

Mathematics of Regenerative Medicine Workshop

C12, Maths/Physics Building, University Park, University of Nottingham

| Wednesday 6 th July 2011 | | | |
|-------------------------------------|--|-----------------------------|---|
| 10.00-11.00 | <i>Arrival</i> | | |
| 11.00-11.15 | <i>Coffee/Tea – Mezzanine Area, Maths/Physics Building</i> | | |
| 11.15-11.20 | Oliver Jensen | University of Nottingham | Welcome and Introduction |
| 11.20-12.05 | Timothy Newman | University of Dundee | Multicellular modelling: 3D cell shape, biomechanical calibration, and active processes |
| 12.05-12.30 | Reuben O’Dea | Nottingham Trent University | Multiscale analysis of pattern formation and wave propagation in a discrete cell signalling model |
| 12.30-14.00 | <i>Buffet Lunch – C10, Maths/Physics Building</i> | | |
| 14.00-14.25 | Helen Byrne | University of Oxford | Modelling length adaption in rod photoreceptors |
| 14.25-15.10 | Paul Watton | University of Oxford | Modelling the evolution of vascular disease: cerebral aneurysms |
| 15.10-15.35 | Pavol Bokes | Comenius University | Copy number distributions of gene products at the single-cell level |
| 15.35-16.00 | <i>Coffee/Tea – Mezzanine Area, Maths/Physics Building</i> | | |
| 16.00-16.25 | Harsh Jain | Ohio State University | Mathematical validation of a novel implantable oxygen sensor |
| 16.25-16.50 | Greg Lemon | University of Nottingham | Modelling regeneration of a tissue-engineered trachea |
| 16.50-17.15 | Laura Brown | University of Nottingham | Mathematical models of gene regulatory networks underlying mesendoderm formation in amphibians |
| | <i>Close</i> | | |

| Thursday 7 th July 2011 | | | |
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| 09.00-09.25 | Igor Chernyavsky | University of Nottingham | Homogenizing hemodynamics in a disordered medium |
| 09.25-09.50 | Joanne Dunster | University of Reading | Unravelling the blood coagulation cascade |
| 09.50-10.15 | Gen Zhang | University of Cambridge | Progenitors in oesophageal epithelium are capable of maintenance and regeneration |
| 10.15-11.00 | Rebecca Shipley | University of Oxford | Mathematical modelling to drive the design of hollow fibre membrane bioreactors for tissue engineering applications |
| 11.00-11.30 | <i>Coffee/Tea – Mezzanine Area, Maths/Physics Building</i> | | |
| 11.30-12.15 | Tim Secomb | University of Arizona | Growth and structural adaptation of microcirculation in normal and tumor tissues |
| 12.15-13.00 | Rod Smallwood | University of Sheffield | Predicting tissue changes - what will the asthmatic lung look like in ten years time? |
| 13.00-14.00 | <i>Buffet Lunch – C10, Maths/Physics Building</i> | | |
| | <i>Departures</i> | | |