

IAP, Biosecurity, and Responsible Research Practices

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Advances in modern biotechnology are being reported on a daily basis. Concepts such as synthetic biology, gain of 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/13912/IAP-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.



IAP members (countries in blue) and its four regional networks.

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 Jordan, Pakistan, South Africa and Switzerland.

IAP is holding a side event at this BWC 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.

[#]See, for example: <http://www.interacademies.org/30337/The-Biological-and-Toxin-Weapons-Convention-Implications-of-advances-in-science-and-technology>

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 Diplomacy for Scientists: Introduction to responsible research practices in chemical and biochemical sciences'.

Two workshops have been held so far, in Pretoria, 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 'Avoiding the Weaponisation of Research'.



Ongoing 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/43251/Assessing-the-Security-Implications-of-Genome-Editing-Technology-Report-of-an-international-workshop>

In June 2018, the NASEM, in cooperation with IAP, the Croatian Academy of Sciences and Arts, and the Croatian Society for Biosafety and Biosecurity, convened an international workshop on 'Governance of Dual Use Research in the 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 organising a session at the World Social Science Forum (WSSF) in Fukuoka, Japan on 'Engaging Key Stakeholders in addressing Biosecurity Challenges: Insights from the social sciences'.

Other related publications

Responsible Conduct in the Global Research Enterprise, 2012:

<http://www.interacademies.org/19787/Responsible-Conduct-in-the-Global-Research-Enterprise>

IAP Statement on Realising Global Potential in Synthetic Biology: Scientific Opportunities and Good Governance, 2014;

<http://www.interacademies.org/23968/Scientific-Opportunities-and-Good-Governance>

Gain of Function: Experimental Applications Relating to Potentially Pandemic Pathogens, 2015:

<https://easac.eu/publications/details/gain-of-function-experimental-applications-relating-to-potentially-pandemic-pathogens/>

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

<http://www.interacademies.org/33345/Doing-Global-Science-A-Guide-to-Responsible-Conduct-in-the-Global-Research-Enterprise>

