

## **Report from the December 2017 gene drive sponsors and supporters' forum**

Representatives from organizations that sponsor and support research on gene drive technologies met in London on December 7, 2017 at a meeting co-hosted by the Wellcome Trust and the Foundation for the National Institutes of Health (FNIH). Taking note of the recent publication of the principles for sponsors and supporters of gene drive research in Science Policy Forum (<http://science.sciencemag.org/content/358/6367/1135.full>), meeting participants considered next steps to operationalize the principles and promote responsible research. Recognizing the range of topics and disciplines relevant to gene drive research and the broad potential impact of gene drive technologies, they concurred that efforts to bring other interested organizations into the forum should continue, and noted that FNIH has provided a mechanism for others to become signatories to the principles (<https://fnih.org/gene-drive-form>). The group further considered the current state of understanding in broad areas of mutual interest related to the principles and identified aspects where future collective efforts would be beneficial.

### **Regulatory Capacity**

The discussion focused on regulatory capacity in regions where gene drive approaches for the public good, such as for disease prevention or biodiversity conservation, might be tested and implemented. It was acknowledged that sponsors of gene drive research have a responsibility to ensure thorough, well-informed and unbiased evaluation of research applications at multiple different levels, including strong regulatory review; this in turn implies a responsibility to support regulatory capacity strengthening in the rapidly evolving area of gene drive research and technologies. Conflicts of interest should be avoided by ensuring that such regulatory capacity strengthening is carried out with strict separation between research proponents and regulatory authorities. Participants considered ways that they could foster broader communication and information sharing among regulators internationally.

### **Data Sharing**

Many of the participants brought substantial experience with research data sharing from other scientific fields, such as genomics and clinical research. The group agreed to work together to define sponsor expectations for sharing of gene drive research data within the context of existing data sharing policies, and to create opportunities for bringing the broad research community together to explore what this should involve.

### **Transparency**

The group agreed on the value of issuing a joint statement on objectives for research transparency.

### **Stakeholder Engagement**

Participants strongly endorsed the need for broad and objective stakeholder engagement and agreed that this must be integrated into gene drive research activities. The need for informed consent and stakeholder endorsement in this field is not unique, but is shared with many other areas of research where the proposed intervention is intended to operate at the community rather than individual level. Participants discussed convening a meeting of stakeholder engagement practitioners to share information and develop best practices, which would likely be relevant to many emerging technologies.

The group recognized the need for a balance of perspectives in current discourse on gene drive research and agreed that they could make an important contribution to these discussions. In particular, the need to encourage closer communication between the health and environmental sectors to explore how best to achieve coordinated consideration of potential risks and benefits of the technology was emphasized.

### **Technical Capacity**

The group also recognized a need to enhance technical capacity in developing countries in key disciplines that underpin gene drive research, including ecology, entomology, social science and risk assessment. They considered the importance of addressing this need through the programs of individual organizations.

### **Next Steps & Future Activities**

Participants agreed on the value of periodic meetings to continue these discussions and will begin efforts to identify a date and venue in the second half of 2018. Progress and outcomes on the areas described above will be reported on at the next meeting.

#### Participants (in alphabetical order):

Bill & Melinda Gates Foundation  
Canadian Institutes of Health Research  
Commonwealth Scientific and Industrial Research Organisation (CSIRO)  
Emerging Ag  
European Commission  
Foundation for the National Institutes of Health  
Imperial College London  
Institut de Recherche en Sciences de la Santé  
Institut Pasteur  
Japan Agency for Medical Research and Development  
McMaster University  
New Partnership for Africa's Development  
South African Medical Research Council  
US Defense Advanced Research Projects Agency (DARPA)  
US National Institutes of Health  
Wellcome Trust

#### Observers (in alphabetical order):

Medical Research Council  
Royal Society