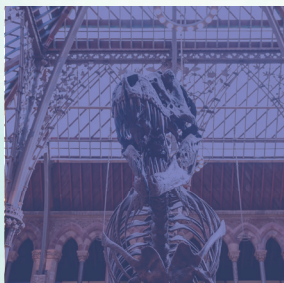


www.bsgct.science



BSGCT Public Engagement Day 2018

University Museum of Natural History, Oxford

Thursday 15th March 2018

Programme Thursday March 15th 2018

09:30-10:00	BSGCT Public Engagement Day Registration Desk Opens ♀ Exhibition and registration area
10:00-10:30	Introduction to gene therapy ♀ Lecture Theatre, Dr Simon Waddington, University College London
10:30-11:00	Stem Cells Hype or Hope? ♀ Lecture Theatre, Jo Mountford, Scottish National Blood Transfusion Service
11:00-11:30	Live Polling ♀ Lecture Theatre
11:30-13:00	Lunch, careers advice, meet the scientist, exhibitors etc. ♀ Exhibition and registration area
13:00-13:30	Successful application of gene therapy to cure patients ♀ Lecture Theatre, Dr Jenny McIntosh, University College London
13:30-14:00	Engineering our body's natural defences to fight cancer ♀ Lecture Theatre, David Cole, Immunocore
14:00-14:30	Science of gene editing and therapeutic applications ♀ Lecture Theatre, Patrick Harrison, University of Cork
14:00-14:30	Ethical Distinctions in Genome Editing: Laboratory and Clinic, Germline and Soma, Treatment and Enhancement ♀ Lecture Theatre, Sandy Starr, Progress Educational Trust & Jennifer Willows, Progress Educational Trust/bionews
14:30-15:00	The Three R's of Gene & Cell Therapy for Patients: Resignation, Risk, Reward ♀ Lecture Theatre, Adam Jones, University of Sunderland
15:00-15:30	Live polling and panel discussion ♀ Lecture Theatre

The official attendee portal for the Public Engagement Day 2018



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App Store



To access the portal, please follow these steps:

Follow the links provided or in your email from the organisers and download the EventsAIR app, Insert Event Code **PED2018** when prompted, Open the portal, and save to your home screen.




Back to the future - from genetics to medicine

This free, one-day interactive event provides an opportunity to discuss and debate cutting edge research with scientists, patients, research students and clinicians/nurses, and to think about the impact that this research has on society and on you. We have a great line-up of speakers who will introduce the concepts of gene therapy and stem cell therapy through interactive talks, as well as their application to treat cancer and disorders of the blood among others.

The lunchtime session allows students the chance to participate in several hands-on activities as well as chatting to active scientists from a range of career backgrounds and levels.

This event is an opportunity to discuss and debate new developments in gene and stem cell therapies and gene editing as well as ethical implications of these novel discoveries. It is a chance to engage with scientists, clinicians and research students to learn about the impact this research has on society and to hear about different career paths in science. The FREE event is suitable for GCSE and A-Level students and anyone with an interest in learning more about immunity and disease prevention.

Organising Committee

We are extremely grateful to our 2018 organising committee for their time, support and contribution to the planning and preparation for the event:

Clare Beach, Azura Events
Claire Booth, University College London
Tassos Georgiadis, University College London (Chair)
Mustafa Munye, GlaxoSmithKline
Stuart Nicklin, University of Glasgow
Alan Parker, Cardiff University
Aarash Saleh, Imperial College London
Renee Watson, Watson Consultancy

British
Society
for
Gene &
Cell
Therapy



BSGCT Secretariat and Conference Organisation
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2018
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MEMBER



Hands-on activities

During lunchtime, try your hand at making DNA origami, build a model of a virus and learn about DNA and the ways we can use it to treat different diseases. Come to meet and interact with some of the world's leading experts who will be talking about their research in gene and cell therapy. Chat to PhD students and post-doctoral researchers about their career choices and their current research projects.

DNA origami (Stand 3)

DNA, or deoxyribonucleic acid, is an instruction code for life. Nearly every cell in our body contains the DNA required to make a new copy of ourselves. The "story" of DNA is split up into "paragraphs" called genes. Each gene contains enough information to make a different protein. Other stretches of DNA are important in telling the cell how much protein to make. DNA manages to do all of this using a four letter code comprising A, T, C and G which stand for Adenine, Thymine, Cytosine and Guanine. DNA is wound into a double helix structure. This is then wound up even further and each compacted strand makes a chromosome. We have 23 pairs of chromosomes in each of our cells however a species of fern called "Adders tongue" beats us by having 630 pairs! At the DNA origami stand you'll learn how to fold a normal sheet of A4 paper into the shape of the DNA double helix, just like in this picture.



DNA – the Book of Life (Stand 5)

Holds all the information needed to make up an organism and encodes this information using only four letters A, T, C and G (Adenine, Thymine, Cytosine and Guanine). These letters have a specific order for each gene they encode and in the double helix they can only bind to each other in a certain way. At the DNA bracelets stand you will learn how this works, be able to build a DNA sequence of your own and take it with you!

Live Polling

We will be holding two live polling sessions during the day asking your opinion on current debate topics in the gene and cell therapy field! We will be comparing answers from the two polls to see how your perception on these topics changes throughout the day. You will be able to discuss the results with our experts!

Scan the QR code to access the poll or use the following link:
<http://bit.ly/bsgct>



Speakers

David Cole has been involved in research focussed on how our immune system fights off germs for the last 14 years. He has recently moved to Immunocore as a group leader to help develop new drugs to help in the fight against cancer, autoimmune conditions and infectious diseases.

Successful application of gene therapy to cure patients

📅 Thursday, March 15, 2018 ⌚ 13:30 - 14:00 📍 Lecture Theatre



Patrick Harrison is a senior lecturer at University College Cork, Ireland, a principal investigator in the CF Trust's gene editing strategic research centre, and associate editor (Europe) for Gene Therapy. His group pioneered gene editing for cystic fibrosis and other rare disease, collaborating with researchers in Paris, London, Lisbon and Cleveland.

An introduction and ethical discussion on genome editing

📅 Thursday, March 15, 2018 ⌚ 14:00 - 14:30 📍 Lecture Theatre



Adam Jones has severe haemophilia B and has lived through disasters and developments in the treatment and care of people living with this life-long genetic illness. The move towards genetic therapies is, in his opinion, a very personal journey, and the session will hopefully reflect this.

A patient's perspective

📅 Thursday, March 15, 2018 ⌚ 14:30 - 15:00 📍 Lecture Theatre



Jenny McIntosh is a senior research associate at UCL. She has researched several aspects of gene therapy such as purification methods for adeno associated virus, transient immune depletion to allow a second dose, and a gene therapy approach for haemophilia A. She is currently on secondment to Freeline Therapeutics, a UCL spin out company.

Successful application of gene therapy to cure patients

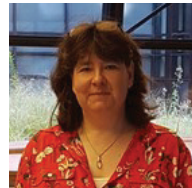
📅 Thursday, March 15, 2018 ⌚ 13:00 - 13:30 📍 Lecture Theatre



Jo Mountford is Head of Cellular Therapeutics at the Scottish National Blood Transfusion Service and holds honorary positions at Universities of Glasgow and Heriot Watt. Her background is in the differentiation of normal and leukemic blood cells (1993-2008) and more recently (2008-date) her lab has concentrated more on human pluripotent stem cells (hPSC) and their capacity to generate cells that may be used for clinical treatments.

An introduction to stem cells

📅 Thursday, March 15, 2018 ⌚ 10:30 - 11:00 📍 Lecture Theatre

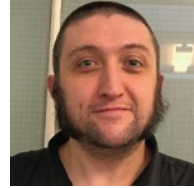


Speakers

Sandy Starr is Communications Manager at the Progress Educational Trust (PET), and worked on PET's 'Basic Understanding of Genome Editing' project. He also serves on the Ethics Advisory Board of the world's largest autism research project. Last year, he represented PET in an address to a Parliamentary Select Committee on the subject of human embryo research.

[An introduction and ethical discussion on genome editing](#)

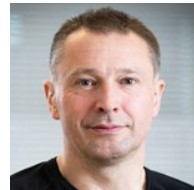
 Thursday, March 15, 2018  14:00 - 14:30  Lecture Theatre



Simon Waddington and his team are developing gene therapy for severe genetic diseases of childhood. With clinicians and scientists from Great Ormond Street Hospital and the UCL Institute of Neurology, they study many diseases, ranging from neurological disorders including inherited epilepsy, to those affecting the liver and metabolism.

[An introduction to gene therapy](#)

 Thursday, March 15, 2018  10:00 - 10:30  Lecture Theatre



Renee Watson dreamed of being an explorer but ended up becoming a scientist which is pretty close. She founded WATS.ON, a company that helps scientific organisations grow and have positive social impact and The Curiosity Box, which sends boxes of science experiments to families across the world. Renee plays touch rugby for England and loves having adventures with her family.

[Public Engagement Day Chairperson](#)



Jennifer Willows is Legal Editor at the Progress Educational Trust (PET) and BioNews, and worked on PET's 'Basic Understanding of Genome Editing' project. She has an MA in Medical Ethics and Law from King's College London, plus degrees in Biology and Law. She is interested in the intersection of genetic and reproductive technology, law and ethics.

[An introduction and ethical discussion on genome editing](#)

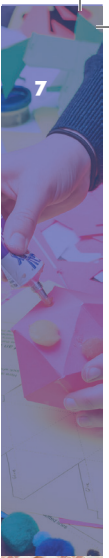
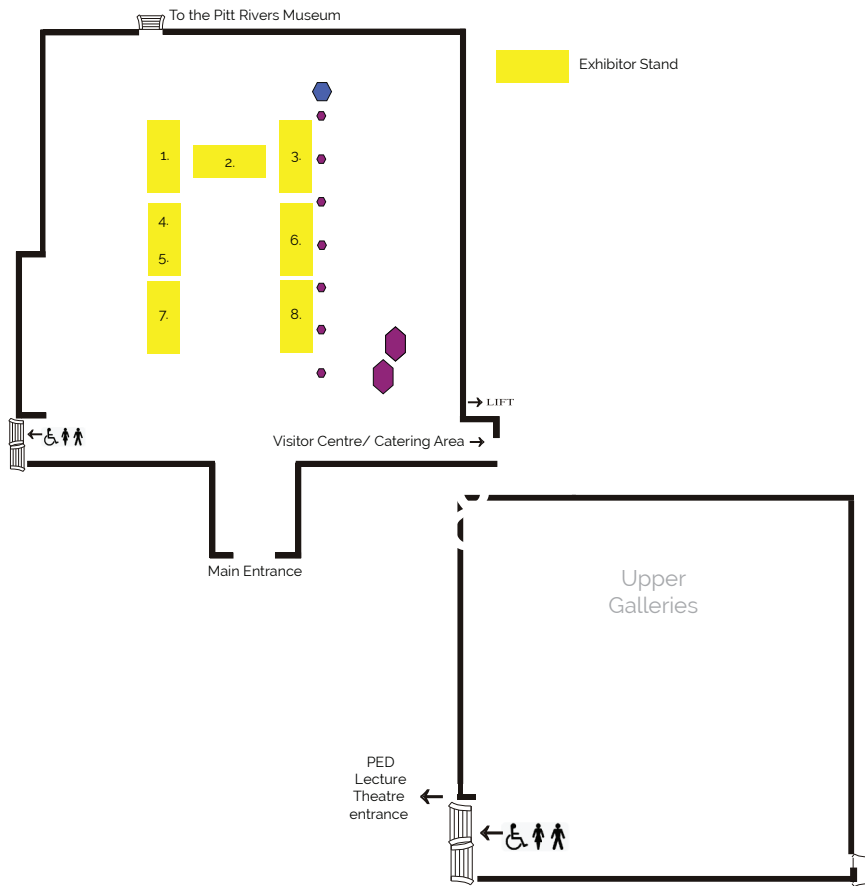
 Thursday, March 15, 2018  14:00 - 14:30  Lecture Theatre



Disclaimer: Speaker names, affiliations, talk titles and abstracts in the Programme are presented as submitted by the corresponding author.

BSGCT kindly requests that attendees do not take and disseminate photos of data slides from presentations. This is to encourage the speakers to present their unpublished data so the event remains as cutting edge as possible. Any attendees tweeting from the event are encouraged to use **#BSGCTPED**.

Exhibitor Floor Plan



Sponsors & Exhibitors



**BIOCHEMICAL
SOCIETY**

Biochemical Society Genome Editing has revolutionised bioscience research, but what is it, how does it work and what can we do with it? Join the Biochemical Society to have a go with our Scientific Scissors and share your thoughts on the ethics of Genome Editing.

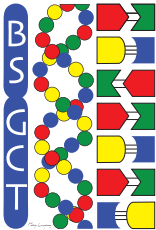
Exhibitor Stand 1

in2science^{UK}

<http://in2scienceuk.org>
07388514640

in2scienceUK is an award winning charity which empowers students from disadvantaged backgrounds to achieve their potential and progress to STEM and research careers through high quality work placements and careers guidance. in2scienceUK supports young people from low income backgrounds to progress to university to study science, technology and engineering and maths degrees and progress to STEM careers.

Exhibitor Stand 2



BSGCT
BRITISH SOCIETY FOR GENE AND CELL THERAPY
www.bsgct.org

www.bsgct.science

BSGCT The aim of the British Society for Gene and Cell Therapy is to accelerate scientific progress and promote ethical and efficient transfer of gene- and cell-based technologies from the laboratory into the clinic. Gene and cell therapy is an area where co-operation between ALL the interested parties - general public, patients, scientists, government and the media - is vital for the optimal development of these technologies and treatments, and BSGCT is working towards becoming this pro-active interface.

Exhibitor Stand 3 & 5



BUILD A VIRUS: Adenoviruses are used routinely in experimental research. Increasingly they are also being used clinically for gene therapy applications as well as "oncolytic" cancer killing machines. Our stand will allow you to build your own "customised" adenovirus, 1 million times bigger than the real thing.

Exhibitor Stand 4

www.bsgct.science

Sponsors & Exhibitors



www.well.ox.ac.uk/home
+44 (0) 1865 287500

Wellcome Centre for Human Genetics. The WHG is a research institute of the Nuffield Department of Medicine at the University of Oxford, funded by the University, Wellcome and numerous other sponsors. It is based in purpose-built laboratories on the University of Oxford's Biomedical Research Campus in Headington, one of the largest concentrations of biomedical expertise in the world. With more than 400 active researchers and around 70 employed in administrative and support roles, the Centre is an international leader in genetics, genomics and structural biology. We collaborate with research teams across the world on a number of large-scale studies in these areas. Our researchers expend close to £20m annually in competitively-won grants, and publish around 300 primary papers per year.

Exhibitor Stand 6

IMMUNOCORE

www.immunocore.com

Immunocore is the world's leading T cell receptor (TCR) company developing biological drugs to treat cancer, infectious diseases and autoimmune diseases, through its pioneering soluble TCR technology platform. The scientific expertise at Immunocore spans the entire process of drug development. From the discovery and validation of suitable disease targets, through to the design and engineering of immune-activating TCR-based reagents, and preclinical and clinical assessment.

Exhibitor Stand 7



www.progress.org.uk/home

Progress Educational Trust (PET) is a charity founded in 1992 to advance public understanding of science, law and ethics in the fields of human genetics, human reproduction, embryology and stem cell research. Funded by grants and public donations PET aims to help people in the UK and worldwide. OUR VISION IS... to improve the choices for people affected by infertility or genetic conditions. OUR MISSION IS... to educate and to debate the responsible application of reproductive and genetic science. We hold regular, free public events at which we welcome school parties. If you need to research a particular topic for an assignment, you should also check out PET's flagship publication BioNews - www.bionews.org.uk - a weekly digest of news, comment and reviews read by around 18,000 people. You can subscribe to BioNews by email for FREE at www.bionews.org.uk/subscribe. Find us on Facebook at www.facebook.com/ProgressEducationalTrust. Follow us on Twitter @BioNewsUK

Exhibitor Stand 8

[f](#) British Society for Gene and Cell Therapy [t](#) _BSGCT



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Nuffield and SetPoint. Nuffield Research Placements offer Year 12 students the chance to work alongside a scientist, engineer, mathematician or technologist for four weeks during the summer on a real research project. SETPOINT manage the scheme in this area, and we have a limited number of projects to offer. Students who are eligible for a bursary are particularly encouraged to apply and will receive priority for placements. Applications from students are open until the end of March 2018. For more information and to apply, see: <http://www.nuffieldfoundation.org/nuffield-research-placements>

PED 2018 Supporter



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Oxford Genetics Ltd a leader in synthetic biology, is a specialised contract research organisation offering services to support the discovery, development and production of biologics, gene and cell therapies. A unifying theme across the portfolio is expertise in designing DNA, optimising expression of proteins, cell line development, and improving viral delivery systems.

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WATS.ON
ASSOCIATION MANAGEMENT

WATS.ON helps scientific societies to launch, grow and excel. We believe that science belongs to EVERYONE and, by partnering with scientific societies, doing everything from managing their Board to raising funds, we can help societies have greater social impact through innovative and engaging projects that involve communities, young people, the media and patients in discussion of topical science.

Sponsor

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Thank you

BSGCT would like to thank their group of valued volunteers for their assistance in making the Public Engagement Day a success.

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British Society
for Gene and
Cell Therapy



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