

Her qualifications in science, medicine, law and ethics enable her to work and communicate effectively across and between a wide range of disciplines and in 2012 she was awarded as Provost's Teaching Award in recognition of her pioneering approach to teaching medical science and ethics.

In 2012, Prof Sheils was appointed Chair of College's Research Ethics Policy Committee (REPC) having chaired the Faculty of Health Sciences Research Ethics Committee (REC) for the previous 7 years. In this role, she developed policy documents on the criteria for RECs within College, Good Research Practice, Procedures for Ethical Review, External Access and she was responsible for aligning Research Ethics Committees across College.

In 2016 Professor Sheils was appointed as founding Director of the Trinity Translational Medicine Institute where she leads an exclusively health sciences-focused educational and research institution, embedded within the acute hospital setting. TTMI's strategy of improving human health through translational research is predicated on clinical, laboratory-based and health service research informed by real world clinical bedside problems, and societal and global health challenges.

Since childhood, Orla has enjoyed choral singing, first under the baton of the late Sean Creamer with the Park Singers and more recently with the chamber choir Cantando under the direction of Órla Barry. She enjoys watching rugby, participating in swimming, reading (crime fiction), and despite pretending not to – foreign language TV series. Orla lives with her husband David in Greenhills in Dublin.



The Faculty of Health Sciences  
presents:

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The Inaugural Lecture of

Professor Orla Sheils

Thurs. 10<sup>th</sup> Jan. 2019

PCR based Diagnostics –

Theseus' Paradox or Trigger's Broom?



**Trinity College Dublin**

Coláiste na Tríonóide, Baile Átha Cliath  
The University of Dublin

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## Inaugural Lectures



*Inaugural lectures provide newly appointed professors with the opportunity to showcase their academic activity to the College community and members of the public. An inaugural lecture is a significant event in an academic staff member's career. At Trinity College, inaugural lectures are a ceremonial occasion, which is why academic robes are worn by the inaugural professor and the rest of the platform party.*

*The Faculty of Health Sciences is proud to present the inaugural lecture of Professor Orla Sheils.*

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Orla Sheils is Director of the Trinity Translational Medicine Institute (TTMI), Professor of Molecular Diagnostics, Director of Medical Ethics at the School of Medicine and FTCD (2009).

She has a PhD in Molecular Pathology from Trinity College Dublin and a MA in Medical Law and Ethics from Kings College London. She is recognised internationally as a Key Opinion Leader in the area of novel molecular diagnostics, playing a central role in a variety of global consortia, acting as a scientific advisor to several Biotech partners and influencing national and European policy.

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Professor Sheils was born in Dublin the youngest of 4 children and the only girl. She attended St Paul's School at primary and secondary levels. She studied Biomedical Science, graduating top of her class and was appointed as a clinical scientist in the Department of Histopathology, Trinity College. Under the guidance of Prof Dermot Hourihane, she established a molecular pathology laboratory within the Department of Histopathology. Her PhD was conducted under the mentorship of Prof Eamon Sweeney, a polymath whose tireless curiosity supported her ambition to develop molecular techniques that could be applied to routine laboratory specimens. The broad applicability of these techniques was recognised by industry and she began fruitful collaborations with biotech partners from that point. She received a Young Researcher Award at an EU High Level Scientific Conference in Bonn in 2000. In 2004, her research laboratory was designated a Reference Laboratory for Applied Biosystems. During this time she began working with John O'Leary and they forged a research partnership that endured for two decades. He was the catalyst that drove and facilitated her research efforts and a colleague who's support was instrumental in her success.

She is a leader in multidisciplinary molecular pathology, who has championed a niche area facilitating interaction between basic science, translational research, clinical service provision and biotechnology. In this regard she has built an independent, globally recognised research group focused on molecular diagnostics and identification of molecular features of disease progression. Through her research, she has uncovered pivotal mutations descriptive of several solid tumours including thyroid, cervix, ovary, colon, head & neck and lung. These discoveries form peer-reviewed publications, populate pathology textbooks and are the basis for the translation of assays that she designed to transform clinical diagnostics.

In research, her commitment to translational medicine is underpinned by the singular objective of using clinical research to advance human health. The underlying theme of her research is to understand the causes and molecular basis of the development of disease, with particular reference to cancer, and to apply this knowledge to improving disease prevention, detection, diagnosis, and treatment. She has a strong track record in developing novel molecular diagnostics and translating this research into clinical service.

As a teacher, Prof Sheils has embraced curricular reform and has introduced a variety of innovations into undergraduate and postgraduate teaching. Her commitment to students was recognized when she was invited to become President of the 134th session of the Biological Society of Dublin University in 2008.