# Programme - Joint CDT Conference 13th – 14th June 2013

## Thursday 13th June – Prince Philip House

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| **12.00-13.00** | Arrival, registration and lunch |
| **13.00-14.20** | Student talks - session I |
| **14.20-14.30** | Break |
| **14.30-15.30** | Student talks - session II |
| **15.30-16.00** | Break with tea/coffee |
| **16.00-17.20** | Student talks - session III |
| **17.20-18.00** | Free time |
| **18.00-onwards** | Dinner and drinks at Tiger Tiger |

## Friday 14th June – Prince Philip House

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| **09.30-10.30** | Poster session with tea/coffee |
| **10.30-11.30** | Keynote lecture: Professor Molly Stevens (Imperial College London) |
| **11.30-12.30** | Keynote lecture: Dr Stuart Cantrill (Nature Chemistry) |
| **12.30-13.00** | Prizes and close |

## **Parallel Session:** *Chemical Biology* (Sir Kirby Laing Room)

### Session I — Chair: Naoko Masumoto

13.00-13.20 Andrew Bell (Imperial) - *N*-Myristoyltransferase as a Drug Target – A (Chemical) Space Odyssey

13.20-13.40 Snezhana Akpunarlieva (Glasgow) - Quantitative proteomic and metabolomic analysis of *Leishmania Mexicana*

13.40-14.00 Stephen Norton (Warwick) - Parkinson's Disease-Associated E46K α-Synuclein shows different lipid interaction from wild type

14.00-14.20 Jiazhi Liu (Imperial) - Targeting dithiol-disulfide switches in cells

### Session II — Chair: Lucy Smith

14.30-14.50 James Clulow (Imperial) - Getting a chemical handle on the biological targets of electrophilic natural products

14.50-15.10 Sarah-Jane Richards (Warwick) – Inhibition of Bacterial Toxins with Multivalent Glycopolymers

15.10-15.30 Nitipol Srimongkolpithak (Imperial) - Design and Synthesis of Small Molecule for Epigenetic Genes Re-activation

### Session III — Chair: James Clulow

16.00-16.20 Lucy Smith (Imperial) - Antagonists of the IgE:FcεRI protein-protein interaction as potential anti-asthma therapeutics

16.20-16.40 Angela Macintyre (Glasgow) - Designing peptide based biomaterials for influencing mesenchymal stem cell behaviour

16.40-17.00 Kerry O'Donnelly (Imperial) – Rubisco: Enhancing Photosynthetic Efficiency

17.00-17.20 Naoko Masumoto (Imperial) - Understanding Protein Palmitoylation Using Chemical Tools to Discover Novel Cancer Therapeutics

## **Parallel Session:** *Biophysical Techniques* (David Sainsbury Room)

### Session I — Chair: Paulina Ciepla

13.00-13.20 Audrey Plaquin-Chan (Imperial) - The MAPK interactome and its role in hypertrophic responses studied by single cell proteomics

13.20-13.40 James McLachlan (Warwick) - Probing the kinesin step with optical tweezers

13.40-14.00 Philippa Nuttall (Imperial) - Nanopore detection of p53 interactions

14.00-14.20 Ben Miles (Imperial) - Fake Dentine for Real Benefits

### Session II — Chair: Philippa Nuttall

14.30-14.50 Tom Charlton (Imperial) - A Chemical Proteomics Approach to Profile the *Clostridium difficile* Lipoproteome

14.50-15.10 Caroline Montgomery (Warwick) - Self-assembly of diphenylalanine peptide nanofibres

15.10-15.30 Alex Savell (Imperial) – Cross Section of a Killer: Using STED Microscopy to Image the interface between an Immune Natural Killer Cell and its Target

### Session III — Chair: Tom Charlton

16.00-16.20 William Pitchford (Imperial) - Solid-state Nanopores as a Tool for Probing Protein-Protein Interactions

16.20-16.40 Matthew Thomas (Warwick) - A chamber for the perfusion of *in vitro* tissue with multiple solutions

16.40-17.00 Marc Baghdadi (Warwick) - Scanning Electrochemical Microscopy Techniques for use in Live Cell Imaging

17.00-17.20 Paulina Ciepla (Imperial) – Sonic Hedgehog: Insights into Chemical Biology of Post Translational Chorlesterylation

## **Parallel Session:** *Modelling and Structural Biology* (National Grid Room)

### Session I — Chair: Chris McDonald

13.00-13.20 Claire Dow (Warwick) - A Predictive Model of Bacterial Cell Division

13.20-13.40 Sarah Byrne (Imperial) - Stability analysis of protein kinases

13.40-14.00 Paul Harrison (Warwick) – Modelling the effect of slow sodium channel inactivation on post-spike threshold decay in neurons

14.00-14.20 Rachel Sheldon (Warwick) - Spatial Heterogeneity in Gap Junctions Enhances the Excitability of the Myometrium during Labour

### Session II — Chair: Yuval Elani

14.30-14.50 Jennifer Webb (Warwick) - Diamond Nanopores for Single Molecule Biosensing: Insights from Molecular Dynamics Simulations and Electrochemistry

14.50-15.10 Thomas Branch (Imperial) - Fluorescence Studies of Amyloid-β – Kinetics of its Interactions with $Cu^{2+}$

15.10-15.30 Ben Fitton (Warwick) – Regulation of microtubule dynamics by EB1, EB2 and EB3

### Session III — Chair: Thomas Branch

16.00-16.20 Yuval Elani (Imperial) - Manufacturing compartmentalised membrane-based biomimetic structures

16.20-16.40 Muhammad Hasan (Warwick) - Structure and Dynamics of Membrane Proteins using Solid-State NMR

16.40-17.00 Christopher McDonald (Imperial) - Characterising the Organisation and Functions of Inner Membrane Associated Protein PspA