School of Biological Sciences
Business Day

Friday 17th September 2010

Thomas Paine Study Centre, University of East Anglia, Norwich NR4 7TJ

10.00	Registration and Coffee
10.30	Welcome address by Head of School, Professor Dylan Edwards
10.40	Dr Caroline Pennington – GEN-ID – Gene Expression & Cell Validation
10.55	Dr Paul Thomas – Henry Wellcome Laboratory for Cell Imaging
11.10	Dr Darren Sexton – Flow Cytometry Services
11.25	Dr Charles Brearley – Bioanalytical Laboratory
11.40	Dr Gary Rowley – The Wolfson Fermentation and Bioenergy Laboratory
12.00	Ways to Engage & Funding Opportunities
12:15	Lunch & Networking
13:00	1-2-1 and Tours

Registration is FREE. Please visit www.uea.ac.uk/bio/enterprise/biobusinessday

If you would like further information about the School of Biological Sciences Business Day please contact:

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GEN-ID – Gene Expression & Cell Validation

Dr Caroline Pennington

Our technical team at GEN-ID has over 9 years experience offering services based on gene expression and genetic/allelic discrimination to institutes worldwide. We have an extensive publication record in the application of real-time PCR analysis in the areas of mammalian development, cancer, arthritis, multiple sclerosis, bacterial infection, angiogenesis, gene regulation and wound repair. Most recently our laboratory participated in the FP6 Cancer Degradome project where the team developed a raft of quantitative PCR tools including the use of TaqMan Low Density Array (TLDA) cards for profiling of proteases and related genes.

GEN-ID is located in a newly refurbished Enterprise laboratory within the University of East Anglia, part of the Norwich Research Park. We are committed to operating in accordance with the requirements of ISO/IEC 17025:2000 “General Requirements for the Competence of Testing and Calibration Laboratories” and our intention is to seek customer satisfaction by the implementation of quality management and Good Laboratory Practice.

Our aim is to provide academic institutes and the pharmaceutical industry with the reassurance that the cell cultures within their facilities are authenticated and remain so throughout the duration of a project. We offer a user friendly and cost effective solution to your cell identification and gene expression needs.

Henry Wellcome Laboratory for Cell Imaging

Dr Paul Thomas

The Henry Wellcome Laboratory for Cell Imaging is a state-of-the-art facility providing optical microscopes capable of high-resolution (confocal), deep tissue (multi-photon) and functional (widefield timelapse, photoactivation, FRAP and FLIM-FRET) imaging. This image capture technology is complemented by a dedicated analysis suite for multi-dimensional image analysis, 3D-reconstruction, image restoration and data archiving.

Flow Cytometry Services

Dr Darren Sexton

Flow Cytometry facilitates cell and particulate analysis allowing assessment of new medicines and their efficacy, assessment of new delivery mechanisms (nanotechnology), product validation and testing of health claims. Our services offer bespoke flow cytometric sample analysis includes:

Services:

- Cell sorting
- Cell cycle analysis
- Apoptosis analysis
- Multicolour analysis
- Functional analysis
- Stem Cell analysis

Assessment of:

- New medicine efficacy
- New delivery mechanisms (nanotechnology)
- Product validation
- Testing of health claims

Bioanalytical Laboratory

Dr Charles Brearley

Our laboratories contain a range of instruments that have wide application for examining the interaction of biological macromolecules in solution:

- Far UV CD spectroscopy provides information about the way proteins fold whilst Analytical Ultracentrifugation (AUC) gives information about their subunit composition and conformation.
- Isothermal Titration Calorimeter (ITC) probes the thermodynamics of protein:ligand interactions.
- Rates of association between molecules are explored with a range of rapid-reaction techniques including stopped-flow spectrometers fitted with interchangeable detectors (UV/Vis, fluorescence, CD) and a laser-flash spectrometer.
- Carey 4000 UV/Vis spectrophotometer and a Carey Eclipse Fluorimeter offer steady state spectroscopic investigations (includes plate reader for high sample throughput).

The Wolfson Fermentation & Bioenergy Laboratory.

Dr Gary Rowley

The laboratory is a containment level 2 facility that contains a range of large-scale bioreactors (15-200 litres) and downstream processing facilities. These facilities enable large-scale purification of proteins or metabolites from a range of microorganisms. The laboratory also houses a number of state-of-the-art continuous culture bioreactors for use in post-genomic studies on microbial physiology.

The Wolfson Fermentation & Bioenergy Laboratory is a hub for our research on microbial metabolism that includes:

- Study of the production and consumption of potent greenhouse gases such as nitrous oxide
- Production of biofuels
- Molecular mechanisms of bioelectricity generation
- Modelling of waste-treatment processes
- Modelling of *in vivo* conditions related to pathogenesis