

“Post Receptor Events in Cell Signalling and Disease”

Key Note Address by Professor Sir Philip Cohen

Hosted by University of Dundee
12-14 September 2005

Background and Aims:

In association with **The University of Dundee**, a workshop focusing on cell signalling and disease will be held at the University of Dundee, September 12-14, 2005.

The aims of the workshop are:

- To enable researchers from participating institutions in Texas and their colleagues from the UK to showcase relevant research activities.
- To allow researchers to network with colleagues and explore collaborative opportunities.
- To explore the opportunities for larger, multi institutional collaborations aimed at accelerating the passage of new solutions through the clinic.

The overall outcomes should be:

- The development of collaborative relationships between researchers in Texas and in the UK.
- The exploration of novel opportunities for collaboration across disciplines.
- The sharing of emerging results.
- The provision of access to specialist equipment and facilities.

The workshop will focus on the following areas:

Emerging Signalling Technologies
Emerging Signalling Themes
Diabetes
Immune system
Neurodegeneration

For additional information, on both the Programme and the event, please visit www.uspartneruk.com or contact Margaret Parton, Programme Manager, at 07748 115404.

Outline Programme

Sunday 11 September

- AM Texas Delegates arrive at Edinburgh Airport
Coach will collect Texas delegates and convey to Carnoustie Hotel, Golf Course and Spa
<http://www.carnoustie-hotel.com/>
- PM UK/Texas Golf tournament for those wishing to participate
- Evening Reception and Buffet dinner at the Carnoustie Hotel

Monday 12 September

- 8.15 am Coach collects UK and Texas delegates from the Carnoustie Hotel for departure to University of Dundee
- 9.00 am Registration and Coffee at MRC Protein Phosphorylation Unit School of Life Sciences
- 9.10 am **Welcome by Sir Alan Langlands FRSE**
Principal and Vice-Chancellor, University of Dundee
- 9.30 am **Key Note Presentation**
“KESTREL- A Simple Method for Identifying the Physiological Substrates of Protein Kinases”
Sir Philip Cohen, University of Dundee
- 10.15 am **“Maximising the Value from Academic / Industrial Collaboration: The Dundee Kinase Consortium”**
Malcolm Skingle, GlaxoSmithKline
- 10.45 am Refreshment Break
- 11.15 am ***Emerging Signalling Technologies***
Chair: Carol Mackintosh University of Dundee
“Exploring Cellular Signaling with DNA and Whole-cell Microarrays”
Vishy Iyer, University of Texas at Austin
“Strategies to Analyse Uncharacterised Protein Kinases Mutated in Human Disease”
Dario Alessi, University of Dundee
“Calcium Signal Integration through Myosin Phosphorylation”
James Stull, University of Texas Southwestern

“Ligand Binding to GPCRs in Single Living Cells Using Fluorescent Agonists and Antagonists”

Steve Hill, University of Nottingham

12.45

LUNCH

1.45pm

“Cell Signaling through the Non-receptor Protein Tyrosine Kinase Src-Implications for Cancer Therapy”

Gary Gallick, UT MD Anderson Cancer Center

“Aspects of Cancer Growth: Mutations, Metastasis and Mathematical Modelling”

Mark Chaplain, University of Dundee

“Deciphering the Functionality of Compounds and Targets in Cell Signaling Networks for Drug Discovery”

Alastair Reith, GlaxoSmithKline, Stevenage

“Vascular Mechanotransduction Via the Extracellular Matrix-Integrin-Cytoskeletal Axis”

Roland Kaunas, Texas A&M University

“Inositol Lipid Signals in Health and Disease”

Peter Downes, University of Dundee

Each session will end with an opportunity to discuss the presentations and debate some of the points raised.

3.00 pm

Cell Signalling in Diabetes

Chair: Tricia Cohen University of Dundee

“Proteomic and Phosphoproteomic Approaches to Understanding Dysregulated Signaling in the Complications of Diabetes”

Larry Denner, University of Texas Medical Branch

“Insulin Signalling Mechanisms Involved in Regulating Glucose Uptake”

Jeremy Tavare, University of Bristol

“Signalling Downstream of Adiponectin Receptors”

Lily Dong, University of Texas Health Science Center-San Antonio

4.00 pm

Refreshment Break

4.15 pm

Cell Signalling in Diabetes (continued)

“Phosphorylation and Nuclear Translocation of PDK1: Potential Mechanisms of Negative Regulation”

Feng Liu, University of Texas Health Science Center-San Antonio

“Regulation of Energy Balance by the AMPK System and its Relevance to Obesity and Diabetes”

Grahame Hardie, University of Dundee

“Molecular Pathology and Therapy of Diabetes”

Larry Chan, Baylor College of Medicine

“Pathways of Liporegulation and Lipotoxicity”

Roger Unger, University of Texas Southwestern

Each session will end with an opportunity to discuss the presentations and debate some of the points raised.

5.45 pm

End of Session

6.00 pm

Coach departs for Glamis Castle for Reception and Formal Dinner

Tuesday 13 September

8.15 am

Coach collects UK and Texas delegates from the Carnoustie Hotel for departure to University of Dundee

9.15 am

Cell Signalling in Immune Disease

Chair: Allan Brasier, University of Texas Medical Branch

“Identifying Novel Therapeutic Targets in Rheumatoid Arthritis”

Janet M. Lord, University of Birmingham

“NF- κ B Dependent Networks in TNF Signaling”

Allan Brasier, University of Texas Medical Branch

“Antigen Receptor and Cytokine Regulated Serine Kinases”

Doreen Cantrell, University of Dundee

“The Role of Tyrosine Kinases in Systemic Autoimmune Disease”

Anne Satterthwaite, University of Texas Southwestern

“Signalling by Isoforms of PI 3-Kinase in Immunity”

Bart Vanhaesebroek, University College, London

“Complement Anaphylatoxin Receptors in Allergic and Infectious Disease”

Rick Wetsel, University of Texas Health Science Center-Houston

10.50 am

Refreshment Break

“Triggering and Functions of Inflammatory Intracellular Signalling Pathways”

Jeremy Saklatvala, Imperial College, London

“GPCR CB2 Immune Signal Transduction and Pharmacophore-based In-silico Drug Screening”

Sean Xie, University of Houston

“Ubiquitination in T Cell Signalling”

Marie-Jose Bijlmakers, King’s College London

“Signalling via PI3Ks in Neutrophils”

Phil Hawkins, Babraham Institute Cambridge

Discussion Session

12.45 pm

LUNCH

1.45 pm

Cell Signalling in Neurodegenerative Disease

Chair: TBA

“Diacylglycerol Lipases; Post-Receptor Switches that Regulate Endocannabinoid and other Signalling Pathways”

Patrick Doherty, King’s College London

“Modulation of the Expression of Voltage-Gated Calcium Channels by G Proteins and PI3 Kinase”

Annette Dolphin, University College, London

“Tau Protein and Neurodegeneration”

Michel Goedert, Medical Research Council, Cambridge

“Alpha7 Nicotinic Receptor and Amyloid Beta Peptide Interaction: Cell Signaling Consequences Under Disease and Physiologic Conditions”

Kelly Dineley, University of Texas Medical Branch

“AMPA Receptor Potentiators as a Potential Treatment for Parkinson's Disease - Understanding the Post-Receptor Events Responsible for Efficacy”

Phil Szekeres, Eli Lilly and Company Limited

Discussion Session

3.30 pm

Refreshment Break

4.00 pm

Emerging Themes in Cell Signalling

Chair: Steve Keyse University of Dundee

“Structural Genomics Studies of Cell Signalling Proteins”

Declan A. Doyle, University of Oxford

“Inhibition of p90RSK –Regulated C/EBPbeta DNA Binding by Aspirin”

Kenneth Wu, University of Texas Health Science Center-Houston

“How GPCR Heterodimeric Interactions Control the Effectiveness of Cell Signalling: Implications for Drug Design”

Graeme Milligan, University of Glasgow

“Signal Transduction and Translational Regulation”

Funda Meric-Bernstam, UT MD Anderson Cancer Center

"Signaling Pathways Resulting from Ligand-Dependent Activation of Orphan Receptors"

Steve Safe, Texas A&M University

5.45 pm

Session Ends

Reception and Poster Session

7.00 pm Dinner at Carnoustie Hotel

Wednesday 14 September

8.15 am Coach collects UK and Texas delegates from the Carnoustie Hotel for departure to University of Dundee

9.15 am ***Emerging Themes in Cell Signalling (continued)***

“Signaling Pathways Activated by Nitric Oxide: A Profusion of Mediators”

Michael Gustin, Rice University

“Regulation of Specificity in Rho GTPase Signalling Pathways”

Aron Jaffe, University College, London

“Signaling Pathways Controlling Both Cell Fate Determination and Cancer”

Adrian Lee, Baylor College of Medicine

“Constructing Functional Logic Interaction Maps of Signalling Pathways”

Peter Ghazal, University of Edinburgh

10.45 am Refreshment Break

11.15 am **“Analysing the Complexities of Calcium Signaling in the Whole Organism”**

Kate Beckingham, Rice University

“Activation and Inhibition of PDGF Receptor Family Members in Disease”

Nick Dibb, Imperial College, London

“Feedback Regulation of Wnt / beta-catenin Signaling”

Keith Wharton, University of Texas Southwestern

“New Approaches for Identifying Phosphorylation Sites in Proteins”

Nick Morrice, University of Dundee

1.15 pm Lunch and close of workshop

Optional Evening:

Texas delegates travel to Pitlochry for distillery visit and evening theatre

<http://www.scottish-towns.co.uk/perthshire/pitlochry>

Thursday 15 September

Texas delegates depart by coach for Edinburgh Airport