

**Statement by  
The IAP Biosecurity Working Group  
December 2017**

Excellencies, distinguished delegates, ladies and gentlemen:

On behalf of the InterAcademy Partnership – a global network of more than 130 academies of science and medicine – and its Biosecurity Working Group, we want to commend the Biological and Toxin Weapons Convention (BTWC) and the States Parties for the opportunities they have provided for engagement by the scientific community to support the effective implementation of the Convention.\* With that in mind, we want to provide a brief update on some recent and upcoming activities that are particularly relevant.

First, we want to encourage everyone to attend the side event to be held during lunchtime on Thursday, 7 December. Entitled '*Implementation in Action: IAP's Experience in Engaging Scientists in Biosecurity*', it will feature presentations by experts from four national academies – Jordan, Pakistan, South Africa and Switzerland – about the studies, conferences and educational/outreach activities they have undertaken.†

The widespread interest in new genome editing technologies, including in the BTWC, has led to a number of activities by national academies and their regional networks. A list may be found on the back of this statement and IAP will provide information about upcoming events to the BTWC.

One recent example is an international workshop, '*Assessing the Security Implications of Genome Editing Technology*', convened in mid-October in at Herrenhausen Palace in Hannover, Germany, by IAP and a group of U.S. and European academies.‡ Over 100 scientific, policy, and security experts gathered to assess the security implications of genome editing technology. This workshop began a dialogue amongst international experts about the benefits as well as potential for intentional misuse of genome editing technologies. Proactive international dialogue about genome editing and security is important because of the recent rapid development and widespread use of genome editing tools, in particular CRISPR Cas9, in countries that may have divergent regulations and research governance. The workshop recognised the importance of an open and inclusive dialogue with stakeholders as well as the promotion of a research culture that builds trust through responsibility and integrity. Further information about the workshop is available on the website listed below, a short report is available<sup>§</sup>, and a summary report will be available by the end of the year.<sup>§</sup>

Finally, in the second quarter of 2018, IAP will convene an international workshop to discuss strategies to promote sustained global dialogue and increased common understandings of the essential elements of governance for research in the life sciences that raises potential dual use issues. Participants will include practicing scientists, government officials, security experts, and representatives of relevant international organizations from all parts of the world. A combination of plenary sessions and working groups will enable participants to share experiences and lessons learned, explore crosscutting themes, and delve into specific issues in depth. Further information will be provided to the BTWC. The workshop is being made possible with the generous support of the Open Philanthropy Project.

IAP and its Biosecurity Working Group hope that this update will be helpful and we wish you productive discussions and every success with the Meeting of States Parties.

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\* Information about IAP and its Biosecurity Working Group may be found at <http://www.interacademies.net>

† Further information is available on the BTWC website under "Side Events"

‡ The partnership included IAP, the European Academies Science Advisory Council (EASAC), the German National Academy of Sciences, Leopoldina, and the US National Academies of Sciences, Engineering and Medicine (NASEM). Support for the workshop was provided by the Volkswagen Foundation and the Gordon and Betty Moore Foundation.

§ See <http://www.interacademies.net/2952/31891.aspx>

§ See <http://nas-sites.org/dels/events/ge-security/>

## Examples of Recent Reports and Events Focused on Genome Editing\*\*

- Chinese Academy of Sciences, Royal Society, and US National Academies, *International Summit on Human Gene Editing* (2015): <http://nationalacademies.org/gene-editing/Gene-Edit-Summit/index.htm>.
- German National Academy of Sciences, Leopoldina. Academies issue statement on progress in molecular breeding and on the possible national ban on cultivation of genetically modified plants (2015): <http://www.leopoldina.org/en/publications/detailview/publication/stellungnahme-zur-gruenen-gentechnik-2015/>.
- National Academy of Sciences Leopoldina, the German National Academy of Science and Engineering, the Union of German Academies of Sciences and Humanities, and the German Research Foundation. *The opportunities and limits of genome editing* (2015): <http://www.leopoldina.org/en/publications/detailview/publication/chancen-und-grenzen-des-genome-editing-2015/>.
- Federation of European Academies of Medicine. *Human Genome Editing in the EU* (2016): <http://www.interacademies.net/Publications/31271.aspx>.
- US National Academies. *Genetically Engineered Crops: Experiences and Prospects* (2016): <https://www.nap.edu/search/?term=Genetically+Engineered+Crops%3A+Experiences+and+Prospects+>.
- US National Academies. *Gene Drives on the Horizon: Advancing Science, Navigating Uncertainty, and Aligning Research with Public Values* (2016): <https://www.nap.edu/catalog/23405/gene-drives-on-the-horizon-advancing-science-navigating-uncertainty-and>.
- Royal Netherlands Academy of Arts and Sciences. Genome editing position paper (2016): <https://www.knaw.nl/en/news/publications/genome-editing>.
- Royal Society of New Zealand. Gene Editing Evidence Update and Expert Advice paper (2016): <https://royalsociety.org.nz/what-we-do/our-expert-advice/all-expert-advice-papers/genome-editing/>.
- Australian Academy of Science. *Synthetic gene drives in Australia: implications of emerging technologies* (2017): <https://www.science.org.au/support/analysis/reports/synthetic-gene-drives-australia-implications-emerging-technologies>.
- European Academies Science Advisory Council. *Genome editing: scientific opportunities, public interests and policy options in the European Union* (2017): [http://www.easac.eu/fileadmin/PDF\\_s/reports\\_statements/Genome\\_Editing/EASAC\\_Report\\_3\\_1\\_on\\_Genome\\_Editing.pdf](http://www.easac.eu/fileadmin/PDF_s/reports_statements/Genome_Editing/EASAC_Report_3_1_on_Genome_Editing.pdf).
- Academy of Science of South Africa and Department of Science and Technology of South Africa. *The regulatory implications of new breeding techniques* (2017): [http://research.assaf.org.za/bitstream/handle/20.500.11911/29/2017\\_%20assaf\\_newbreedingtechniques.pdf?sequence=5&isAllowed=y](http://research.assaf.org.za/bitstream/handle/20.500.11911/29/2017_%20assaf_newbreedingtechniques.pdf?sequence=5&isAllowed=y).
- German National Academy of Sciences, Leopoldina. Ethical and legal assessment of genome editing in human cells (2017): <https://www.leopoldina.org/en/publications/detailview/publication/ethische-und-rechtliche-beurteilung-des-genome-editing-in-der-forschung-an-humanen-zellen-2017/>.
- US National Academies. *Human Genome Editing: Science, Ethics and Governance* (2017): <https://www.nap.edu/catalog/24623/human-genome-editing-science-ethics-and-governance>.

\*\* This list is taken from 'Briefing Paper: Genome Editing and Biosecurity', prepared for the Hannover workshop by Bioesecu.re available at <http://nas-sites.org/dels/events/ge-security/>