The next sandpit on the **17th April** at the University of Birmingham and will focus on “*What we can learn from structural biology*”, please register at [https://www.eventbrite.com/e/sandpit-what-can-we-learn-from-structural-biology-registration-58565974406](https://www.eventbrite.com/e/sandpit-what-can-we-learn-from-structural-biology-registration-58565974406)

<table>
<thead>
<tr>
<th>Timing</th>
<th>Session</th>
<th>Speaker(s)</th>
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<tbody>
<tr>
<td>13:30</td>
<td>Coffee/+</td>
<td>Common Room</td>
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<tr>
<td>14:00-14:05</td>
<td>Introduction</td>
<td>Dmitry Veprintsev</td>
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<tr>
<td>1405-14:20</td>
<td>High-throughput cloning and mutagenesis using Assembly reaction</td>
<td>Tamara Miljus</td>
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<tr>
<td>14:20-14:30</td>
<td>Small scale purification of beta2 AR for biophysical studies</td>
<td>Clare Harwood</td>
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<td>14:30-14:45</td>
<td>Functional characterisation of solubilised GPCRs</td>
<td>David Sykes</td>
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<tr>
<td>14:45-15:00</td>
<td>Fluorescence Correlation Spectroscopy (FCS) on GPCR-SMALPs</td>
<td>Rachael Grime</td>
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<td>15:00-15:20</td>
<td>Biophysical studies of platelet receptor GPVI with its major ligands: The road to potential new antithrombotic drugs</td>
<td>Alex Slater</td>
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<td>15:20-15:50</td>
<td>Cryo-EM studies of pore forming proteins</td>
<td>Christos Savva University of Leicester</td>
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<td>15:50-16:10</td>
<td>Coffee/tea</td>
<td>Common Room</td>
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<tr>
<td>16:10-16:40</td>
<td>Applications of mini G proteins to study the structure and function of GPCRs</td>
<td>Byron Carpenter University of Warwick</td>
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<tr>
<td>16:40-17:00</td>
<td>Deciphering the phosphorylation barcode of GPCRs (biophysics+NMR)</td>
<td>Dmitry Veprintsev</td>
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<td>17:00-17:15</td>
<td>GPCRs: what can we learn from molecular dynamics?</td>
<td>Charlie Laughton</td>
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<td>17:15-17:30</td>
<td>X-ray (TBC)</td>
<td>Jonas Emsley</td>
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<td>17:30-18:00</td>
<td>Open discussion</td>
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<tr>
<td>18:00-19:00</td>
<td>Close and Drinks Reception</td>
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**Key Dates**

**Midlands Academy of Medical Sciences Research Festival 2019**
Wednesday 27th March 2019
Edgbaston Park Hotel and Conference Centre, Birmingham

**Seminar—David Gloriam, New computational methods and online resources for GPCR structure and function**
University of Copenhagen
28th March 2019 15:30
C1052 University of Nottingham

and

29th March 2019 14:00
IBR Seminar Room, University of Birmingham

**Journal Club—28th March 2019**
IBR Seminar Room
University of Birmingham

**Sandpit Event, “What can we learn from Structural Biology?”**
17th April 2019 14:00-18:00
IBR Seminar Room, Birmingham

**Annual Research Symposium**
26th September 2019
Jubilee Conference Centre
Nottingham

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compare@birmingham-nottingham.ac.uk
Midlands Academy of Medical Sciences Research Festival

**Wednesday 27th March 2019, Edgbaston Park Hotel and Conference Centre, Birmingham.** The Midlands Academy of Medical Sciences Research Festival is a unique biomedical and health research event designed to bring early career researchers together to present their work, meet one another and to network with senior researchers.

For our 2019 event we have chosen three areas of focus around our recently elected Fellows: **Diabetes, Cancer and Respiratory Science**. Our keynote speakers for 2019 include AMS Fellows: Professor Melanie Davies, CBE, (Director of the Leicester Biomedical Research Centre); Professor Ian Hall (Director of the Nottingham Biomedical Research Centre); Professor Paul Moss (Director of Research and Knowledge Transfer at the University of Birmingham) and Professor Martin Tobin (Professor of Genetic Epidemiology and Public Health - Leicester).

Researchers from our six institutions are welcome to attend, subject to delegate places being available. (University of Birmingham, Loughborough University, Keele University, University of Nottingham, University of Leicester, University of Warwick). Registration is mandatory at [https://www.eventbrite.co.uk/e/midlands-academy-of-medical-sciences-research-festival-2019-tickets-52817150519](https://www.eventbrite.co.uk/e/midlands-academy-of-medical-sciences-research-festival-2019-tickets-52817150519)

### Microscopes

Three large pieces of equipment have been purchased from the BHF infrastructure grant to include: a state of the art FCD/sted in Nottingham and a SIM and light sheet ultra microscope for cleared tissues in Birmingham. Full details on usage and contact details will follow after installation.

### Journal Club

The next journal club will be held on 28th March 2019 in the IBR seminar Room, at the University of Birmingham at 4pm. If you would like to find out more about these events or suggest topics for discussion, please contact Jak Grimes JXG937@student.bham.ac.uk

**RMS—Imaging by Steve Briddon**

On February 12th, the inaugural Royal Microscopical Society High Content Imaging (HCI) workshop was held at Jubilee Conference Centre, University of Nottingham. Organised by Tim Self and Steve Briddon (COMPARE; University of Nottingham) and Jacquelyn Bond (University of Leeds), the meeting was aimed at PhD students, ECRs and academics just starting out in HCI, or considering moving into the area. The workshop was attended by 19 delegates from academia and industry across the U.K., as well as eight invited speakers and seven exhibitors, who had also kindly provided generous sponsorship.

Presentations from Steve Bagley (Manchester), Liz Rosethorne (Nottingham), Steve Brown (Sheffield) and Alex Sossick (Cambridge) covered HCI hardware, experimental design and data analysis and management. Following short “Technobite” presentations from each of the exhibitors, an extended lunch break saw an intensive round of software demonstrations from Carl Zeiss, Molecular Devices, Nikon, Olympus, Perkin Elmer and ThermoFisher. Further excellent case study presentations followed lunch, demonstrating the use of HCI in 3D imaging of spheroids (Jano Kristin-Vizi, UCL), cell cycle analysis (Alexis Barr, MRC London), GPCR pharmacology (Steve Briddon, Nottingham) and siRNA screening (Katarzyna Szymanska, Leeds).

Overall, a thoroughly enjoyable, if intense, day which was had by all. Many thanks to the RMS Office for their help with the organisation, the speakers for their well-judged presentations and the exhibitors for their sponsorship and informative demonstrations. Based on the very positive feedback, planning for a follow up meeting next year is already underway!
Thank you
From the 10th April, Sally Utton will be leaving COMPARE. We would like to thank her for her valuable contribution to COMPARE and wish her well in her new role at the University of Leicester.

Welcome
The Management Board welcome Dr Alejandra Tomas, who will be joining the University of Birmingham as Senior Research Fellow in the Institute of Metabolism and Systems Research, College of Medical and Dental Sciences and a COMPARE PI.

COMPARE Publications


We would like to celebrate our successful publications via the newsletter and the COMPARE website. Please email compare@birmingham-nottingham.ac.uk with the references of published papers.