



Influencing and Supporting Policy



Professor Aoife McLysaght

CENTRE

Molecular Evolutionary
Laboratory, Smurfit Institute
of Genetics

PARTNER AGENCIES

Dept of Further and Higher
Education, Research,
Innovation and Science

FUNDERS:

European Research Council
☯ Marie Skłodowska Curie
Actions ☯ Science
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SUBJECT AREAS

Accelerated Sequence
Evolution ☯ Comparative
Genomics ☯ Molecular
Genetics ☯ Evolutionary
Biology ☯ Science Advice

Science shaping policy

In a society facing complex societal challenges, the need for evidence to inform the policymaking process has never been more vital. From the climate crisis to food security, AI to public health, the pace of change demands decisions that are grounded knowledge and insight.

The appointment of Professor Aoife McLysaght as Government Science Advisor in October 2024 marks a milestone in embedding scientific advice at the heart of policymaking. Her leadership of the newly established National Science Advice Forum signals an ambition to move beyond ad-hoc consultation, towards a system where research, innovation and expertise inform Government approaches in uncertain times.

Ireland's recent experience during the COVID-19 pandemic underscored the value and the challenges of evidence-led governance. Professor McLysaght was among those advocating for a coherent, science-driven approach, interventions that resonated in Oireachtas debate as well as in the public sphere.

Her subsequent engagement with citizen juries and her prominent role as a science communicator reflect a career dedicated not only to generating knowledge, but to ensuring it is understood, debated and trusted. In an era of misinformation and rapid technological upheaval, she is standing up for research and how it can be a trusted ally in the development of responsible policymaking.

This work showcases Trinity's support for policymaking processes and ensuring that scientific perspectives can be available in the ongoing desire to devise policies that will shape Ireland's uncertain future.

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Chief Science Advisor

In October 2024, Professor McLysaght was appointed Government Science Advisor for Ireland, now leading the National Science Advice Forum. This Forum was established to inform evidence-based policy across sectors advising the government on issues including climate change, food sustainability, AI, cybersecurity and emerging technologies. This forum was established as an action of Impact 2030, Ireland's Research and Innovation Strategy and support for the role was reinforced in the 2025 Programme for Government as a means to achieve excellence in Research, Innovation and Science.

Science Leadership during COVID-19

During the restrictions brought on by COVID-19, Professor McLysaght became an insightful contributor to the public conversation in Ireland, advocating for a coherent, evidence-led public-health strategy.

As part of the Independent Scientific Advocacy Group (ISAG), she contributed to calls for policies aimed at driving community transmission to very low levels—policy proposals that generated Oireachtas debate and helped frame the national conversation about trade-offs, timelines, and outcomes. These arguments were visible in Seanad Éireann debates, a concrete sign that scholarly analysis was being weighed in the legislative arena, not just discussed in the media cycle.

IPPOSI Citizen Juries

Professor McLysaght was an 'expert witness' on two IPPOSI citizen juries: on the secondary use of health data, and on the use of genomics in healthcare. These engagements fostered informed debate within a cross section of Irish society, creating a space to consider where the citizens placed themselves in the complex biomedical and ethical challenges to be answered in IPPOSI's process.

Science Communicator and Advocate

A fundamental aspect of bridging the divide between the realms of science and policymaking is an ability to communicate the mechanisms and processes of science to people in different walks of life. Professor McLysaght's long record of high-quality science communication, such as delivering the Royal Institution Christmas Lectures with Professor Alice Roberts, being a guest on BBC Radio 4's "The Infinite Monkey Cage", appearing at Electric Picnic Music and Arts festival or talking science on The 2 Johnnies podcast in 2023 or Blindboy's Podcast in 2024, are all building a public culture that is receptive to research evidence and curious about the realities of science. This work is especially important in an era where academia's legitimacy as a trusted source of knowledge is being undermined in different parts of the world.

"I think I enjoy the right to define my own metrics of success... Within the area of genomics and genome analysis, I've changed around a bit... sometimes, of course, bringing the viewpoint I have from the previous research because it made me think about things in a certain way"

Professor Aoife McLysaght in conversation with
Professor Jocelyn Bell Burnel
April 2025

Project Outputs

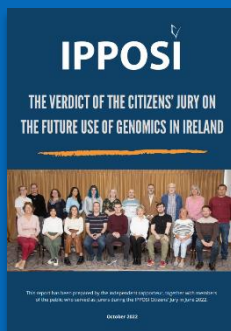


The Infinite Monkey Cage: Are Humans Still Evolving? (2025)

Professor McLysaght joins hosts Brian Cox and Robin Ince, comedian and author David Baddiel and geneticist and broadcaster Adam Rutherford, in order to discuss whether humans could even tell if we were evolving as a species, or have humans reached peak human.

The Blindboy Podcast (2024)

The Blindboy podcast has an estimated 80 million listeners worldwide. Professor McLysaght appeared on the podcast in January 2024 in front of a live audience to discuss genetics, medicine and the reality, as opposed to the rumours of mRNA vaccines.



The Verdict Of The Citizens' Jury On The Future Use of Genomics In Ireland (2022)

Organised by IPPOSI (Irish Platform for Patients Organisations, Science & Industry) the process set out 22 recommendations for health policymakers to consider when considering the use of genomics in Ireland, in areas such as appropriate use, public engagement and data security.

An Post Launches Special Stamps to Celebrate Women in STEM (2025)

This RTÉ News story covers the issue of two postage stamps celebrating the role of women in STEM, featuring Professor McLysaght and Professor Jocelyn Bell Burnell, the astrophysicist who discovered pulsars.





Professor Aoife McLysaght is Chair of Evolutionary Genetics at Trinity College Dublin and a leading figure in molecular evolution and comparative genomics, exploring gene birth and duplication dynamics. Since 2003, she has led a research team, managing over €5.5 million in competitive research funding.

She contributed to the landmark first draft of the Human Genome Project (2001), discovered novel human-specific genes (2009), and established critical links between gene duplication patterns and human disease.

For More Information

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