

Applications of Stem Cells and Regenerative Medicine **The use of somatic and embryonic stem cells in therapy and drug discovery**

22nd March 2006, RCOG, London

With the announcement by the government to double spending in stem cell research to 100 million pounds over the next two years it is evident that there is huge potential in this ever-expanding market. The UK has always had a strong history in this area and it is now essential that industry and academia work together to maximize the potential of stem cells for regenerative medicine, drug discovery and therapeutic applications. This event will provide a unique forum in which to access the region's academic brilliance, and gain detailed knowledge of the cutting-edge research and developments in the field of stem cells and regenerative medicine. More specifically this event will consider: ♦ What are the biggest challenges in the stem cell arena? ♦ What are the advantages of using stem cells for therapy and drug discovery? ♦ What are the challenges faced regarding regenerative medicine? ♦ What opportunities are there for collaborative research and partnerships between the commercial and academic sectors?

17.45- 18.15 Registration with tea and coffee

18.15- 18.30 Introduction to aims and objectives of LTN
Jolyon White, Technology Consultant, LONDON TECHNOLOGY NETWORK

18.30- 20.00 Speaker presentations and Q&A

20.00- 21.00 Wine reception & buffet-networking opportunity & poster sessions from across London and the South East's universities showcasing their latest stem cell research

1. Introduction by the chair to the main challenges facing the stem cell community

- ♦ Assessing the critical importance of translational research and development
- ♦ Emphasising the need to address bioprocessing and regulatory demands at an early stage
- ♦ Understanding the essential need to maintain research on a broad base i.e. embryonic and somatic stem cells
- ♦ Highlighting the importance of enabling public support through provision of good quality information

Chair: Dr Glyn Stacey, Head of the Division Of Cell Biology and Imaging, NIBSC

2. Assessing research and development concerning therapeutic applications of stem cells

- ♦ Addressing the significance of pluripotent stem cells for therapy
- ♦ Evaluating the challenges in generating clinically relevant stem cells for therapeutic applications
- ♦ Highlighting the importance of propagating stem cells under GMP conditions and free from animal-derived products
- ♦ Examining the future of stem cell research in regards to major clinical targets

Dr Stephen Minger, Director of the Stem Cell Biology Laboratory, King's College London

3. Potential contribution of stem cells to drug discovery for neurodegenerative diseases

- ♦ Rationale for neural stem cells as drug targets
- ♦ Optimising the drug discovery process using stem cell based assays i.e. screening for novel compounds
- ♦ Assessing the areas where industry and academia can effectively work together
- ♦ What does the future hold?

Dr Aaron Chuang, Stem Cell Project Leader, Neurology & GI CEDD, GlaxoSmithKline

4. Examining the latest advancements and implications for regenerative medicine

- ♦ Considering the necessity of stem cells for the repair of bodily functions and the concerns related to biocompatibility.
- ♦ Emphasising the need to scale-up stem cell production for commercial viability
- ♦ Addressing the challenges faced with identifying viable stem cells i.e. selection, markers & expansion
- ♦ Focusing on examples of industry/academic collaborations and subsequent future initiatives
- ♦ Highlighting how far we have got with product development and future directions

Dr Gareth Roberts, Chief Executive Officer, Nova Thera

5. Question and answer session with the audience and speaker panel

6. Networking wine and buffet reception

All events are by INVITATION ONLY



SPEAKER PROFILES

Aaron Chuang - GLAXOSMITHKLINE

Aaron obtained his BSc and PhD in Physiology at the University of London. He then conducted his postdoctoral research in France and Italy in Neuroendocrinology and Receptor Regulation. In 1996 Aaron joined GlaxoWellcome and worked in Respiratory and Neurodegenerative Diseases. He has led programmes for Alzheimer's disease in early development and into clinical phases.

Gareth Roberts - NOVA THERA

Gareth started his career in science in the field of neuropsychiatric disorders with the Medical Research Council and progressed to building and leading a 10 strong team within Imperial College School of Medicine. Subsequently he worked for Smithkline Beecham as a Group Director in Drug Discovery. He has been a scientific referee for the MRC, Wellcome Trust, a number of charities and scientific journals. In addition he has also acted as an advisor for the National Endowment for Science Technology and Arts (NESTA), the DTI (SEEDA) and MBA programmes. Gareth has been involved as advisor/business angel to a number of start up companies, and has been a co-founder of Genostic Pharma founded 1998, Proteom founded 1999 and Isohelix founded 2003. Gareth is also a director of Sciona Ltd and non-executive director of the British Library.

Glyn Stacey - NIBSC

From 1989-1998 Glyn worked at the Centre for Applied Biology and Research where he was involved in developing cell culture and cell banking procedures and in establishing a cell biology unit working on the development of cell substrates for manufacture of medical products and cell-based diagnostic assays. Glyn's initial work at NIBSC was focused on suitability of cells used for the production of biological medicines and this has developed into a broad remit involving activities relevant to the quality and safety of new biological medicines and therapies based on the use of human and animal cells. He has also acted as an advisor to the UK Department of Health and the World Health Organization and was a member of the consultation group that drafted the UK Code of Practice for the Production of Human-derived Therapeutic Products (June 2002). Glyn is now the Director of the UK Stem Cell Bank which is funded by the UK Government (Medical Research Council and BBSRC).

Jolyon White - LONDON TECHNOLOGY NETWORK

Jolyon received his PhD in Biochemistry from Nottingham University and has an MBA from the Open University. He then worked for two years in Quality Assurance for OTC pharmaceuticals and three years as a Research Fellow at Loughborough University. He was General Manager of a biotech company before joining Powderject for eight years where he was Business Development Manager extensively involved in international B2B sales and bio defence products.

Stephen Minger - KING'S COLLEGE LONDON

Stephen is the Director of the Stem Cell Biology Laboratory and a Senior Lecturer in the new Wolfson Centre for Age Related Diseases at King's College London. From 1992-1994, he was a post-doctoral fellow in the laboratory of Professor Fred Gage, University of California, San Diego, where he first began to pursue research in neural stem cell biology. He moved his stem cell research programme to Guy's Hospital in 1996 and was appointed a Lecturer in Biomolecular Sciences at King's College London in 1998. Over the last 13 years, his research group has worked with a wide range of somatic stem cell populations, as well as mouse and human embryonic stem cells. In 2002, together with Dr Susan Pickering and Professor Peter Braude, Dr Minger was awarded one of the first two licenses granted by the UK Human Fertilisation and Embryology Authority for the derivation of human ES cells. His group subsequently generated the first human embryonic stem cell line in the UK and was one of the first groups to deposit this into the UK Stem Cell Bank. They have gone on to generate three new human ES cell lines, including one that encodes the most common genetic mutation resulting in Cystic Fibrosis.

See what participants said about previous LTN events:

"Thank you for the very valuable event"

R. Suzuki, Associate Director, EISAI EUROPE

"Excellent selection of speakers...excellent balance between industry and academic attendees"

R. Kamugasha, Research Fellow, UNIVERSITY COLLEGE LONDON

"I found the event extremely stimulating, it was good to get a different viewpoint and I will be making arrangements to visit some of the departments in the near future"

M. Pullen, Chief Systems Architect, SYMBIAN

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LTN's Mission:

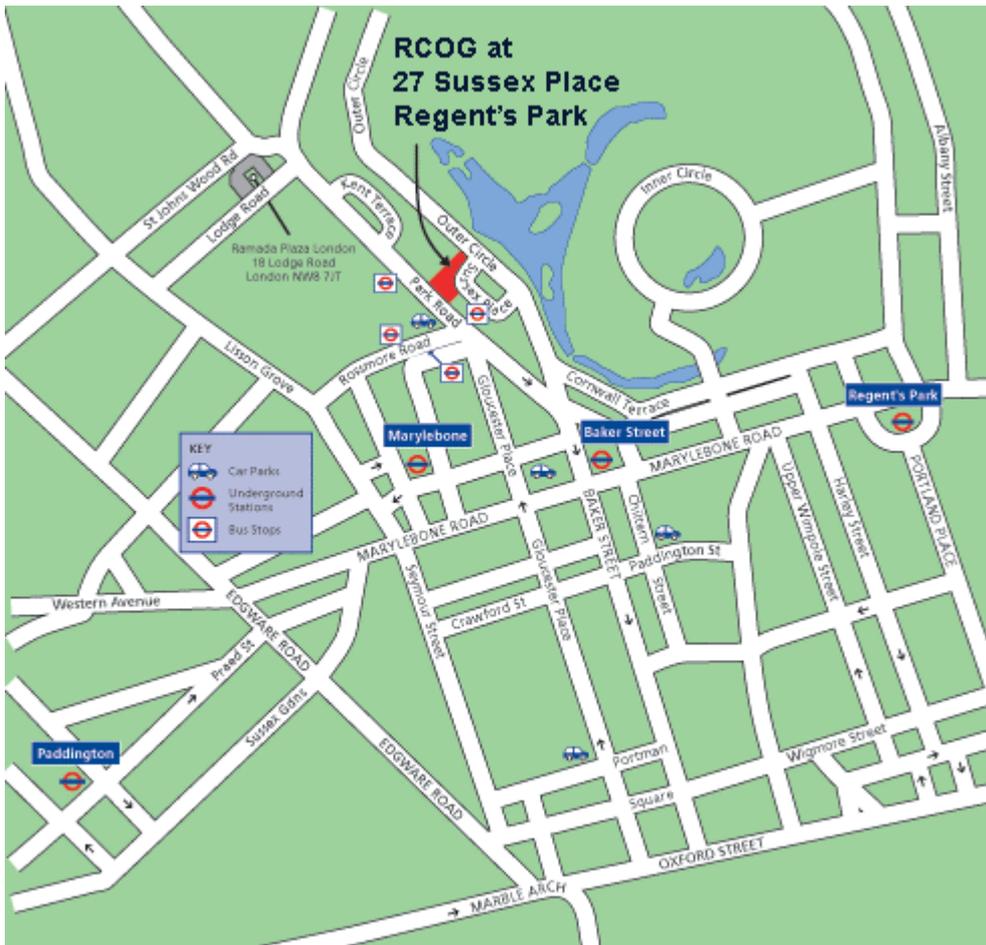
To help technology-intensive companies be more effective and efficient in their “knowledge acquisition” from London’s universities.

Each month, London Technology Network brings together industrial and academic thought leaders in the most powerful new technologies, both on the stage and in the audience. LTN discussions identify common technology platforms shared across industries and disciplines, and explore how industry, government and academia can collaborate to introduce and exploit these technologies. Attendees build personal networks that foster efficient transfer of technology and drive down the cost and time to deliver new products to market. Through the London Innovation Relay Centre we also run a series of workshops to help London companies identify their technology needs and find suitable technology partners.

HOW TO GET THERE

This event will take place at the **Royal College of Obstetricians and Gynaecologists**, 27 Sussex Place, Regent’s Park, London NW1 4RG, Tel: 020 7772 6200.

For a more detailed view, please go to <http://www.rcog.org.uk/mainpages.asp?PageID=426>.



By Train:

Marylebone mainline rail station is only a ten-minute walk away and Paddington, Euston, King's Cross and St Pancras are also close by.

By Tube:

The nearest Underground station is Baker Street (served by the Hammersmith & City, Bakerloo, Circle, Jubilee and Metropolitan lines.)

By Bus:

The area is also well served by a number of different buses, including the numbers: 13, 82, 113, 139, 189 and 274.

By Car:

Car parking facilities are available at the NCP Park Road (24-hour) and on the Regent's Park Outer Circle (short-stay metered parking.)