



# High Value Products from Algae Programme

1-2 November, 2016  
Park Plaza, Nottingham

## **DAY 1**

12.30: Registration of delegates, posters to be displayed

### **Opening address:**

13.30: Introduction from Network Directors – Saul Purton (PHYCONET) and Ian Graham (HVCfP)

13.45: Rene Wijffels (Wageningen University/AlgaePARC, Netherlands)

*Industrial products from microalgae*

### **Systems and Processing**

#### **Chair: Saul Purton, PHYCONET Director**

14.15: Izabela Michalak (Wroclaw University of Technology, Poland)

*Algae as production systems of bioactive compounds*

14.40: Sarah Hotchkiss (Cyber Colloids Ltd)

*SeaRefinery: developing a seaweed biorefinery for high value products*

15.05: Flash presentations

Maria Huete-Ortega (University of Sheffield)

*Systems biology study of the metabolic regulatory network involved in the production of biofuels in *Phaeodactylum tricornutum**

Emily Kostas (University of Nottingham)

*Bio-refining of UK seaweeds*

Katherine Duncan (University of Strathclyde)

*Using molecular networking for algal comparative metabolomics*

Richard Blackburn (University of Leeds)

*Extraction, separation and purification of phlorotannins from British seaweed for high-value applications*

15.30: Refreshment/ networking break

#### **Chair: Ian Graham, HVCfP Director**

16.00: Greta Csalane Besenyei (University College London)

*Scale up and downstream processing of *Phaeodactylum tricornutum**

16.25: Alison Smith (University of Cambridge)

*Gene discovery for novel products from *Botryococcus braunii* using genomics approaches*

16.50: David Mackie (Marine Biopolymers Ltd)

*A Seaweed Biorefinery in practice*

17:15: Close of Session 1 and posters

19.30: Workshop Dinner

## **DAY 2**

### **Commercialisation of high value products from algae**

#### **Chair: Alison Smith, University of Cambridge**

09.00: Andrew Spicer (Algenuity)

*Making microalgae work: challenges in realising a synthetic biology pipeline for high value products produced in microalgae - pipeline, process, product*

09.25: Tony Dowd (Supreme Biotechnologies Ltd)

*Journey of an algapreneur*

09.50: Flash presentations

Thomas Torode (University of Cambridge)

*The future's bright, the future's brown: applications of the brown algae for biotechnology*

Patricia Harvey (University of Greenwich)

*Extracting value from the Dunaliella microalgal value chain: opportunities and challenges*

Marco Lizzul (Varicon Aqua)

*Varicon Aqua - photobioreactor design and supply specialists*

Steve Skill (Swansea University)

*Metal recovery from mine drainage using microalgae*

Russell Sharp (Plater Bio)

*The latest developments in UK-sourced commercial macroalgae extracts*

Douglas McKenzie (Xanthella)

*Algal manufacturing and renewable energy: a match made in heaven?*

Lucie Pfaltzgraff (NNFCC)

*Innovation & value chains in the biobased market: two EU projects are here to help*

10.30: Refreshment/ networking break

#### **Chair: Michelle Stanley, PHYCONET Co-Director**

11.00: Showcase talks funded by Networks (BIV and PoC projects)

11.00: Carole Llewellyn (Swansea University): PHYCONET PoC project

*Exploring chlorophyll-f and associated metabolism for improved intensive cultivation of cyanobacteria*

11.20: John J Milledge (University of Greenwich): HVCfP BIV project

*High value products from macroalgae*

11.40: Julie Zedler (University of Kent): PHYCONET PoC project

*Engineering supramolecular assemblies for enhanced high-value compound synthesis in the Chlamydomonas reinhardtii chloroplast*

12.00: Anil Day (University of Manchester): HVCfP PoC project

*Analysis of genes and culture conditions required for improving the yield, quality and variety of high value oils from microalgae*

12.20: Discussion and workshop conclusions

- John Dodd, AlgaeCytes – Open Innovation proposal
- Initiatives available to further cross-network activities: Open Innovation, training etc.

13:00: Networking lunch – a buffet style lunch will be served and the room will be available for networking discussions until 14.00

## Poster presentations

- Hannah McCue (GeneMill, University of Liverpool)  
*GeneMill: A Synthetic Biology Foundry*
- Smain Chemat (Centre de Recherches en Analyses Physico-chimiques (CRAPC))  
*Development of alternative eco-solvents for the recovery of active compounds from extracts*
- Susan Sinclair (Semba Biosciences)  
*Bench top Continuous Chromatography: an enabling platform for bioprocess development*
- Naglis Malys (University of Nottingham)  
*Combinatorial engineering for production of chemical compounds using *R. eutropha* chassis*
- Alejandra Berenice Mendez Leyva (University of Manchester)  
*Transformation and expression of recombinant proteins in microalgae*
- Leopoldo Herrera Rodriguez (University of Manchester)  
*Recombinant protein expression in microalgae and plants*
- Daniel Hayes (Celignis)  
*Near infrared spectroscopy for rapid characterisation*
- Ellis O'Neill (University of Oxford)  
*De novo transcriptome sequencing of the alga *Euglena gracilis* reveals unexpected metabolic capabilities*
- Chris Bailey (University of St Andrews)  
*Discovering, elucidating and exploiting biosynthesis*
- Lucy Akinmosin (University of Aberystwyth)  
*North Ronaldsay algae eating sheep possess novel algae-degrading-microorganisms for production of high value products from *Ulva lactuca**

## Delegate list

Akinmosin, Lucy (University of Aberystwyth)	Mackie, David (Marine BioPolymers Ltd)
Bailey, Chris (University of St Andrews)	Mallabar, Richard (Constant Systems)
Bates, Lauren (Kimberley STEM College)	Malys, Naglis (University of Nottingham)
Berenice Mendez Leyva, Alejandra (University of Manchester)	McCue, Hannah (Gene Mill, University of Liverpool)
Binner, Eleanor (University of Nottingham)	McKenzie, Douglas (Xanthella)
Blackburn, Richard (University of Leeds)	MCQuillan, Josie (University of Sheffield)
Booth, Michael (BBSRC)	McQuarrie, Duncan (Green Chemistry Centre of Excellence, University of York)
Butler, Thomas (University of Sheffield)	Menchavez, Russel (University of Nottingham)
Calvert, Caroline (HVCfP Manager, University of York)	Metcalfe, Philip (Efficiency Technologies Limited)
Changko, Saowalak (University College London)	Michalak, Izabela (Wroclaw University of Technology)
Crawford, Julia (University of York)	Milledge, John (University of Greenwich)
Csalane Besenyey, Greta (University College London)	Moirangthem, Kamaljit (University of Nottingham)
Cumming, Bob (Cellexus Ltd)	Morris, Mike (Aberystwyth University)
Day, Anil (University of Manchester)	Moss, Claire (GlycoMar Ltd)
Dodd, John (AlgaeCytes Ltd)	O'Neill, Ellis (University of Oxford)
Dowd, Tony (Founder, Supreme Biotechnologies Ltd)	Okorafor, Laurence (Croda Europe)
Duncan, Katherine (University of Strathclyde)	Papadopoulos, Apostolos (Crop Intellect Ltd)
Feichtinger, Georg (Phycosera Ltd)	Pearce, Matt (Feed Algae)
Gangl, Doris (University of Cambridge)	Pfaltzgraff, Lucie (NNFCC)
Goss, Rebecca (University of St Andrews)	Purton, Saul (PHYCONET Director, UCL)
Graham, Ian (HVCfP Director, University of York)	Sanchez-Tarre, Victor (University College London)
Harvey, Patricia (University of Greenwich)	Sharp, Russell (Plater Bio)
Hayes, Daniel (Celignis)	Sinclair, Susan (Semba Biosciences)
Herrera Rodriguez, Leopoldo (University of Manchester)	Skill, Steve (Swansea University)
Hotchkiss, Sarah (Cyber Colloids Ltd)	Smith, Alison (University of Cambridge)
Huete-Ortega, Maria (University of Sheffield)	Spicer, Andrew (Algenuity)
Irwin, Dianne (Syngenta)	Stanley, Michele (PHYCONET Co-Director, SAMS)
Jones, Mark (RLC-Lab)	Stoffels, Laura (University College London)
Jovine, Raffael (Feed Algae)	Tai, Hongyun (Bangor University)
Ko, Andy (Kimberley STEM College)	Tonon, Thierry (CNAP, University of York)
Kostas, Emily (University of Nottingham)	Torode, Thomas (University of Cambridge)
Lawley, Wendy, (HVCfP Manager, University of York)	Wang, Duoduo (University of Nottingham)
Lizzul, Marco (Varicon Aqua)	Waterhouse, Janet (PHYCONET Manager, UCL)
Llewellyn, Carole (Swansea University)	Wijffels, Rene (Wageningen University, AlgaePARC)
Long, Mark (Naturiol Ltd)	Winkworth-Smith, Charlie (University of Nottingham)
Lougher, Matt (Constant Systems)	Zedler, Julie (University of Kent)