

One-day Course: Nanotechnology for Drug Delivery

Northwick Park Hospital

30 September 2010

Programme

- 09.30 – 10.00** **Registration and coffee**
- 10.00 – 10.15** **Welcome and roundtable introductions**
- 10.15 – 11.00** **Introduction to Medical Nanotechnology**
Richard Moore, Institute of Nanotechnology
- Important properties of nanomaterials
 - Useful types of nanostructures and key areas for application in medicine
- 11.00 – 11.50** **Nanocarriers for the Delivery of Drugs and Genes**
Professor Ijeoma Uchegbu, Professor of Pharmaceutical Nanoscience, The School of Pharmacy, University of London
- Polymer amphiphiles, low molecular weight dendrimers & other nanosystems
 - Self-assembling nanoparticles for drug delivery
 - Improving drug bioavailability
- 11.50 – 12.15** **Refreshments**
- 12.15 – 13.00** **Nanotechnology in CNS Drug Discovery and Delivery**
Dr Mo Alavijeh, Pharmidex Ltd
- Crossing the blood-brain barrier – a major challenge in drug delivery
 - Examples of current pipeline developments and applications
- 13.00 – 13.45** **Lunch and networking**
- 13.45 – 14.30** **Why use nanoparticles as drug delivery systems?**
Dr Martin Garnett, Associate Professor in Drug Delivery, School of Pharmacy, University of Nottingham
- Biodistribution of nanoparticles
 - Target diseases
 - Novel biodegradable polymer drug delivery nanosystems
- 14.30 – 15.15** **Nanotechnology and drug delivery: a clinician-scientist's perspective**
Professor Shervanthi Homer-Vanniasinkam, Consultant Vascular Surgeon, Leeds Vascular Institute, Clinical Sub-Dean, Leeds University Medical School, Professor of Translational Vascular Medicine, University of Bradford
- Some important clinical challenges
 - Achieving better outcomes by targeted delivery
 - Monitoring the effectiveness of drugs for patients
- 15.15 – 16.00** **The Rocky Road to Market**
Richard Moore, Institute of Nanotechnology
- Identifying hazards and managing risks
 - Nanotechnology trends in the market
 - Overcoming regulatory and other hurdles
- 16.00 – 16.30** **Discussion session “Moving forward in Nano- Drug Delivery” and final remarks**