

Assessing Security and Governance Issues of Modern Biotechnology:



Updates from Academies of Science

Side event – Room XXII – BWC MXP
Geneva, Switzerland | 9 August 2018

Membership

More than 130 national, regional and global academies



IAP for Science

IAP for Health
78 members, of which
52 also belong to IAP for Science



Strategic Priorities

- Provide evidence-based advice and perspectives on global issues.
- Strengthen the global scientific enterprise.
- A scientifically literate global society.
- Strengthen the global network, including supporting the creation of new academies in countries where they are not yet present.



Strategic Priority 3: Strengthen the global scientific enterprise.

Programmes for:

- Responsible conduct of research
- Women in science
- Young scientists
- including support for the GYA.



2016: Doing Global Science: A Guide to Responsible Conduct in the Global Research Enterprise

IAP Statement on 'Biosecurity'
December 2005 – issued ahead of the Meeting of States Parties of the Biological Weapons Convention (5 - 9 December 2005) in Geneva.



2016: Women for Science: Inclusion and Participation in Academies of Science

Previous side event – December 2017

‘Implementation in Action: IAP’s experience in engaging scientists in biosecurity’

Presentations from academies in:

- Jordan
- Pakistan
- South Africa
- Switzerland.

See: <http://www.interacademies.org/38760/Academies-and-implementation-of-the-Biological-Weapons-Convention>

Poster session – August 2018 MXP



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Ann Mitchell, Coordinator
IAP - The InterAcademy Partnership
Address: 217 Avenue, Frank, TX 78111, USA - Email: iam@iapartnership.org

IAP, Biosecurity, and Responsible Research Practices

Advances in modern biotechnology are being reported on a daily basis. Concepts such as synthetic biology, gene function, gene drives and genome editing have entered popular discourse. But what do these advancements mean for the Biological and Toxin Weapons Convention and its member states? In an area that is developing so quickly, how can we ensure that global norms and obligations are being adhered to?

The InterAcademy Partnership (IAP) brings together more than 130 national and regional academies of science and medicine that work together to support the role of science and its efforts to seek solutions to address the world's most challenging problems. In particular, IAP harnesses the expertise of the world's scientific, medical and engineering leaders to advance sound policies, improve public health, promote excellence in science education, and achieve other critical development goals.

In 2003, IAP established a Biosecurity Working Group. Shortly after, IAP released a 'Statement on Biosecurity' (<http://www.interacademies.org/1217127-Statement-on-Biosecurity>) that presented a series of principles to guide individual scientists and local scientific communities wishing to define a code of conduct for their own use.

Work with the Biological and Toxin Weapons Convention (BWC)

Through its Biosecurity Working Group, IAP has a history of organizing side events for BWC meetings in Geneva, bringing the latest science and debates on issues such as genome editing to the attention of Member States.

In December 2017, IAP hosted a side event, 'Implementation in Action: IAP's experience in engaging scientists in biosecurity', featuring presentations from the national academies of science in Jordan, Pakistan, South Africa and Switzerland.

IAP is holding a side event at the 6th Meeting of the Experts (Geneva, August 2018), providing an update on relevant work carried out by IAP, the US National Academies of Science, Engineering and Medicine, and other academy partners.

IAP and the US National Academies of Sciences, Engineering and Medicine (NASEM) are also partnering with the secretariat of the BWC to organize a series of information workshops for scientists, including in Ukraine, Mexico and Jordan.

For more information on www.interacademies.org/38760

Responsible research workshops

IAP partners with the Organization for the Prohibition of Chemical Weapons (OPCW) and The World Academy of Sciences (TWAS) to host workshops on Policy and Scientific Research Practices for Scientists: Introduction to Responsible Research Practices in Chemical and Biomedical Sciences. Two workshops have been held so far, in Pakistan, South Africa, in 2016, and in Trieste, Italy, in 2017.

In the coming years, other collaborative workshops are planned for different regions.

In November 2017, as a side event to the World Science Forum in Jordan on the theme Science for Peace, IAP also co-hosted a side event for young scientists on 'Averting the Weaponization of Research'.



Opening work

To proactively encourage international dialogue about genome editing and biosecurity, IAP joined with the European Academies Science Advisory Council (EASAC), the US National Academies of Sciences, Engineering and Medicine (NASEM) and the German National Academy of Sciences, Leopoldina, to convene an international workshop in October 2017. As a follow-up, IAP published the report 'Assessing the Security Implications of Genome Editing Technologies' (<http://www.interacademies.org/38760>).

In June 2018, the NASEM in cooperation with IAP, the Croatian Academy of Sciences and Arts, and the Croatian Society for Bioethics and Biosecurity, convened an international workshop on 'Governance of Dual Use Research in Life Sciences: advancing global consensus on research oversight', held in Zagreb, Croatia. (Report from NASEM to be published later this year)

Next, in September 2018, IAP is organizing a session at the World Science Forum (WSF) in Frankfurt, Japan on 'Engaging Key Stakeholders in Addressing Biosecurity Challenges: Insights from the social sciences'

Other related publications

Responsible Conduct in the Global Research Enterprise, 2010

Statement on Publishing Social Policies in Synthetic Biology: Scientific Opportunities and Dual Governance, 2014

Code of Practice: Equatorial Applications Ready to Proliferate: Pandemic Pathogens, 2016

Doing Global Science: A Guide to Responsible Conduct in the Global Research Enterprise, 2016

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Agenda: Assessing Security and Governance Issues of Modern Biotechnology: Updates from Academies of Science

- 13:20-30 Introductions and Background
- Peter McGrath, Coordinator, InterAcademy Partnership (IAP)
- 13:30-14:30 Panel presentations
- *Assessing the Security Implications of Genome Editing: Insights from an International Workshop*
Bert Rima, Honorary Professor and Emeritus Professor, School of Medicine, Dentistry and Biomedical Sciences, Queens University Belfast
 - *Biodefense in the Age of Synthetic Biology*
Michael Imperiale, Arthur F. Thurnau Professor and Associate Chair of Microbiology and Immunology and Associate Vice President for Research, Research Policy and Compliance, University of Michigan
 - *Governance of Dual Use Research in the Life Sciences*
Katherine Bowman, Senior Program Officer, Board on Life Sciences, U.S. National Academies of Sciences, Engineering, and Medicine
- 14:30-14:55 Q&A/Closing Remarks

Thank you!

iap@twas.org

mcgrath@twas.org



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