

Parliamentary and Scientific Committee

‘How embedding ethics across the innovation lifecycle- from discovery to regulation and implementation- can strengthen the UK’s science ecosystem’

A meeting held in partnership with the Nuffield Council on Bioethics

Before discussions began, the Westminster Medal was presented to Ané Kritzing, University of St Andrews, for the best Gold winning poster at STEM for BRITAIN March 2026.

Current advances in engineering biology, AI and quantum computing have potential to drive economic growth, benefit society and provide jobs, but they also raise deep societal and ethical questions. ‘Innovation-friendly regulation’ is desirable, but the question is how can this regulation embed rigorous ethical analysis to prevent missed opportunities, avoidable harms, and loss of investor confidence and public trust. Introduced by Sam Carling MP, Chair of the P&SC, the meeting brought together experts to discuss how to achieve this.

The Nuffield Council on Bioethics (NCOB) was founded in 1991 to be a national body devoted to assessing ethical implications of advances in biological and medical research; speaker and NCOB Director Danielle Hamm, described the work of the organisation, which addresses many contentious issues, all with very different perspectives. She feels ethics can bridge divides, using multi-discipline working groups to meet, air disagreements and reach consensus; some research is so contentious, should it even proceed? The pace of biotech development is outstripping guidelines, with researchers left to decide where boundaries should be drawn; bad reactions can lead to tighter regulations. The public expect ethical behaviour of researchers, and there have been instances (GM crops) where respect has been lost. Ethics need to be incorporated across research and innovation, but AI developments in particular are moving so swiftly it is impossible for government regulation to keep pace. In 2015, after major ethical review, the UK was the first country to legalise mitochondrial replacement /transfer therapy. The recent King’s Speech listed new legislation reducing unnecessary regulatory burdens to avoid barriers to innovation.

Professor Segun Fatumo, Professor and Chair of Genomic Diversity, Queen Mary University of London spoke on genetic medicine, highlighting that most data currently used is not representative of the present more diverse UK population, especially those with African ancestry. UK Biobank data can identify diseases far in advance because of genetic makeup, but doesn’t cover the whole population, significant because drugs can work differently depending on patient ancestry. Some minority groups lack trust in the health system, with reluctance to accept vaccination. He is concerned as to

who controls UK data; public trust can only be won by scientists being honest.

Professor Sarah Devaney, Professor of Healthcare Law and Regulation, University of Manchester gave some examples of responsible regulation, such as the Human Fertilisation and Embryology Act 1990 which regulates use of human embryos; amendments have managed to keep abreast of subsequent developments, keeping ethics at the core. Areas of challenge include stem-cell based embryo models, in vitro gametes and the 14-day embryo rule. In silico modelling is another area of biotech advance; researchers must engage with the public, with ethics at the core, and regulators and researchers collaborating.

Questions followed, with Sam asking about the future role of government. The NCoB engages in horizon scanning, looking at ethical issues in new research; things are moving so quickly ethics need to be embedded in new regulation. NHS data security and curation need to be improved to retain public trust; the government could encourage better practices to avoid poor ethical behaviour. Many scientists, unlike medics, are not regulated, and it was felt they should be trained in ethical behaviour and public communication at an early stage. Processes and structures in UK research were discussed at length with mention of the Research Excellence Framework (REF2029) system for assessing the excellence of research in UK higher education, and the length of time research proposals can take to get approval because of ethical issues. Is there need for one overarching biotech regulator, as presently many regulatory bodies are involved making it difficult getting a consensus of what is acceptable? Should ethical regulation exist for other areas of innovation beyond biotech; wider discussion could be helpful? NCoB brings people together and offers tools which can be used for public deliberations; proportionality in regulation with balance between innovators and public views is needed. Other issues raised included how could large UK research funders encourage ethical embedding, and how to keep an eye on international ethical developments (which can impact the UK). It was suggested that UK regulatory systems are widely respected, encouraging researchers to work here.

Sue Wharton

P&SC Discussion Meeting ‘How embedding ethics across the innovation lifecycle- from discovery to regulation and implementation-can strengthen the UK’s science ecosystem’ 18th May 2026

