



## Algal Polysaccharides

Thursday 14 July - Friday 15 July 2016

Radisson Blu Hotel, 80 High Street, The Royal Mile, Edinburgh, EH1 1TH

### Thursday 14<sup>th</sup> July

#### Session 1 (Chair: Saul Purton, PHYCONET Director, UCL)

1.00pm: *Arrival, registration & lunch*

1.45pm: Welcome and brief introduction to IBCarb and PHYCONET

2.00pm: **Speaker: Anna Amtmann (University of Glasgow)**  
*Cyanobacteria as a chassis for synthetic biology approaches to glycobiology*

2.30pm: **Speaker: Lenka Franková (University of Edinburgh)**  
*The Charophytes' enzymic toolkit for grafting and tethering cell-wall polysaccharides*

3.00pm: *Coffee/Tea/Networking*

#### Session 2 (Chair: Michele Stanley, PHYCONET Co-Director, SAMS)

3.30pm: **Speaker: Morten Laake (AlgaVida AS)**  
*Production of  $\beta$ -1.3,1.6-glucans from diatoms*

4.00pm: **Flash presentations**

- **Andrew Round (University of East Anglia)** - *Single molecule mapping of 'eggbox' junction zones in alginate polymers*
- **Ellis O'Neill (University of Oxford)** - *De novo transcriptome sequencing of the alga *Euglena gracilis* reveals unexpected capabilities for carbohydrate metabolism*
- **Claudio Fuentes-Grunewald (Swansea University)** - *Characterization and biological test of biomass and exopolysaccharides (EPS) from two microalgal strains*
- **Oliver Ebenhoeh (University of Aberdeen)** - *Polysaccharide Metabolism in silico: Conceptual Challenges and Approaches*
- **Steve Harding (University of Nottingham)** - *SEDFIT-MSTAR analysis of alginate and its interaction with iron*

4.30pm: *Networking session*

5.30pm: Summary and close

7.00pm: **Dinner and discussion**

## **Friday 15<sup>th</sup> July**

### **Session 3 (Chair: Steve Skill, Swansea University)**

9.00am: **Speaker: Laurent Legentil (Ecole Nationale Supérieure de Chimie de Rennes)**  
*Chemo-enzymatic synthesis of  $\beta$ -(1,3)-Glucans : Tailored laminarinase as "blue" biocatalyst*

9.30am: **Flash presentations**

- **Dušan Uhrín (University of Edinburgh)** - *NMR structure elucidation of algal polysaccharides at 800 MHz*
- **Alice Ekelhof (University of Cologne)** - *Extracellular Polysaccharide Production by Microalga *Netrium digitus* in Immobilized Culture*
- **Loïc de Carvalho (James Hutton Institute)** - *Maximum Value Enhancement of Indigenous Seaweed through Multi-component Extraction*
- **Sue (Sakonwan) Kuhaudomlarp (John Innes Centre)** - *Identification of carbohydrate phosphorylases from *Euglena gracilis* and *Ochromonas* sp. for beta-1,3-glucan production*
- **Chris Lawson (Carbosynth)** - *Polysaccharide products and support services from Carbosynth*
- **Michael Cunliffe (MBA UK)** - *A novel stable isotope probing-based approach to target algal polysaccharide utilising microbes*

10.15am: *Coffee/Tea/Networking*

### **Session 4 (Chair: Rob Field, IBCarb Co-Director, John Innes Centre)**

10.45am: **Speaker: David Green (The Scottish Association for Marine Science)**  
*Marine bacterial biopolymers: from ecology to exploitation*

11.15am: **Speaker: Peter Ulvskov (University of Copenhagen)**  
*The cell wall of the *Pseudochloris wilhelmii* complex*

11.45am: **Speaker: Charlie Bavington (GlycoMar Ltd)**  
*Development of a novel microalgal polysaccharide product - from concept to market*

12.15pm: *Breakout group/discussion*

1.00pm: *Lunch and departure*