

**An NC3Rs/BBSRC Symposium – Tissue engineering: a new dimension to animal replacement**

1 – 2 April 2009, The Royal College of Surgeons, Central London

**Agenda**

| Day One – 1 April 2009                                   |  |                                |  |
|--|--|--------------------------------|--|
|  | 13.00 – 14.00  | <b>REGISTRATION and COFFEE</b> |  |
| Chair: Professor Sheila MacNeil, University of Sheffield | Introduction   | 14.00 – 14.10                  | <b>Welcome and introduction</b><br><i>Professor Sheila MacNeil, University of Sheffield</i>  |
|  |  | 14.10 – 14.20                  | <b>Introduction to the NC3Rs</b><br><i>Dr Anthony Holmes, NC3Rs</i>  |
|  |  | 14.20 – 15.00                  | <b>Keynote : Translation and commercialisation of tissue engineered products</b><br><i>Dr Stefan Przyborski, Reinnervate Ltd.</i>  |
|  | Session 1 – Commercial application of tissue engineering | 15.00 – 15.25                  | <b>Use of 3D and stem cell organotypic CNS models in drug discovery</b><br><i>Professor Lars Sundstrom, Capsant</i>  |
|  |  | 15.25 – 15.45                  | <b>COFFEE</b>  |
|  |  | 15.45 – 16.10                  | <b>Liver test systems: 3D liver cell model and vascularized liver cell module</b><br><i>Professor Heike Mertsching, Fraunhofer Institute for Interfacial Engineering and Biotechnology</i> |
|  |  | 16.10 – 16.35                  | <b>A multi-chamber bioreactor system for disease modelling, toxicity screening, and stem cell research</b><br><i>Dr J Malcolm Wilkinson, Kirkstall Ltd.</i>                                |
|  |  | 16.35 – 17.00                  | <b>Developing a 3D tissue engineering model of the human lung for safety testing</b><br><i>Dr Kelly Bérubé, Cardiff University</i>   |
|  |  | 17.00 – 17.20                  | <b>Closing remarks</b>   |
|  |  | 17.30 – 21.00                  | <b>POSTER VIEWING and BUFFET DINNER</b>  |
| Day Two – 2 April 2009                                   |  |                                |  |
| Chair: Professor Eileen Ingham, University of Leeds      | Session 2 – Tissue engineered models of disease          | 09.00 – 09.40                  | <b>Keynote : Tissue engineered approaches to modelling the nervous system</b><br><i>Dr James Phillips, The Open University</i>   |
|  |  | 09.40 – 10.05                  | <b>The development of an in vitro model of CNS injury to identify factors which promote repair</b><br><i>Professor Sue Barnett, University of Glasgow</i>                                  |
|  |  | 10.05 – 10.30                  | <b>A tissue engineered model of osteoarthritis</b><br><i>Dr Ali Mobasher, University of Nottingham</i>   |
|  |  | 10.30 – 11.00                  | <b>COFFEE</b>  |
|  |  | 11.00 – 11.25                  | <b>Using a novel three-dimensional cell culture model to investigate sepsis-induced renal failure</b><br><i>Professor Tom Evans, University of Glasgow</i>                                 |
|  |  | 11.25 – 11.50                  | <b>Development of a cell-based diabetic wound bioassay</b><br><i>Professor Phil Stephens, Cardiff University</i>   |

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|   |   | 11.50 – 12.15 | <b>Tissue engineered oral mucosa: a multi-faceted tool for studying oral health and disease</b><br><i>Professor Martin Thornhill, University of Sheffield</i>  |
|   |   | 12.15 – 13.15 | <b>LUNCH</b>   |
| Chair: Dr Vivek Mudera, University College London | Session 3 – Poster presentations              | 13.15 – 13.30 | <b>Assessing human urothelial toxicity without animals: a novel drug evaluation model</b><br><i>Dr Simon Baker, University of York</i>   |
|   |   | 13.30 – 13.45 | <b>Self-assembly and self-sorting of scaffold-free 3D micro-tissues</b><br><i>Professor Jeffrey Morgan, Brown University</i>   |
|   |   | 13.45 – 14.00 | <b>Developing systems for studying human intervertebral disc degeneration and testing novel tissue regeneration therapies</b><br><i>Dr Stephen Richardson, University of Manchester</i>  |
|   |   | 14.00 – 14.15 | <b>Development of a 3D all-human, in vitro model of the BBB for nanoparticle drug delivery and cancer metastasis studies using transwells and electrical cell-substrate impedance sensing system</b><br><i>Professor Geoffrey Pilkington, University of Portsmouth</i> |
|   | Session 4 – Stem cells and tissue engineering | 14.15 – 14.35 | <b>Keynote: Opportunities and challenges in the use of stem cells in early drug development</b><br><i>Dr Philip Wright, Stem Cells for Safer Medicines</i>   |
|   |   | 14.35 – 14.55 | <b>COFFEE</b>  |
|   |   | 14.55 – 15.20 | <b>Human IPS cell models of Huntingdon’s disease</b><br><i>Dr Nick Allen, Cardiff University</i>   |
|   |   | 15.20 – 15.45 | <b>Use of cardiomyocytes derived from human embryonic stem cells for safety assessment</b><br><i>Dr Peter Sartipy, Cellartis AB</i>  |
|   |   | 15.45 – 16.10 | <b>Generation of three dimensional tissue structures with targeted gene deletions using mesenchymal stem cells</b><br><i>Dr Paul Genever, University of York</i>   |
|   |   | 16.10 – 16.35 | <b>Keynote: Tissue engineering, challenges and opportunities for product exploitation</b><br><i>Professor Dame Julia Polak, Imperial College London</i>  |
|   |   | 16.35 – 16.45 | <b>CLOSE</b>   |

Please note that this programme is subject to change