

**RSC Carbohydrate Interest Group Winter Meeting**  
**Manchester Institute of Biotechnology, University of Manchester**

**Wednesday - Thursday 1<sup>st</sup>-2<sup>nd</sup> November 2023, MIB Lecture Theatre, John Garside Buildings**

12:00	Arrival and set-up		
Time	Title	Speaker	Chair
12:20 – 12:30	Welcome and Introduction	Dr Yi Jin	
12:30 – 13:05	Keynote presentation 1 Cell-based libraries of glycosaminoglycans – New technology and tools	Dr Rebecca L. Miller (University of Copenhagen)	
13:05– 13:40	Keynote presentation 2 TBC	Prof Gurdial Besra (University of Birmingham)	
13:40 – 14:00	ECR oral presentation 1 Using glycofluoroforms in impedimetric electrochemical biosensing for prostate cancer detection	Alice Hewson (University of York)	
14:00 – 14:20	ECR oral presentation 2 Potential Glycomic Biomarkers of Cardiovascular Disease	Jack Cheeseman (University of Reading, Ludger Ltd)	
14:20 – 14:50	Coffee Break		
14:50 – 15:25	Keynote presentation 3 TBC	Prof Nic Harmer (University of Exeter)	
15:25 – 16:00	Keynote presentation 4 NMR applied to glycoproteins and glycan mediated molecular recognition events	Dr Ana Arda (CIC bioGUNE, Bilbao)	
16:00 – 16:20	ECR oral presentation 3 Swainsonine and mannostation based analogues: targeting selective inhibition of Golgi α-mannosidase	Megan Bennett (University of York)	

16:20 – 16:40	ECR oral presentation 4 Using activity-based probes to understand α-amylase substrate specificity	Isabelle Pickles (University of York)	
16:40 – 17:10	Coffee Break		
17:10 – 18:00	Thesis in Three minutes competition		
Thesis ID	Title	Presenter	
47828	Synthesis of Chemical Inhibitors to Monitor OGA Activity	Alexander Robertson (University of York)	
47824	Glycopolymer Arrays for the Detection of Bacterial Lectins	Callum Johnson (Durham University)	
47819	Synthesis of alkyne-tagged ribitol-5-phosphate as metabolic labelling tools to study muscular dystrophy	Lloyd Murphy (University of York)	
47816	Decoding Heparan Sulfate: Chemical Synthesis of S-linked Glycomimetics	Conor O'Shea (Keele University)	
47827	Application of activity-based probes in viral disease	Elisha Moran (University of York)	
47777	Spotlighting Sugars - Photoswitchable Glycans to Illuminate Novel Cell Surface-Binding Interactions	David Sharp (The Francis Crick Institute)	
Drinks Reception and Buffet Dinner in The Atrium from 6 pm) Sponsored by MIB, Biosynth, Ice Pharma (Dextra) and Radleys.			

<b>Time</b>	<b>Title</b>	<b>Speaker</b>	<b>Chair</b>
8:45 – 9:00	<b>Arrival and Coffee</b>		
9:00– 9:35	Keynote presentation 5 TBC	Dr Lianne Willems (University of York)	
9:35 – 10:10	Keynote presentation 6 Inorganic biocatalysis - emerging applications in carbohydrate chemistry	Dr Jack Robowthan (University of Manchester)	
10:10 – 10:30	ECR oral presentation 5 Mimicking the matrix: <i>in situ</i> functionalisation of simple hydrogels with a single "click"	Christopher Merrett (University of Nottingham)	

10:30 – 10:50	ECR oral presentation 6 Bypassing cotton cellulose biosynthesis to design fibers with increased water-retaining and mechanical properties	Filipe Natalio (Weizmann Institute of Science)	
10:50 – 11:20	Coffee Break		
11:20 – 11:55	Keynote presentation 7 Extending the enzymatic toolbox for the polymerization, depolymerization and detection of bacterial capsule polymers	Dr Timm Fiebig (Hannover Medical School)	
11:55 – 12:30	Keynote presentation 8 Mass spectrometry workflows for glycoimmunology	Dr David Falck (Leiden University)	
12:30 – 12:50	ECR oral presentation 7 A recombinant approach for Group A Streptococcus glycoconjugate vaccines	Rupa Nagar (University of Dundee)	
12:50 – 13:50	Lunch		
13:50 – 15:00	Poster session		
15:00 – 15:20	ECR oral presentation 8 The development of ToF-SIMS as a label free approach to in-situ glycosaminoglycan analysis	Lorna Milne (University of Nottingham)	
15:20– 15:40	ECR oral presentation 9 Synthesis of 1-Deoxymannojirimycin from D-fructose using the Mitsunobu reaction	Peter Sunde-Brown (Keele University)	
15:40 – 16:20	Dextra Award 2023 Chemical Precision Tools to Dissect Protein Glycosylation	Ben Schumann (The Francis Crick Institute)	
16:20-16:30	Closing Remarks and ECR Awards	Gavin Miller	
Departure			

	<b>Posters</b>		
<b>Poster ID</b>	<b>Title</b>	<b>Presenter</b>	<b>University</b>
1	Synthesis of Chemical Inhibitors to Monitor OGA Activity	Alexander Robertson	University of York
2	Glycopolymer Arrays to Detect Pathoadaptations in Bacterial Infections	Kate Leslie	Durham University
3	Glycopolymer Arrays for the Detection of Bacterial Lectins	Callum Johnson	Durham University
4	Synthesis of alkyne-tagged ribitol-5-phosphate as metabolic labelling tools to study muscular dystrophy	Lloyd Murphy	University of York
5	Decoding Heparan Sulfate: Chemical Synthesis of S-linked Glycomimetics	Conor O'Shea	Keele University
6	The molecular basis for inhibition of heparanases and $\beta$ -glucuronidases by Siastatin B	Elisha Moran	University of York
7	Interrogating fungal adjuvant and glycan nanoparticles for modulating interleukin-23 expression via the dendritic cell receptor DC-SIGN	Maisie Holbrow-Wilshaw	University of Leeds
8	Bioinspired Multivalent Glycan Structures to Decipher Pathogen Immune Evasion	Erin Tait	University of Leeds
9	Continuous flow biocatalysis of sugar nucleotides	Tom Roberts	Keele University
10	Novel effectors for induction of the sulfoglycolytic-EMP pathway in persistent Salmonella infection	Sana Fairman	University of Manchester
11	Investigating protein O-glycosylation	Tom McAllister	Newcastle University
12	Development of chondroitin sulphate furnished polymer scaffolds	Sian Berry	Keele University
13	GlycoWeb	Cathy Merry	University of Nottingham
14	A recombinant approach for Group A Streptococcus glycoconjugate vaccines	Rupa Nagar	University of Dundee
15	The development of ToF-SIMS as a label free approach to glycosaminoglycan analysis	Lorna Milne	University of Nottingham
16	Chemoenzymatic synthesis of sialoglycans for the detection of Siglecs	Iakovia Ttofi	University of Manchester
17	Virtual screening, in-vitro validation, and identification of small molecule GDP-mannose dehydrogenase inhibitors	Sanaz Ahmadipour	University of Manchester
18	Structural understanding of substrate specificity in <i>Prymnesium parvum</i> CMP-sialic acid synthetase	Claire Morley	University of Manchester

19		Martin Fascione's students	University of York
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