



CAMS OXFORD INSTITUTE SYMPOSIUM

UNIVERSITY OF OXFORD DELEGATES BIOS

- June 2026, OXFORD -





IRENE TRACEY

FRS, FMedSci, FRCA, MAE, CBE

Professor of Anaesthetic Neuroscience
 Vice-Chancellor at the University of Oxford



Professor Irene Tracey CBE, FRS, FMedSci is Vice-Chancellor at the University of Oxford and Professor of Anaesthetic Neuroscience in the Nuffield Department of Clinical Neurosciences, a department she led. Irene was a founding member and subsequently Director for ten years of Oxford's world-leading neuroimaging centre, FMRIB.

She has served on national and international Councils, including: IASP, BNA, MRC and the Lundbeck Brain Prize Committee. Irene was recently President of FENS and has been awarded multiple prizes, honours and fellowships in academia and science, including a CBE. She is a Fellow of the Royal Society and Academy of Medical Sciences.

Alongside senior leadership roles within the University, Irene has served and continues to serve on many national and international committees, such as the International Association for the Study of Pain (IASP), British Neuroscience Association and Lundbeck Brain Prize Committee. She is currently appointed by the Government to the Council of the Medical Research Council and is President-elect of the Federation of European Societies (FENS). She is a passionate advocate for women in science and is involved in several mentorship schemes. In 2008 she was awarded the triennial Patrick Wall Medal from the Royal College of Anaesthetists and in 2009 was made an FRCA for her contributions to the discipline. In 2015 she was elected a Fellow of the Academy of Medical Sciences and in 2017 won the Feldberg Foundation Prize followed in 2018 by the British Neuroscience Association's Outstanding Contribution to Neuroscience award and in 2020 she was elected a Member of the Academia Europaea. In the New Year's Honours list 2022, she was appointed a Commander of the Order of the British Empire (CBE) by Her Majesty The Queen for services to Medical Research.

KEY PUBLICATIONS

1. Soni A, *et al.* Central Sensitization in Knee Osteoarthritis: Relating Presurgical Brainstem Neuroimaging and PainDETECT-Based Patient Stratification to Arthroplasty Outcome. *Arthritis Rheumatol.* 2019 Apr;71(4):550-560.
2. Tracey I, *et al.* Composite Pain Biomarker Signatures for Objective Assessment and Effective Treatment. *Neuron.* 2019 Mar 6;101(5):783-800.
3. McDermott LA, *et al.* Defining the Functional Role of NaV1.7 in Human Nociception. *Neuron.* 2019 Mar 6;101(5):905-919.e8.
4. Kikkert S, *et al.* Neural basis of induced phantom limb pain relief. *Ann Neurol.* 2019 Jan;85(1):59-73.
5. Segerdahl AR, *et al.* A brain-based pain facilitation mechanism contributes to painful diabetic polyneuropathy. *Brain.* 2018 Feb 1;141(2):357-364.



RIHARD CORNALL

FMedSci, FRCP

Professor of Immunology
Nuffield Professor of Clinical Medicine and
Head of Department



Our aim is to understand how the immune system is formed and regulated and the causes of autoimmunity, particularly the systemic autoimmune diseases, and the development and selection of B cells. Adverse immunological reactions to self and foreign antigens that lead to autoimmune or inflammatory disease place a major economic and social burden on world health and individual quality of life. We are also interested in how people differ in their inherited susceptibility to these diseases and why these differences are sustained in human populations by natural selection. Advances in this area will have a large and impact on the management of human disease.

Our strategy involves research programmes in basic biology and in clinical medicine. In the first, we use transgenic models to investigate how lymphocytes function in health and in human disease and how our genes encode susceptibility to autoimmunity and immunodeficiency. In the second, which is a collaboration with Professor Simon Davis, we are developing ways to change the function of lymphocytes, turning them on in cancer and off during inflammation or autoimmunity.

KEY PUBLICATIONS

1. Deobagkar-Lele M, *et al.* B cells require DOCK8 to elicit and integrate T cell help when antigen is limiting. *Sci Immunol.* 2024 Aug 9;9(98):eadd4874.
2. Lippert AH, *et al.* Antibody agonists trigger immune receptor signaling through local exclusion of receptor-type protein tyrosine phosphatases. *Immunity.* 2024 Feb 13;57(2):256-270.e10.
3. Hodgson R, *et al.* NDRG1 is induced by antigen-receptor signaling but dispensable for B and T cell self-tolerance. *Commun Biol.* 2022 Nov 10;5(1):1216.
4. Anzilotti C, *et al.* An essential role for the Zn²⁺ transporter ZIP7 in B cell development. *Nat Immunol.* 2019 Mar;20(3):350-361.
5. Ghezraoui H, *et al.* 53BP1 cooperation with the REV7-shieldin complex underpins DNA structure-specific NHEJ. *Nature.* 2018 Aug;560(7716):122-127.



TAO DONG

FMedSci

Ita Askonas Professor of Translational Immunology
Director of CAMS Oxford Institute

Tao Dong is the founding director of the CAMS-Oxford Institute based in Nuffield Department of Medicine, Oxford University since 2019. She has held the post of Professor of Immunology in the MRC Human Immunology Unit at Oxford University since 2014 and is a Senior Fellow at University College Oxford. In May 2023, Tao was appointed the Ita Askonas Professorship of Translational Immunology.

Tao moved to Oxford University in 1993 where she received a DPhil degree in Immunology in 1998. In 2010 she became the Head of the human anti-viral and anti-cancer cytotoxic T cell laboratory and subsequently Program Leader in the MRC Human Immunology Unit at Oxford University. Tao is elected Fellow of UK Academy of Medical Sciences. She has served as a panel member in various international funding organisations, and SAB members for several pharmaceutical companies.

The aim of Tao Dong's research group is to investigate the functional aspects of antigen specific cytotoxic T cells (CTL) with a focus on the factors affecting CTL in controlling virus infection and cancer progression. While a robust and appropriate T cell response is typically beneficial to the host during human infections, a weak or inappropriate response can be ineffective or even have a detrimental effect. Over the past two decades, they have been working to understand the key factors required for efficient viral control by T cells in a number of different viral infections and cancer. Establishing both ex-vivo and in-vitro T cell functional evaluation platforms for antigen-specific T cells isolated from tissue and blood. By linking functional data with multi-omic single cell and T cell receptor (TCR) repertoire analysis, they continue to identify potential targets and pathways to augment and control the immune response as a way of improving the outcome of several important human diseases including SARS-CoV-2 virus infection and cancer.

KEY PUBLICATIONS

1. Hamid MHBA, *et al.* Unconventional human CD61 pairing with CD103 promotes TCR signaling and antigen-specific T cell cytotoxicity. *Nat Immunol.* 2024 May;25(5):834-846.
2. Peng Y, *et al.* Broad and strong memory CD4+ and CD8+ T cells induced by SARS-CoV-2 in UK convalescent individuals following COVID-19. *Nat Immunol.* 2020 Nov;21(11):1336-1345.
3. Peng Y, *et al.* An immunodominant NP105–113-B*07:02 cytotoxic T cell response controls viral replication and is associated with less severe COVID-19 disease. *Nat Immunol.* 2022 Jan;23(1):50-61.
4. Liu G, *et al.* Long-persisting SARS-CoV-2 spike-specific CD4+ T cells associated with mild disease and increased cytotoxicity post COVID-19. *Nat Commun.* 2025 Oct 1;16(1):8743.
5. Chen JL, *et al.* T cell memory response to MPXV infection exhibits greater effector function and migratory potential compared to MVA-BN vaccination. *Nat Commun.* 2025 May 10;16(1):4362.



ANDREW WILKIE

FRS, FMedSci, FRCP

Nuffield Professor of Pathology
Honorary Consultant in Clinical Genetics

Professor Andrew Wilkie has been employed as an Honorary Consultant in Clinical Genetics in Oxford since 1993, and his work has always been driven by the desire to provide patients and families with better answers to the questions they ask in the clinic. Working closely with plastic surgeons, his primary interest is in craniofacial malformations in children, especially craniosynostosis, the premature fusion of the cranial sutures of the skull. By identifying the molecular genetic basis of these conditions, Professor Wilkie and his colleagues not only provide families with the answers they seek, but also gain fundamental knowledge about the mechanisms by which the human skull is formed.

A key early discovery, made in 1995, was that Apert syndrome, in which craniosynostosis occurs together with fusions of the fingers and toes, is caused by highly localised, recurrent mutations in the fibroblast growth factor receptor type 2 (FGFR2) gene. From this discovery, two major research themes developed: identifying other genetic causes of craniosynostosis, and investigating why certain genetic mutations, such as the Apert FGFR2 mutations, occur up to a thousand times more frequently than expected.

His work on craniosynostosis has led to many important disease-gene discoveries, for which genetic testing has been translated into NHS clinical practice. Research into the origins of these mutations led to the recognition of a novel process occurring in the testes, termed 'selfish spermatogonial selection', which provides a link between the origins of germline and somatic mutations.

Current efforts focus on harnessing the technological revolution provided by next-generation sequencing to identify additional genetic causes of craniosynostosis. Using this information, Professor Wilkie's team explores the complex mechanisms by which a population of stem cells is maintained within the cranial sutures, enabling them to remain open while continuously turning over to support ongoing skull growth.

KEY PUBLICATIONS

1. Twigg SR, Wilkie AO. New insights into craniofacial malformations. *Hum Mol Genet.* 2015 Oct 15;24(R1):R50-9.
2. Twigg SR, Wilkie AO. A Genetic-Pathophysiological Framework for Craniosynostosis. *Am J Hum Genet.* 2015 Sep 3;97(3):359-77.
3. Johnson D, Wilkie AO. Craniosynostosis. *Eur J Hum Genet.* 2011 Apr;19(4):369-76.
4. Cairns BJ, *et al.* Long-term survival without high cancer risk in a cohort of 24 patients with Apert syndrome. *Eur J Hum Genet.* 2026 May 4. doi: 10.1038/s41431-026-02122-w.
5. Pei Y, *et al.* Exploring the size limits of Bionano optical genome mapping to resolve alternative structures of linked interspersed chromosomal duplications. *Genome Med.* 2025 Nov 13;17(1):141.



STEPHEN SANDERS

Professor of Neurogenetics



Professor Stephen Sanders.....

KEY PUBLICATIONS

1.



NICKY WHIFFIN

Associate Professor

Prof. Nicky is an Associate Professor / Group Leader and Wellcome Career Development Award Fellow at the Big Data Institute and the Centre for Human Genetics. She is also a visiting scientist at the Broad Institute of MIT and Harvard, a member of St Anne's College, and a 2024 Lister Institute Research Fellow.

Nicky leads the Computational Rare Disease Genomics group, which specialises in analysis of large genome sequencing datasets to identify genetic variants that cause rare diseases and to identify novel therapeutic targets. Nicky is particularly interested in non-coding regions of the genome and gene regulation. She is an expert in the annotation and interpretation of non-coding variants, for which she has led the creation of clinical guidelines. In 2024, her team led a global collaboration that identified variants in a non-coding RNA gene *RNU4-2* as a cause of a remarkably prevalent neurodevelopmental disorder, ReNU syndrome. Nicky was recently awarded the 2025 Balfour Lecture from the UK Genetics Society.

Nicky's undergraduate degree was in Natural Sciences at the University of Cambridge before she studied for a PhD in genetic susceptibility to Colorectal Cancer at the Institute of Cancer Research in London. During her postdoctoral work at Imperial College London, she developed tools and methods to improve interpretation of variants identified in patients with Inherited Heart Conditions.

KEY PUBLICATIONS

1. Rius R, *et al.* Biallelic variants in the noncoding RNA gene *RNU4-2* cause a recessive neurodevelopmental syndrome with distinct white matter changes. *Nat Genet.* 2026 Apr;58(4):761-773.
2. Jonghe JD, *et al.* Saturation editing of *RNU4-2* reveals distinct dominant and recessive disorders. *Nature.* 2026 Apr 8.
3. Riu R, *et al.* Biallelic variants in the noncoding RNA gene *RNU4-2* cause a recessive neurodevelopmental syndrome with distinct white matter changes. *Nat Genet.* 2026 Apr;58(4):761-773.
4. Gray B, *et al.* Influence of age and sex on the diagnostic yield of inherited cardiac conditions in sudden arrhythmic death syndrome decedents. *Eur J Prev Cardiol.* 2026 Feb 18;33(3):432-440.
5. Beer Wells ES, *et al.* Modulating splicing in 5' untranslated regions to treat rare haploinsufficient disease. *bioRxiv [Preprint].* 2025 Dec 9:2025.12.07.692584.

UNIVERSITY OF OXFORD



CHINESE ACADEMY *of*
MEDICAL SCIENCES
OXFORD INSTITUTE

OXFORD UK
JUNE 2026

