

COMPARE

CENTRE OF MEMBRANE PROTEINS AND RECEPTORS

Newsletter

Edition 5, March 2018

Grants

Grants - A joint BHF infrastructure grant to support cardiovascular research in COMPARE was submitted. The grant was subsequently altered to a single submission by the University of Birmingham only, on behalf of both. A response is expected by April 2018.

Brazil

Brazil – A formal signing ceremony is planned for 12th April at the Brazilian Embassy in London. There will be a COMPARE office in Campinas and associated lab space for five years. In return, COMPARE will provide a commitment of six person months in 3-4 week placements. Visits are planned for June by Steve Hill and Steve Watson with Yi Sun and Alex Slater, and Barrie Kellam in the next few months. If you believe a visit to the labs in Brazil will be beneficial to your research, please email COMPARE@birmingham-nottingham.ac.uk with a project proposal and associated costs for review and approval.

Recent Publications

Goulding J, May LT, Hill SJ, (2018). Characterisation of endogenous A2A and A2B receptor-mediated cyclic AMP responses in HEK 293 cells using the GloSensor™ biosensor: Evidence for an allosteric mechanism of action for the A2B-selective antagonist PSB 603. *Biochem Pharmacol.* 147:55-66.

Podewin T, Ast J, Broichhagen J, Fine N, Nasteska D, Leippe P, Gailer M, Buenaventura T, Jones B, Baneres, JL, Marie J, Trauner D, Hoffmann-Röder A, Hodson DJ, (2018). Conditional and reversible activation of class A and B G protein-coupled receptors using tethered pharmacology. *ACS Central Sci.*

Latest papers are on the COMPARE website.

<http://www.birmingham-nottingham.ac.uk/compare/compare-publications.aspx>

Special Edition—TiPS

It is a great pleasure for us to introduce a special issue of *Trends in Pharmacological Sciences* outlining some of the new fluorescence and bioluminescence imaging approaches available to study cell-surface receptors [particularly G protein-coupled receptors (GPCRs)] in living cells.

Hill SJ, Watson SP, (2018). Fluorescence approaches unravel spatial and temporal aspects of GPCR organisation, location and intracellular signalling. *Trends Pharmacol. Sci.* (Review). Full article;

[http://www.cell.com/trends/pharmacological-sciences/fulltext/S0165-6147\(17\)30229-8](http://www.cell.com/trends/pharmacological-sciences/fulltext/S0165-6147(17)30229-8)

Congratulations

Birgit Caspar, PhD Student, University of Nottingham, selected as one of the finalists for the Young Investigator Award of the IUPHAR World Congress of Basic and Clinical Pharmacology in Kyoto in July.

Laura Humphrys and Jess Carpenter, University of Nottingham have successfully obtained grant funding from the university UNICAS scheme. In collaboration with Engineering, they are going to build innovative plate formats for cell specific light stimulation of optogenetic and other sensors.

Vacancies

Research Fellow/Associate—University of Nottingham - Closing Date 23rd March 2018. Applications are invited for the above post in Dmitry Veprintsev lab. **COMING SOON**—Birmingham Chair and Research Fellow—details of these two vacancies will be advertised shortly.

IN PARTNERSHIP:

The Universities of Birmingham and Nottingham

Key Dates

COMPARE Launch
Keynote: Brian Kobilka
Nobel Prize Laureate
LT1 Medical School,
Nottingham
18th April 2018 16:00

COMPARE Team Science and
ONCORNET Research
Symposium
LT4 Medical School, Nottingham
18th April 2018 09:30
<https://compare-oncornet.eventbrite.com>

Team Science Seminar
Malou Zuidscherwoude
LT4 Medical School, Nottingham
21st March 2018 12:00

Seminar
Dmitry Veprintsev
IBR Seminar Room, Birmingham
21st March 2018 16:00-17:00

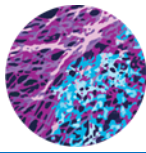
Team Science Away Day
Fazeley Studios
Birmingham
18th May 2018
<https://www.eventbrite.com/e/compare-team-science-away-day-tickets-44099152753>

Annual Research Symposium
Birmingham Hotel & Conference Centre
28th September 2018

birmingham-nottingham.ac.uk/compare



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Welcome



Caroline McKay started in the new post of Project and Grant Writing Officer in January, on a four year secondment. Based at University of Birmingham, Caroline will provide grant writing support to COMPARE, along with project management of the EU funded project Targeting Platelet Adhesion Receptors in Thrombosis (TAPAS), a four year, Marie Skłodowska-Curie Innovative Training Network. With a background in research support and grant writing, working previously as a Research Facilitator in the College of Life and Environmental Sciences at Birmingham, Caroline is looking forward to working as part of the COMPARE team. Her time will be split between TAPAS and COMPARE, with approximately one day a week dedicated to COMPARE. Contact: 0121 414 4511, c.s.mckay@bham.ac.uk

Dual Studentships

Six dual PhD studentships will start on 1st October 2018 with three years funding for three students at each University and a supervisor from each. The studentships will further develop Project One (clustering of surface proteins) and expand cross-university collaboration. PIs are currently reviewing applications and appointing candidates.

- Steve Thomas, Steve Briddon—Investigating the role of actin dynamics on receptor clustering and oligomerisation
- Davide Calebiro, Steve Hill -Single-molecule analysis of protein-protein interactions in GPCR clustering and internalization
- Natalie Poulter, Neil Morgan, Jonas Emsley - An integrated light microscopy and structural biology approach to studying receptor clustering of GPIb in Bernard Soulier Syndrome
- Jeanette Woolard, Neena Kalia — In vivo cardiovascular haemodynamic consequences of adenosine A2AVEGFR2 protein-protein interactions and their implications for combined cancer treatments.
- Barrie Kellam, Steve Watson —Development and Application of fluorescent ligands for GPVI
- Dmitry Veprintsev, Iain Styles—Molecular basis for hetero-oligomerisation of CB2 and CCR5 receptors

Team Science Grants

We received fourteen applications for Team Science Funding to support attendance at a conference or collaborate with a partner laboratory in December 2017. The following colleagues have recently attended conferences supported by Team Science funding;

Sam Cooper, University of Nottingham
Joint Italian-German Purine Club meeting 2017

Justyna Szyroka, University of Birmingham
2017 Angiogenesis Gordon Conference

Rachel Richardson, University of Nottingham
GPCR Structure and Function: Taking GPCR Drug Development and Discovery to the Next Level

Andrew Benest, University of Nottingham
Vascular Biology Human Diseases: From Molecular Pathways to Novel Therapeutics

David Sykes, University of Nottingham
GPCR Structure and Function: Taking GPCR Drug Development and Discovery to the Next Level

Team Science—Summer Placements

It has been agreed that part of the Team Science funding will be used to provide up to four summer placements in 2018. Applications are currently being reviewed and Supervisors and PIs will be informed of the panel outcome in due course.

Branding

Academic publications should conform to each paper's standard requirements, but must acknowledge the funding source and equipment. All Birmingham publications must be uploaded to PURE.

Affiliation 1: Own University affiliation eg:
Division of Physiology, Pharmacology & Neuroscience, School of Life Sciences, University of Nottingham, Medical School, Queen's Medical Centre, Nottingham NG7 2UH, UK, **or**
Institute of Cardiovascular Sciences, Institute for Biomedical Research, The Medical School, University of Birmingham, Edgbaston, Birmingham, UK.

Affiliation 2: Centre of Membrane and Protein and Receptors (COMPARE), University of Birmingham and University of Nottingham, Midlands, UK.

If you have any items for the next newsletter please send to:

compare@birmingham-nottingham.ac.uk

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