Genome engineering futures and the role of the Synthetic Biologist

Conference or Workshop Item

Genome Engineering Futures and the Role of the Synthetic Biologist

Much of the debate surrounding the public, regulatory, IP, funding, security and ethical aspects of synthetic biology has been based on speculation about uncertain futures. This is likely to change as applications begin to emerge, but much still remains unknown. As has been seen in debates over GM crops and stem cells, interest groups and politics can play a central role in how these futures are played out, which can in turn shape scientific and technological pathways of innovation. Synthetic biologists have an important role to play in helping to influence outcomes, and it is crucial that their views and actions inform the emerging agenda.

The purpose of this discussion-based workshop is to develop a number of possible future scenarios for synthetic biology. We will propose several starting points relating for example to costs of DNA synthesis, public attitudes, regulatory environments, biosafety and security, and intellectual property regimes. The focus will be on exploring interactions between factors – ethics and regulation, open source and commercial dynamics, biosecurity and militarisation – and how these may affect innovation pathways. The outcomes of the workshop will be fed back to the synthetic biology community and will ideally help to inform policy formation, as well as social science publications on synthetic biology innovation. The underlying analytical concept guiding the social science work emphasises the 'reflexivity' of synthetic biologists. This highlights the active role that they play in shaping social as well as technological genome engineering futures.