



SYMPOSIUM

# The Future of Science

Organised by The Dunn School Graduate Student Association  
Thursday, 28 September 2017  
Medical Sciences Teaching Centre  
University of Oxford

## WELCOME

The Future of Science Symposium, hosted by the Dunn School Graduate Student Association, invites you to explore how the scientific world will change over the next ten years. The symposium coincides with the 90th anniversary of the opening of the Sir William Dunn School and will spotlight some of the most interesting ideas about the future of research, publishing, science communication, funding and innovation.

Our aim is to **understand** how the research will evolve to meet the challenges of the future, **discuss** what will shape the scientific community in the next decade and **explore** the opportunities that science will create for researchers and the public.

## PROGRAMME

- 9.00 Welcome & Session 1
- 10.40 Coffee break
- 11.10 Discussion Panel
- 12.40 Open lunch (provided)
- 13.40 Session 2
- 15.10 Coffee break
- 15.50 Session 3 & closing remarks
- 17.10 Reception and drinks

## 9.00 | Welcome & Session 1



**Dr Ruth McKernan,  
CBE, Chief Executive,  
Innovate UK**

**Theme: government and innovation**

Ruth McKernan joined Innovate UK as Chief Executive in 2015. Ruth has 25 years of research and commercial experience in the pharmaceutical industry. She is a member of the Ministry of Defence's Innovation Advisory Panel and the Royal Society's Science, Industry and Translation Committee. Ruth was Senior Vice President at Pfizer and Head of the Merck Neuroscience Research Centre. She is a winner of the Glaxo/ABSW Science Writers' Award. Ruth has published more than 120 papers, 15 patents and a book for non-scientists, "Billy's Halo". Ruth holds a BSc in Pharmacology and Biochemistry and a PhD in Molecular Neuroscience from King's College, London. She was awarded a CBE in 2013 for services to business, innovation and skills.



**Dr Eliot Forster,  
CEO Immunocore and  
Executive Chair of MedCity**

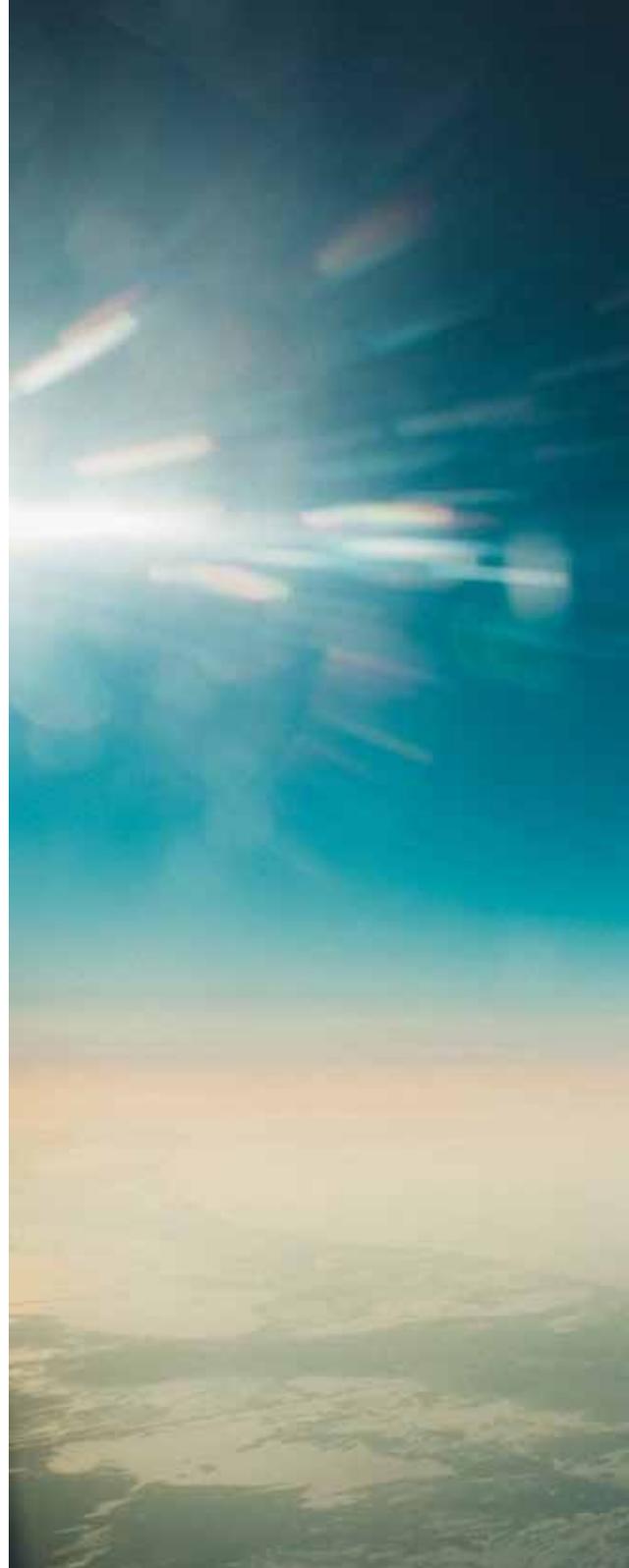
**Theme: biotechnology**

Eliot Forster joined Immunocore as Chief Executive Officer in January 2015. He has more than 25 years of experience in the pharmaceutical industry, and previously was a Chief Executive Officer of Creabilis from 2010. Prior to that he was Chief Executive Officer of US biotechnology company, Solace Pharmaceuticals Inc. Previous roles include Head of EU Development and Operations at Pfizer. Eliot is currently Chairman of the MedCity project that promotes Life Sciences in the "Golden Triangle". He is an Honorary Professor in the Pharmacology and Physiology Department at the University of Liverpool and is a Board member of Office for Strategic Coordination of Health Research. He holds a PhD in Neurophysiology from University of Liverpool and an MBA from Henley Management College.



**Prof Sir John Walker,  
Scientist and Nobel Laureate**  
**Theme: research**

John Walker is a Nobel Prize-winning chemist who has shed light on the mechanisms responsible for the synthesis of Adenosine triphosphate (ATP). After receiving a BA in Chemistry at Oxford, he completed his doctoral studies at Sir William Dunn School of Pathology. In 1998 he became the founding director of the MRC Mitochondrial Biology Unit, Cambridge where he continues his research on proteomics and ATP synthase. A leading figure in the world of biochemistry, Professor Walker received the 1997 Nobel Prize in Chemistry and was knighted for his services to science in 1999. Amongst his numerous other accolades, he received the Biochemical Society's Keilin Medal and the 2012 Copley Medal of the Royal Society.



## 11.10 | Discussion Panel | The future of the scientific community:



**Dr Ben Goldacre,  
academic, campaigner and  
best-selling author**

Ben Goldacre is a doctor, best-selling author, academic and campaigner. His work focuses on uses and misuses of science and statistics by journalists, politicians, drug companies and quacks. His book “Bad Science” reached #1 in the UK non-fiction charts and sold over half a million copies. He has published extensively in all major newspapers and various academic journals, and appears regularly on radio and TV. He has written government papers and reports on evidence based policy, founded a successful global campaign for research transparency, and currently works at the University of Oxford, where he runs the EBMdataLab building live data tools to make science and medicine better.



**Dr John Tregoning,  
blogger and academic**

John Tregoning is a Senior Lecturer at Imperial College London, working on immune responses to respiratory infections (curing the common cold). John studied genetics then did a PhD making transgenic plants before settling on immunology as a specialty. John has been running his own group since 2008 and has experienced many of the associated ups and downs of being a principal investigator. Most of his working life is spent juggling research, teaching, administration and parenting. Since 2015, John has been blogging about what it’s like to be an academic.

## challenges and opportunities



**Dr Jo Dally,**  
**Head of Policy Research, Royal Society**

Jo Dally is Head of Policy (Research) at the Royal Society. She leads on issues from Higher Education and Research funding and assessment, to the UK's exit from the EU, and understanding the UK's research system and culture and how these might evolve. Jo was previously a Deputy Director in the Office for Science where she led the Government Chief Scientific Advisers' work on Horizon Scanning, Data Analytics and Emerging Technologies. Earlier roles included leading the Chemical, Biological, Radiological, and Nuclear Security Team in the Foreign and Commonwealth Office, Private Secretary to the Government's Chief Scientific Adviser and Science Specialist to a House of Commons Select Committee.



**Story Sylwester,**  
**March for Science coordinator**

Story Sylwester is the founder and lead organiser for March for Science London, part of an international campaign aimed at raising public awareness of the importance of science and its contributions to lives everywhere. She received her BA from Portland State University in physical anthropology after attending primate field training school at the Lemur Conservation Foundation in Florida. Her master's research in palaeopathology examined the effect of HIV/AIDS on the remains of rhesus macaques used in vaccine studies at the Oregon National Primate Research Center.

## 13.40 | Session 2



**Dr Ruxandra Draghia-Akli,**  
**VP for Public Health and Scientific Affairs at**  
**Merck Co. Global Vaccines Group**  
**Theme: policy and health research**

Ruxandra Draghia-Akli is currently the Vice-President for Public Health and Scientific Affairs at Merck Global Vaccines group in the USA. She started her career as a researcher and a medical doctor holding positions in Romania and France. She then went on to take a position as the Deputy Director General at the European Commission where, amongst other things, she worked on policy and legislative issues related to the health research and innovation. She also has an extensive experience in the start-up sector as the founder and lead researcher of ADViSYS and VGX Pharmaceuticals start-ups. At Merck she focuses on developing strategies for the company's global vaccination and public health programs.



**Dr Ritu Dhand,**  
**Nature Editorial Director**  
**Theme: publishing**

Ritu Dhand was appointed Nature Editorial Director in 2014 overseeing editorial strategy and management of Nature, Nature Communications and the Nature Research and Review Journals. Ritu joined Nature in 1999 as the cancer and signalling editor and was promoted to the Chief Biological Sciences Editor, Nature in 2001 where she had oversight over content and managed the Nature life Sciences team for 13 years. Prior to that, she spent over 10 years in cancer research, completing her PhD at the Ludwig Institute for Cancer Research and UCL, London and a postdoctoral fellowship at the Samuel Lunenfeld Research Institute, Mount Sinai Hospital, Toronto. Ritu studied Genetics at Queen Mary and Westfield College, University of London and undertook a masters in Biochemistry and Molecular Biology at UCL.



**Dr Simon Stringer,**  
**Director, Oxford Centre for Theoretical  
Neuroscience and Artificial Intelligence**

**Theme: artificial intelligence**

Dr Simon Stringer has been a research mathematician at Oxford University for about 25 years. He has worked across a range of different areas of applied mathematics such as control systems, computational aerodynamics and epidemiology. For the last decade, he has led the Oxford Centre for Theoretical Neuroscience and Artificial Intelligence. The centre houses a team of theoreticians who are modelling various aspects of brain function, including vision, behaviour, audition and speech recognition. The aim of the centre is to develop integrated models of the brain that display the rudiments of artificial consciousness within the next twenty years.

The event is kindly sponsored by:



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## 15.50 | Session 3



**Prof Staffan Normark,  
Scientist and Permanent Secretary of the  
Royal Swedish Academy of Sciences 2010-15**

**Theme: what makes a scientist**

Staffan Normark is a physician and infectious disease researcher. He was born and raised in Umeå in northern Sweden and became professor in medical microbiology at Umeå University in 1979. In 1989 he became professor and department head at Washington University School of Medicine, St Louis USA where he holds an honorary doctoral degree. He returned to Karolinska Institutet in Stockholm, Sweden in 1993 where he continues his research now. He was a member of the Nobel Committee for Medicine or Physiology at KI and between 2010 and 2015 he served as permanent secretary for the Royal Swedish Academy of Sciences. In 2012 he received the Nature award for Mentoring in Science.



**Dr Roger Highfield,  
Director of External Affairs,  
Science Museum Group**

**Theme: science communication**

Roger Highfield was appointed in 2011 and is responsible for advocacy, press and marketing across the Science Museum Group. Roger was the Editor of New Scientist between 2008 and 2011 and the Science Editor of The Daily Telegraph between 1988 and 2008. Roger is also a science journalist, author and broadcaster who has written 7 books and has had thousands of articles published in newspapers and magazines. For his doctorate, Roger became the first person to bounce a neutron off a soap bubble, while working at the Institut Laue Langevin, Grenoble and Oxford University. A Fellow of the Royal Society of Biology, Roger won the Royal Society's Wilkins-Bernal-Medawar prize in 2012 and has garnered many awards for journalism, notably a British Press Award.

## About the Graduate Student Association

The Graduate Student Association (GSA) actively contributes to student life and aims to maintain a social and supportive graduate student community within the Sir William Dunn School of Pathology. The GSA is run by student volunteers, with a broad base of support among the group leaders, from the Head of Department, the Graduate Studies Administrator and Director of Graduate Studies.

To find out more about the GSA and the events we organise, please follow us on **Twitter** @Dunn\_GSA, visit our **Facebook** page or our page on the Dunn School's **website**: [www.path.ox.ac.uk/content/graduate-student-association](http://www.path.ox.ac.uk/content/graduate-student-association)

## ACKNOWLEDGEMENTS

We would like to thank Professor Matthew Freeman, Professor Christoph Tang, Dr Rachel Exley and Professor Elizabeth Robertson for helping the GSA to make the Symposium possible.

We would also like to thank Medical Sciences Skills Training and Sir William Dunn School of Pathology for their generous support of the event.

 @Dunn\_GSA #FutureInDunn

 [www.futureofscience.co.uk](http://www.futureofscience.co.uk)

Please note this event will be recorded  
and the video will be available from  
5th October on [www.path.ox.ac.uk](http://www.path.ox.ac.uk)

