OXFORD GLOBAL

3rd Annual Genome Editing Congress

9 - 10 November 2017, London, UK

Day 1 – Genome Editing Technologies & Techniques

- Advancements in genome editing tools:
  - CRISPR-Cas system
  - TALENs
  - Novel technologies; RNAis, ZFNs
- Gene delivery systems: viral and non-viral
- Delivery of different modifications: knockout, knockin
- Utilising genome editing in drug delivery & development
- In vivo genome editing
- Gene activation and inhibition using dead Cas9 and epigenome editing
- Updates in precise genome editing

Day 2 – Therapeutic Applications of Genome Editing

- Case studies from the areas of:
  - Oncology
  - Gene therapy
  - Inherited diseases including: cystic fibrosis; skin disease
  - Hematologic diseases
  - HIV
- Novel methods of genome editing & engineering
- Therapeutic genome editing: future challenges
- Genome editing: ethical and regulatory issues
- In vivo targeting vs. ex vivo targeting

Benefits to Attending

✓ **Hear from and meet with the key innovators in genome editing.** Attendees include: VP and Senior Principal Scientist, AstraZeneca; Professor, University of Copenhagen; Professor of Genomics, Dresden University of Technology

✓ **Discover collaborative solutions to genome editing technologies and techniques.** This unique event brings together key opinion leaders to discuss advancements in CRISPR/Cas9 systems, viral and non-viral delivery systems, utilising gene editing in delivery and development

✓ **Discuss the latest innovations in the therapeutic applications of genome editing.** Case studies include haematology, oncology, inherited disease and HIV

✓ **Unparalleled networking opportunities**. The two-day congress offers dedicated networking breaks creating an interactive platform for scientific discussions. The exhibition hall and poster presentation spaces offer a relaxed and professional environment for discussion

✓ **A high-quality programme devised with the help of our esteemed advisory board.** Presentations will also cover regulatory & ethical issues and challenges in genome editing and updates in genome engineering

✓ Co-located with the **9th Annual Next Generation Sequencing Congress** & **5th Annual Single Cell Analysis Congress**

2017 Webinars:

- *'Genome editing - a tool to transform the world: Its promise and some potential perils'.* Hosted by John Parrington, University of Oxford | Friday 8th September 2017 – Download for free
- *'A background to genome editing from a patenting perspective'.* Hosted by Philip Webber, Dehns Patent and Trade Mark Attorneys | Friday 8th September 2017 – Download for free
- '*CRISPR technology for genome editing across our drug discovery platform'.* Hosted by Rob Howse, AstraZeneca | Tuesday 12th September 2017 – Download for free

2017 Speakers Include:

Zoltan Ivics
Paul Ehrlich Institute

Lydia Teboul
MRC Harwell

Steven Hyde
John Radcliffe Hospital

Meet Senior Decision Makers

400 delegates from leading research & academic institutions, clinical research institutions, food & nutrition companies as well as major pharmaceutical and biotech companies will attend the event. Delegate job titles include:

Genome Editing Genome Engineering Functional Genomics	Genetics Gene Regulation Gene Therapies	Genome Biology Cell Biology Bioprocess Engineering	Biology Discovery Computational Biology Disease Modelling

Discover New Solutions

Formal and informal meeting opportunities offer delegates the chance to discuss key solutions with leading service providers. Services to be discussed include:

CRISPR TALEN ZFN	Gene Knockin Gene Knockout Detection & Analysis Tools	Gene Libraries Gene Targeting Vector Production	DNA Synthesis Bioinformatics Tools Synthetic Manufacture

For booking details & registration fees please refer to the last page or visit:
www.genomeediting-congress.com/marketing

2017 Confirmed Speakers Include:

- Rob Howes, Director, Reagents and Assay Development, Discovery Sciences, AstraZeneca
- John Feder, Associate Director, Genome Biology & Emerging Technologies, Bristol-Myers Squibb
- Laurent Poirot, Head of Early Discovery, Cellectis
- Emanuela Cuomo, Principal Scientist, AstraZeneca
- Andrea Crisanti, Professor of Molecular Parasitology, Imperial College London
- Tarik Möröy, Professor, Department of Medicine, University of Montreal
- Francis Stewart, Professor, Dresden University of Technology
- Richard Ashcroft, Professor, Queen Mary University of London
- Huw Jones, Professor, Aberystwyth University
- Ruth Chadwick, Professor, University of Manchester
- André Brändli, Professor, Ludwig-Maximilians-University Munich
- Zsuzsanna Izsvák, Professor, Max Delbrück Center for Molecular Medicine
- Pradeep Mammen, Director: Translational Research for the Advanced Heart Failure and Transplant Cardiology Program, UT Southwestern Medical Center
- Niall Barron, Director, National Institute for Cellular Biotechnology, Dublin City University
- Philip Webber, Partner, Dehns Patent and Trade Mark Attorneys
- Julia Reichelt, Head of Research, EB House
- Zoltan Ivics, Head of Division, Paul Ehrlich Institute
- Roderick Beijersbergen, Head of High Content Screening Facility, Netherlands Cancer Institute
- Lydia Teboul, Head of Molecular and Cellular Biology, MRC Harwell
- John Parrington, Associate Professor, University of Oxford
- Mark Osborn, Associate Professor, University of Minnesota
- Steven Hyde, Associate Professor of Molecular Therapy, Gene Medicine Research Group, Nuffield Division of Clinical Laboratory Sciences. John Radcliffe Hospital
- Claudio Mussolino, Group Leader - Junior Group Genome Engineering, Medical Center - University of Freiburg
- Annett Muller, Group Leader, Division of Transfusion Medicine, Department of Haematology, University of Cambridge
- Robin Ketteler, MRC LMCB Group Leader, University College London
- Linda Popplewell, Research Officer, School of Biological Sciences, Royal Holloway University of London
- Patrick Harrison, Senior Lecturer, University College Cork
- Emmanouil Metzakopian, Career Development Fellow, Wellcome Trust Sanger Institute

2017 Next Generation Sequencing, Single Cell Analysis and Genome Editing UK Sponsors Include:

2016 Genome Editing UK Sponsor and Delegate Testimonials Include:

"I liked that the organisation was very straight forward with good support and service"

Regional Marketing Manager Extraction Technologies, QIAGEN

"It was a very useful event, our company was able to gain genuine interest from delegates".

European Market Development Manager, BD Genomics

"I liked that there were good speakers and also nice size conference rooms for question and answer discussions"

Professor in Molecular Genetics, UCL Great Ormond Street Institute of Child Health

"The congress had an excellent selection of presentations, both academic and commercial"

Head of Department, Vavilov Institute of General Genetics

If you're on Twitter, make sure to follow us @xgenseq and join the Congress conversation on #xgenseq16

For more information please contact marketing@oxfordglobal.co.uk

3rd Annual Genome Editing Congress
Day One – 9th November 2017

07.30 – 08.20	**Registration**
08.20 – 08.25	**Oxford Global's Welcome Address**
08.25 – 08.30	**Chairperson's Opening Address**
08.30 – 09.00	**Co-located Keynote Address:** **Development And Optimisation Of CRISPR Genome Editing For Drug Discovery And Application** **John Feder, Associate Director, Genome Biology & Emerging Technologies, Bristol-Myers Squibb**
	Genome Editing Technologies & Techniques
09.00 – 09.30	**Stream Keynote Address:** **Update On The CRISPR Patent Wars** • There are battles in the US between Zhang and Doudna about the ownership of the basic CRISPR technology • In Europe, 7 of Zhang's granted patents are being challenged • This presentation will discuss the background to these disputes and the current status of these patent wars **Philip Webber, Partner, Dehns Patent and Trade Mark Attorneys**
09.30 – 10.00	**Solution Provider Presentation** **For sponsorship opportunities please contact** **sponsorship@oxfordglobal.co.uk**
10.00 – 11.20	**Morning Coffee & Refreshments, Poster Presentation Sessions, One to One Meetings x3**
11.20 – 11.50	**The Transgenic Effect On CRISPR Innovation** **Rob Howes, Director, Reagents and Assay Development, Discovery Sciences, AstraZeneca**
11.50 – 12.20	**Large Scale Combinatorial CRISPR Screens For Identification Of Genotype Specific Drug Targets** • Large scale functional genomic screens • Development clinical relevant models • Synthetic lethality • Novel drug combinations based on synthetic lethality **Roderick Beijersbergen, Head of High Content Screening Facility, Netherlands Cancer Institute**
12.20 – 12.50	**Solution Provider Presentation** **For sponsorship opportunities please contact** **sponsorship@oxfordglobal.co.uk**
12.50 – 13.50	**Lunch**
13.50 – 14.20	**Multiplex Genome Edited T-Cell Manufacturing Platform For "Off-The-Shelf" Adoptive T-Cell Immunotherapies** **Laurent Poirot, Head of Early Discovery, Cellectis**
14.20 – 14.50	**Using Recombineering To Extend The Power Of CRISPR/Cas9** • Achieving complex tasks such as humanizations, regional exchanges and conditional loxP alleles • The utility of BAC transgenes for reporters and lineage tracing, especially in iPSC models • Rapid generation of isogenic targeting constructs **Francis Stewart, Professor, Dresden University of Technology**
14.50 – 15.20	**Solution Provider Presentation** **For sponsorship opportunities please contact** **sponsorship@oxfordglobal.co.uk**
15.20 – 16.20	**Afternoon Refreshments, Poster Presentation Sessions, One to One Meetings x2**
16.20 – 16.50	**Targeting miRNA Expression To Improve Biopharmaceutical Production In Chinese Hamster Ovary Cells** **Niall Barron, Director, National Institute for Cellular Biotechnology, Dublin City University**

16.50– 17.20	**Therapeutic Cell Genome Editing**
	• To be discussed:
	  ○ Therapeutic cell engineering encompassing gene knockout and repair
	  ○ Off target mapping of programmable nucleases
	  ○ Cellular reprogramming/engineering
	
	Mark Osborn, Associate Professor, University of Minnesota

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17.20 – 17.50	**Scaling Up - Genome Wide CRSIPR Cas9 Screening** • Introduction to CRISPR • CRISPR technology coupled with transposons • Gain and loss of function CRISPR screens in various models • CRISPR arrayed libraries generated at the Sanger institute • Summary and finishing remarks **Emmanouil Metzakopian, Career Development Fellow, Wellcome Trust Sanger Institute**
17.50 – 18.20	**Driving Genome Editing For The Development Of Malaria Vector Control** **Andrea Crisanti, Professor of Molecular Parasitology, Imperial College London**
18.20 – 18.50	**Genome Editing – A New Tool For Studying The Molecular Mechanisms Underlying Reproduction** • CRISPR/Cas9 genome editing offers a rapid and economic way to generate knockout and knockin mice • We have used this approach to study the role of sperm protein PLCzeta during fertilization in mammals • Our studies of PLCzeta knockout and knockin mice show that PLCzeta is the physiological trigger of mammalian embryogenesis **John Parrington, Professor, University of Oxford**
18.50 – 19.20	**Applying The CRISPR/Cas9 System To High Throughput Generation Of Mouse Mutants** • Utlize the CRISPR/Cas9 system in vivo at scale • Broaden the range of possible alterations • Create and analyse a library of mouse mutants to understand gene function **Lydia Teboul, Head of Molecular and Cellular Biology, MRC Harwell**
19.20 – 19.50	**Application Of Precise Genome Editing In Drug Development** • Application of CRISPR to the generation of cellular models for oncology • Application of CRISPR to the study of drug resistance **Emanuela Cuomo, Principal Scientist, AstraZeneca**
19.50 – 20.20	**Uses Of CRISPR/Cas9 Genome Editing To Study Gene Function In Autophagy** • Present our experience in using CRISPR/Cas9 genome editing to generate knockout cell lines for genes in autophagy and signaling; • Data on the use of CRISPR/Cas9 for endogenous gene tagging; • Preliminary data using CRISPR/Cas9 in systematic screening approaches; **Robin Ketteler, MRC LMCB Group Leader, University College London**
20.20	**Networking Drinks and End of Day One**

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Day Two – 10th November 2017

08.30 – 09.00	**Keynote Address:** **Ethical Issues Around Genome Editing** **Richard Ashcroft, Professor, Queen Mary University of London**
	Therapeutic Applications Of Genome Editing
09.00 – 09.30	**Viral And Non-viral Gene Therapy For Cystic Fibrosis** • Cystic Fibrosis is the most common life threatening genetic disease in Europe and North America • The UK CF Gene Therapy Consortium has developed viral and non-viral gene transfer agents that efficiently deliver transgenes to the lungs • In pre-clinical and Phase I/IIa clinical studies in CF subjects, we have demonstrated safe, long lasting CFTR expression • In Phase IIb clinical trials we have demonstrated a halt in the progression of CF lung disease after gene delivery **Steven Hyde, Associate Professor of Molecular Therapy, Gene Medicine Research Group, Nuffield Division of Clinical Laboratory Sciences. John Radcliffe Hospital**
09.30 – 10.00	**Solution Provider Presentation** **For sponsorship opportunities please contact** **sponsorship@oxfordglobal.co.uk**
10.00 – 11.00	**Morning Coffee & Refreshments, Poster Presentation Sessions, One to One Meetings x3**

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11.00 – 11.30	**Superexon Correction Of Multiple CF-Causing Variants By CRISPR-mediated Homology-independent Targeted Integration (HITI)** • There are at least 272 different CF-causing variants • Superexon correction by HDR has established proof-of-principle but efficiency of repair is very low • Use of the CRISPR-HITI strategy to correct multiple CF-causing variants will be described **Patrick Harrison, Senior Lecturer, University College Cork**
11.30 – 12.00	**Solution Provider Presentation** **For sponsorship opportunities please contact** **sponsorship@oxfordglobal.co.uk**
12.00 – 12.30	**Ex vivo Gene Therapies For The Blistering Skin Disorder Epidermolysis Bullosa Using TALEN And CRISPR Technology** **Julia Reichelt, Head of Research, EB House**
12.30 – 13.30	**Lunch**
13.30 – 14.00	**Engineering The Genome With The Sleeping Beauty Transposon System** **Zoltan Ivics, Head of Division, Paul Ehrlich Institute**
14.00 – 14.30	**Gene Editing And Duchenne Muscular Dystrophy** **Linda Popplewell, Research Officer, School of Biological Sciences, Royal Holloway University of London**
14.30 – 15.00	**Determined The Role Of Gfi1 And Gfi1b In Blood Cancer And Inherited Blood Disorders** **Tarik Möröy, Professor, Department of Medicine, University of Montreal**
15.00 – 15.30	**Afternoon Refreshments, Poster Presentation Sessions**
15.30 – 16.00	**The Regulation Of Genome Editing For Contained Use, Human Therapeutics And Agriculture** • Appropriate regulatory oversight will differ between contained uses, human therapeutics (both research and clinical) and agriculture • Regulatory frameworks are evolving at different rates and in different directions around the world and the current lack of clarity is already stifling innovation in some sectors • The cost and timescales of regulation will determine whether (and in what countries) this technology is adopted and commercialized **Huw Jones, Professor, Aberystwyth University**
16.00 – 16.30	**CRISPR Cas9 In Duchenne Muscular Dystrophy** **Pradeep Mammen, Director: Translational Research for the Advanced Heart Failure and Transplant Cardiology Program, UT Southwestern Medical Center**
16.30 – 17.00	**Human Genetic Research: Emerging Trends In Ethics** **Ruth Chadwick, Professor, University of Manchester**
17.00 – 17.30	**Epigenome Editing Tools To Tackle HIV Infection** **Claudio Mussolino, Group Leader - Junior Group Genome Engineering, Medical Center - University of Freiburg**
17.30 – 18.00	**Genomic Engineering By Transposable Elements In Vertebrates** **Zsuzsanna Izsvák, Professor, Max Delbrück Center for Molecular Medicine**
18.00 – 18.30	**Rare Disease Modeling In Xenopus: The Example Of Alkaptonuria** **André Brändli, Professor, Ludwig-Maximilians-University Munich**
18.30 – 19.00	**Genome Editing Approaches To Produce Universal Platelets With Added Benefits In Vitro For Clinical Applications** • Generation of an inducible hPSC lines via Zinc finger nucleases for clinical translation • Deletion of HLA-ko using CRISPR/Cas9 to produce “universal” platelets • Adding benefits to platelet by targeting candidate proteins to their alpha granules using TALEN mediated genome editing **Annett Muller, Group Leader, Division of Transfusion Medicine, Department of Haematology, University of Cambridge**
19.00	**End of Conference**