

COMPARE

CENTRE OF MEMBRANE PROTEINS AND RECEPTORS

Newsletter

Edition 12 November 2018

Grant Successes

BHF Accelerator Award

We are pleased to announce that the University of Birmingham have been awarded a BHF grant with match funding to COMPARE to further CVS research.

BBSRC Grant

Ian Kerr (PI) and Steve Briddon, and Nick Holliday (co-I) have been awarded a BBSRC grant. The study will use biochemical techniques along with fluorescence correlation spectroscopy and other advanced imaging techniques to map the interaction sites of substrates in ABCG2 to allow the design of more potent and selective ABCG2 inhibitors and probes. (ABCG2 is a drug transporter which is clinically important in drug resistance and transport, particularly in cancer chemotherapy).

An Introduction to High Content Imaging Workshop 2019

12 February 2019, University of Nottingham

Scientific Organisers: Stephen Briddon, Jacquelyn Bond and Tim Self

This meeting is aimed at introducing the power of High Content Imaging to PhD students, early career researchers and academics who are new to the area or would like to increase their understanding of the technique. It will cover experimental requirements, image collection techniques and analysis in high content imaging, as well as example applications for this approach. Major suppliers of high content imaging software and analysis will also demonstrate applications and uses of their software.

Confirmed Speakers include:

Mr Steve Bagley, *Cancer Research UK Manchester Institute*

Dr Alexis Barr, *MRC London Institute of Medical Sciences*

Dr Steve Brown, *The University of Sheffield*

Dr Janos Kriston-Vizi, *University College London*

Dr Elizabeth Rosethorne, *University of Nottingham*

Dr Emma Shanks, *Cancer Research UK Glasgow*

Mr Alex Sossick, *University of Cambridge*

Dr Katarzyna Szymanska, *University of Leeds*

We look forward to welcoming you to the Jubilee Conference Centre, Nottingham!

Registration: www.rms.org.uk/high-content-imaging

IN PARTNERSHIP:

The Universities of Birmingham and Nottingham

Key Dates

Team Science—Social Event

7th December 17:00
D96B Medical School
Nottingham

COMPARE Mid-term Review

11th December 09:00-12:00
University of Birmingham

Team Science Seminar

10th January 2019 16:00-17:00
David Hodson, Professor of
Cellular Metabolism
C1052 Medical School
University of Nottingham

Sandpit Event, "Gene editing and stem cell approaches in the study of membrane proteins"

23rd January 2019 14:00-17:00
C1052 Medical School
University of Nottingham

Workshop, An Introduction to High Content Imaging

12th February 2019 09:00-17:00
Jubilee Conference Centre
University of Nottingham

COMPARE Management Board

1st March 2019
D12 Medical School
University of Nottingham

Workshop, Single-Molecule Imaging and Spectroscopy of Membrane Proteins

12th & 13th March 2019
CPD, University of Birmingham
Medical School

Sandpit Event, "What can we learn from Structural Biology?"

17th April 2019 14:00-18:00
IBR Seminar Room, Birmingham

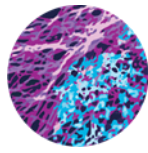
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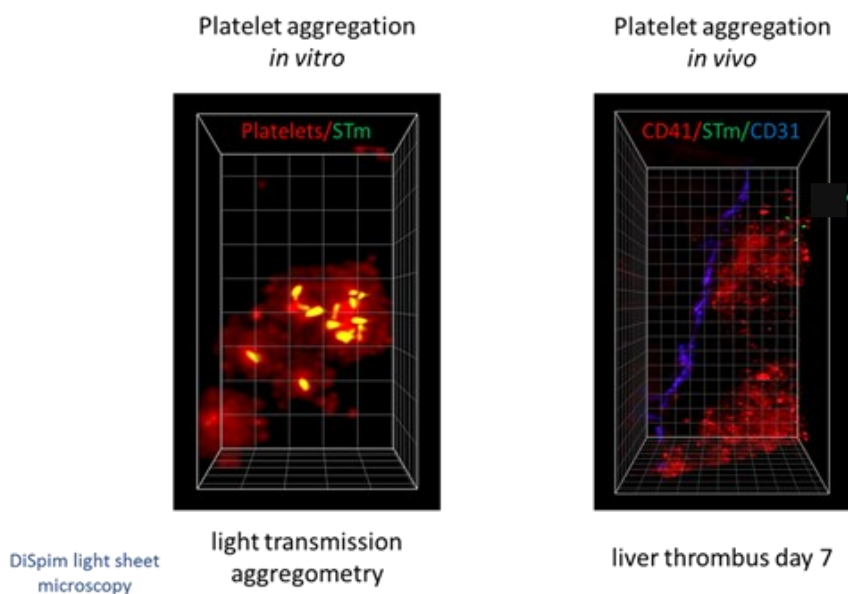


DiSpim Microscope

The picture below was generated using the DiSpim microscope in COMPARE. The manuscript has just been accepted in *Blood* – the two figures are separate in the manuscript and can be found in supplementary.

Beristain-Covarrubias N et al, (2019). *Salmonella*-induced thrombi in mice develop asynchronously in the spleen and liver and are not effective bacterial traps. *Blood* in press. DOI: [10.1182/blood-2018-08-867267](https://doi.org/10.1182/blood-2018-08-867267)

Dual inverted selective plane illumination microscopy was used to localise bacteria in platelet thrombi generated *in vitro* in a Born-aggrometer and *in vivo* in response to a single dose of *Salmonella Typhimurium*. The absence of bacteria in thrombi generated *in vivo* provides evidence against immunothrombosis as a major pathway of removal of bacteria.



COMPARE Workshop on Single-Molecule Imaging and Spectroscopy of Membrane Proteins

March 12th – 13th 2019, University of Birmingham

We are pleased to announce our 2019 COMPARE Workshop, which this year will focus on *Single-Molecule Imaging & Spectroscopy of Membrane Proteins*.

Single-molecule microscopy and spectroscopy are very powerful techniques that allow investigating the organization and dynamics of membrane proteins in cells and tissues with unprecedented spatiotemporal resolution. This workshop will bring together world leaders in single-molecule imaging and spectroscopy to focus on key questions about the spatiotemporal organization of receptors and other signalling proteins in nanodomains on the plasma membrane.

A first day of talks covering both recent exciting biological findings and new methodological developments will be followed on day two by unique practical sessions. These will include in-depth demonstrations of cutting-edge single-molecule microscopy and spectroscopy techniques in collaboration with leading microscopy vendors as well as of new open source software for the analysis of spectroscopy and single-molecule data.

Confirmed speakers include; Stephen Briddon, Susan Cox, Sian Culley, Juliette Griffie, Eric Hosy, Florian Levet, Emmanuel Margeat, Carlo Manzo, Jean-Baptiste Masson, Annemiek van Spriel

Registration: <https://shop.bham.ac.uk/>

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