Class III biosafety cabinets in BSL3 labs
- New awareness of biosecurity, including access controls
- Increased attention to biorisk management programs, such as
  - Equipment maintenance programs,
  - Laboratory audits
  - Development of institutional biosafety manuals
  - Biosafety and biosecurity integrated into quality control programs
- Improvement in waste disposal but still remains a significant challenge

Trends: Growing Number of Training Initiatives

- Short courses
  - Awareness raising
  - Engineering, maintenance
- Courses targeting university students
- Institutional training programs are proliferating
- Training courses are good example of international cooperation

Trends: National Oversight

- Regulations
- National plans that address laboratory issues such as
  - Accreditation
  - Transport
- International and national associations, such as ANBio, help
  - Build a biosafety culture
  - Provide technical advice to governments in the development of regulations
  - Serve as a forum for technical exchanges

Current Challenges

- Funding constraints
- Retaining qualified personnel
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- Certification of equipment
- Broadening laboratory biosafety beyond GMOs
- Coordination between human and agricultural laboratories
- Difficulties with international collaboration

The Way Forward?

Panel Discussion I: Improving Implementation of Laboratory Biosafety and Biosecurity in the Laboratory

- What are the biggest risks at the laboratory level in Latin America? What is the role of risk assessment in bioscience facilities? Who does the risk assessment?

- Who should have the responsibility for implementing biosafety and biosecurity in the laboratory?
  - Individual researchers, laboratory management?
  - Should there be a dedicated biosafety officer? If so, what roles and responsibilities should they have?

- What is the ideal balance between procedural and engineered controls?

- How do facilities get resources to improve their biorisk management?

- What are the biggest factors inhibiting implementation and sustainability of biosafety and biosecurity?
  - Money? Awareness? Education? Training?

Panel Discussion II: Improving Laboratory Biosafety and Biosecurity at the National and Regional Levels

- What is the right balance between regulation and guidance?
  - Which aspects should be addressed by regulations? What aspects are best addressed by guidance?
  - Are existing regulations sufficient, too lax, or too stringent? Do they have negative or positive impacts on research?
  - What are the priorities for new regulations or guidance in Latin America?

- Is there a need for more national biosafety professional associations like AnBIO? A Latin American regional association?

- How should the scientific community engage policy makers and the public on biorisks?