

**Joint Meeting of COST Action CM1102 MultiGlycoNano and the RSC Carbohydrate Interest Group
University of Birmingham 26-28 September 2012**

COST Action CM1102 held a joint conference with the UK Royal Society of Chemistry Carbohydrate Interest Group at the School of Chemistry, University of Birmingham, UK at the end of September. The meeting was hosted by Dr Bruce Turnbull (Chair COST Action CM1102 and secretary of the RSC Carbohydrate Group) and Dr John Fossey (Local organiser).

The meeting began on the afternoon of Wednesday 26 September with a science communication workshop run by Dr Bruce Turnbull for 29 members of the COST Action including 22 ESRs. Following a plenary session discussing different aspects of science communication, five working groups prepared YouTube videos to explain multivalency to a general audience with the aim of promoting the action. The videos are undergoing final editing before being posted online. The event was followed by a networking dinner at Jimmy Spices restaurant.

Thursday 27 September began with an ESR flash presentation session involving 19 ESR speakers from the COST Action and four other ESR speakers from the UK RSC carbohydrate group (University of Birmingham and John Innes Centre). The meeting was organised by three ESR members from Dr Turnbull's research group. The ESRs were allowed five minutes to present their research and time for "one burning question". The session was a fun and fast-moving networking event and all of the ESRs kept perfectly to time! The programme is appended to this report.

Thursday afternoon saw the start of the main joint meeting which brought together approximately 100 delegates from across Europe. Speakers on Thursday afternoon comprised five representatives of the RSC carbohydrate group and six members of the COST Action who gave 20 minute presentations on topics ranging from carbohydrate sensors to multivalent glycoconjugates and banana lectins to artificial receptors for O-GlcNAcylation. The programme is appended to this report. ESRs presented 28 posters in a relaxed session before transferring to the Sundarbon Restaurant for an Indian Banquet.

Friday morning started with another five 20 minute talks on topics covering boronic acid biosensors, carbohydrate vaccines, structural biology of lectins, multivalent inhibitors of bacterial toxins and cyclodextrin-based gene delivery. A plenary lecture was given by Professor Ben Davis on single molecule electrochemical methods for probing the mechanisms of multivalent protein-carbohydrate interactions. The final presentation was the 2012 Haworth Memorial Lecture delivered by Professor David Bundle from the University of Alberta. Professor Bundle spoke about the development of totally synthetic carbohydrate vaccines.

The meeting was concluded with comments by Professor Rob Field (Chair of the RSC Carbohydrate Group) and Professor Nigel Simpkins (Haworth Chair of Chemistry at the University of Birmingham) who presented prizes for the best student talks and posters.

Buchanan Memorial Prize for best student talk: Myriam Bergmann (University of Berne)
Organic and Biomolecular Chemistry Poster Prize: Dirk Heyl (Technical University of Darmstadt)
Chemical Science Poster Prize: Richard Blackburn (University of Bath)
CatSciTech Poster Prize for best Science Communication: Hilde van Hattum (Utrecht University)

**Dr Bruce Turnbull
30 September 2012**

Early Stage Researcher Flash Presentations
9:00-12:00 Thursday 27 September 2012

Peter Jervis	A New Tethering Site For Labeling Glycolipid Antigens	University of Birmingham	UK
Tiina Saloranta	A Perfectly Linear Amphiphilic Polyol Derived from D-Mannose	Åbo Akademi University	FI
Clare Mahon	Carbohydrate Functionalised Polymer-Scaffolded Dynamic Combinatorial Libraries	Newcastle University	UK
Christiane Kupper	Chemo-enzymatic synthesis of modified poly-LacNAc glycans as galectin ligands	RWTH Aachen University	DE
Paola Fezzardi	Clicked multivalent glycolaxarenes: synthesis and galectin-3 binding	Università Degli Studi di Parma	IT
Laura Gallego-Yerga	Comparative study of calixarene and cyclodextrin - based vectors for gene delivery	CSIC - Universidad de Sevilla	ES
Jani Rakkila	Conformational Analysis of Phosphorylated β -1,2-linked Mannosides	Åbo Akademi University	FI
Emilija Marinkovic	Effects of recombinantly produced banana lectin on immune system of colonic mucosa	Torlak Institute, Belgrade	RS
Nicolas Galanos	Glycoclusters for the Nanoelectronic Detection of Lectins and Pathogenic Bacteria	University of Lyon	FR
Dirk Heyl	Glyco-Nano-Cubes and Acetylenedicarboxamides as a Promising Tool for Decorating Scaffolds	TU Darmstadt	DE
Sarah-Jane Richards	Inhibition of Bacterial Toxins with Multivalent Glycopolymers: Affinity and Specificity	University of Warwick	UK
Orla McCabe	Investigations into the binding specificity of a fucose-recognizing Aspergillus lectin	University College Dublin	IE
Silvia Bernardi	Lamellar phases including a calixarene-based glucose functionalized bolaamphiphile for multivalent recognition	Università Degli Studi di Parma	IT
Robert Deller	Mimicking Antifreeze Glycoprotein Function with Synthetic Polymers	University of Warwick	UK
Stefania Ordanini	Multivalent DC-SIGN Ligands With a Rigid Core of Controlled Length	University of Milan	IT
Myriam Bergmann	Multivalent Glycopeptide Dendrimers as Pseudomonas aeruginosa Biofilm Inhibitors	University of Berne	CH
Francesca Pertici	New divalent inhibitor with sugar based rigid spacer for Pseudomonas Aeruginosa lectin LecA	Utrecht University	NL
Hilde van Hattum	Synthesis and evaluation of inhibitors for the galectin-3 cancer protein based on thiodigalactoside and lactosamine	Utrecht University	NL
Gaëlle Michaud	Synthesis of peptides and phosphorylated sugars to study the mechanism of a bacterial oligosaccharyltransferase	University of Berne	CH

Anthony McDonagh	Synthesis of Triazole Linked Glycoclusters via Alpha Galactose Azide Precursors	National University of Ireland Galway	IE
Ellis O'Neill	Transcriptome sequencing of <i>Euglena gracilis</i>	John Innes Centre	UK
Matt Donaldson	Development of a carbohydrate vaccine for <i>Burkholderia pseudomallei</i>	John Innes Centre	UK
Alex Stephenson-Brown	SPR Based Glucose selective Surface Sensor	University of Birmingham	UK

Afternoon Session Thursday 27th September

1400 - **Open Remarks**, John Fossey, *University of Birmingham*

Session Chair: Martina Lahmann, *University of Bangor*

1405 - Paula Mendes, *University of Birmingham*

1420 - Steven D. Bull, *University of Bath*

1440 - Rob Field, *John Innes Centre*

1500 - Barbara Richichi, *University of Florence*

1520 - Trinidad Velasco Torrijos, *National University of Ireland Maynooth*

1540 - Franck Fieschi, *Université Joseph Fourier*

1600 - *Coffee*, **Haworth Building** (lobby)

Session Chair: Cristina Nativi *University of Florence*

1620 - Sebastien Vidal, *University of Lyon*

1640 - Marijana Stojanovic, *Torlak Institute, Belgrade*

1700 - Bruno Linclau, *University of Southampton*

1720 - Anthony Davis, *University of Bristol*

1740 - Poster Session, **Haworth Building** (lobby)

1900 – Conference Dinner at the Sundarban Restaurant

Friday 28th September

0845 - *Coffee*, **Haworth Building** (lobby)

Session Chair: Martina Lahmann, *University of Bangor*

0900 - Tony James, *University of Bath*

0920 - Stefan Oscarson, *University College Dublin*

0940 - Anne Imberty, *CERMAV-CNRS, Grenoble*

1000 - Han Zuilhof, *Wageningen University*

1020 - Juan Benito Hernandez, *IIQ-CSIC, University of Seville*

1040 - *Coffee*, **Haworth Building** (lobby)

Session Chair: Rob Field, *John Innes Centre*

1100 - Professor Benjamin Davis, *University of Oxford Plenary Lecture*

1130 - Professor David Bundle, *University of Alberta RSC Haworth Memorial Lecture*

1230 - Announcements

1245 - Poster Prizes and Closing Remarks:

Professor Nigel Simpkins *Haworth Chair of Chemistry, University of Birmingham*