

# COMPARE

CENTRE OF MEMBRANE PROTEINS AND RECEPTORS

## Newsletter—Special Edition

Edition 26 May 2020

### ECR G protein-coupled receptor (GPCR) pharmacology and cell signalling Symposium 19th & 20th May 2020

The first COMPARE on-line ECR GPCR Symposium took place over two afternoons on Tuesday 19th and Wednesday 20th May 2020. Due to COVID19 the meeting was hosted on Teams, which proved a successful platform for the majority of delegates.

We would like to thank the event speakers (listed below) for agreeing to participate and for providing excellent talks and slides, which sparked some very interesting questions from the audience;

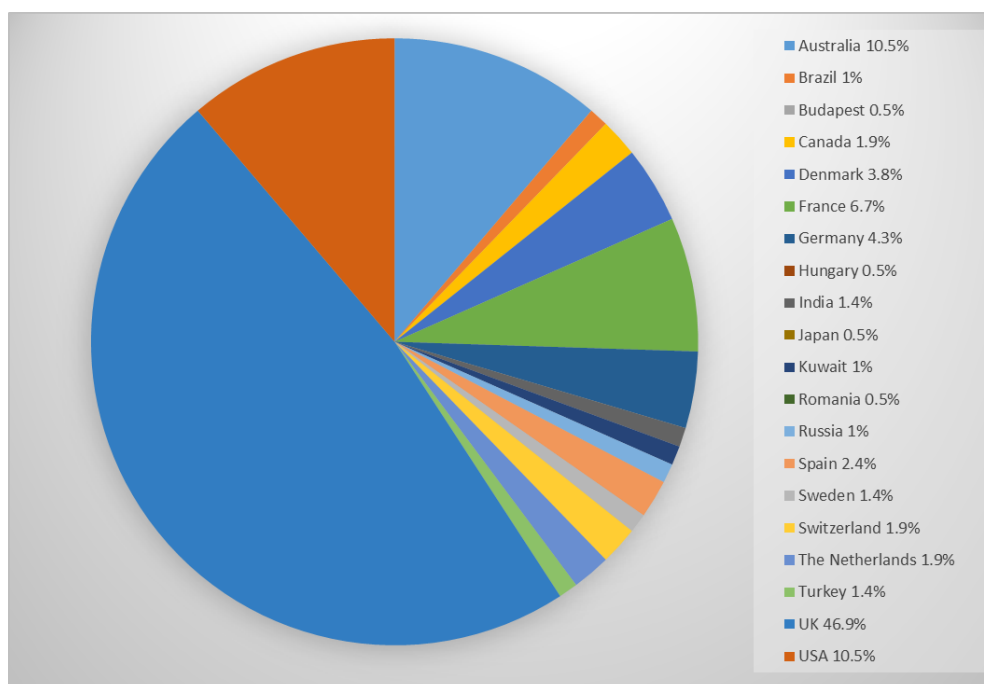
#### Day One

Aurelien Rizk, InterAx Biotech  
Raphael Haider, Uni of Jena  
Shannon O'Brien, Uni of Birmingham  
Brad Hoare, Uni of Nottingham  
Reggie Bosma, Vrije University

#### Day two

Matthew Harris, Uni of Cambridge  
Liz Rosethorne, Uni of Nottingham  
Miriam Scarpa, Uni of Glasgow  
David Favara, Uni of Cambridge  
Simone Prömel, Uni of Leipzig  
Ines Liebcher, Uni of Leipzig

Registrations were received from over 200 delegates across 20 countries, which was an amazing response considering the short time the symposium was advertised following lock-down.



#### Date for next meeting

Following the success of this meeting and positive feedback, it has been agreed that COMPARE ECRs will host a follow up meeting in **September 2020**. If you would like to register your interest in attending or presenting your research to the GPCR community, please contact Mark Soave ([mark.soave@nottingham.ac.uk](mailto:mark.soave@nottingham.ac.uk)) or Laura Kilpatrick ([laura.kilpatrick@nottingham.ac.uk](mailto:laura.kilpatrick@nottingham.ac.uk)).

The date and registration details will be advertised in due course.

[birmingham-nottingham.ac.uk/compare](http://birmingham-nottingham.ac.uk/compare)



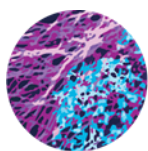
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If you have any items for the next newsletter please send to:

[compare@birmingham-nottingham.ac.uk](mailto:compare@birmingham-nottingham.ac.uk)

#### IN PARTNERSHIP:

The Universities of Birmingham and Nottingham



## Posters

Research Posters were held in break-out rooms where delegates could contact the presenters and discuss findings and research.

Posters were submitted by the following ECRs;

**Ross Cheloha, Boston Children's Hospital**

Nanobody tethering provides improved GPCR ligands

**Laura Figuerola, Instituto de Química Medica**

Evaluation of LFA261A as a biased allosteric modulator for the orphan G protein-coupled receptor GPR55

**Amod Godbole, University Hospital Jena**

Dynamic adenosine receptor conformations differentially influence residence time for agonists and subsequent G-protein activation and signalling

**Maria Angeles Jimenez Sigstad, University of Nottingham**

Using alanine scanning data from V2R and CB2R to predict biased signalling with Random Forest Classifier

**Clare Harwood, University of Nottingham**

Solubilisation of the functional  $\beta$ 2-adrenoceptor in the polymer Diisobutylene maleic acid (DIBMA)

**Eline Koers, University of Nottingham**

Chaperone-mediated folding of GPCRs in health and disease

**Desi Nesheva, University of Nottingham**

Examining the mechanism of action of small molecule modulators of the human CXCR2 receptor using Split Luciferase Complementation and TR FRET methods

**David Sykes, University of Nottingham**

Development of novel TR-FRET-based adenosine A2A binding assays using the polymers SMA and DIBMA

**Abigail Walker, Imperial College London**

Reprogramming prostaglandin EP2 signalling in the pregnant human myometrium from an anti- to a pro-labour receptor via crosstalk with the oxytocin receptor

**Edward Wragg, University of Nottingham & Birmingham**

Investigating Colocalisation Between VEGFR2 and Adenosine A2 Receptors Using NanoBRET Saturation Assays

Feedback from poster presenters on the new virtual platform;

**Edward Wragg, University of Nottingham & Birmingham**

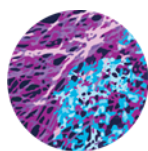
*The virtual poster session gave me a unique opportunity to discuss my work with researchers from across the world, both via messages in my poster chat room, and face-to-face via video call. I received some thought-provoking questions and feedback on my poster, and this has helped me plan the next set of experiments that I will undertake in the lab. I enjoyed this virtual session, and I look forward to partaking in more of them in the future.*

**Laura Figuerola, Instituto de Química Medica**

*I am a PhD student and the COMPARE conference gave me the opportunity to present my research as a poster. I am very grateful to the organization. The virtual poster presentation was a great idea since experts in the field could chat with you and brought new debates. A channel section for each poster was a good experience even though I got some small home internet connection troubles. I would definitely participate to virtual conferences of such high scientific level again.*

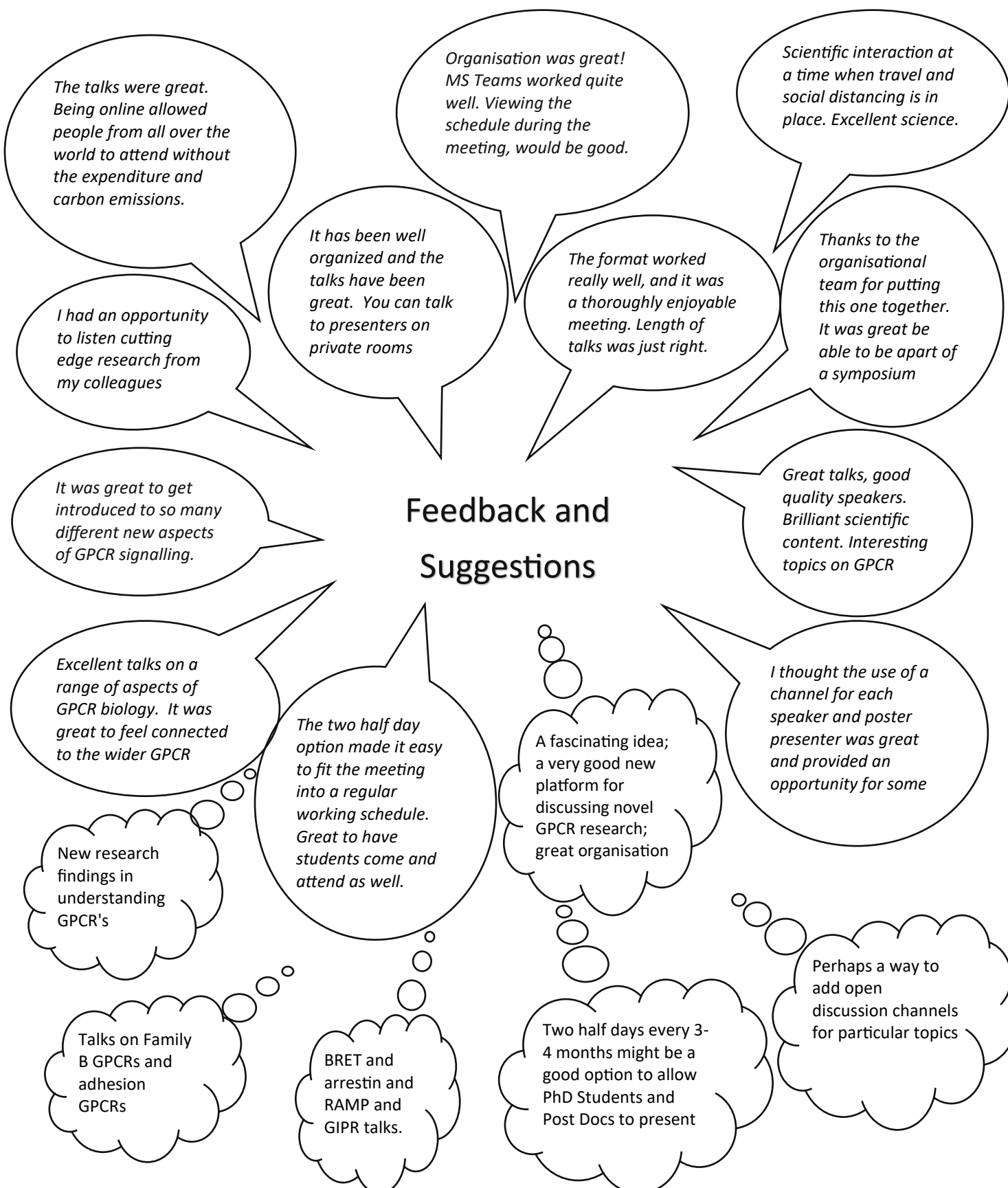
**Maria Angeles Jimenez Sigstad, University of Nottingham**

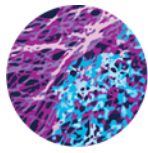
*I took it as a challenge to show most of the work that I've done at Dmitry Veprintsev's group while I was finishing my degree in MSci in Neuroscience. I would have liked to have given a 10 minute summary of my poster to explain my work during the main presentations. The online set up of different chat rooms is a hard-to-follow procedure for new remote workers, which restricts the number of people that can access the posters. I have to say that combining Machine Learning tools with Molecular Neuroscience is hard to grasp, but I hope people were able to get a short overview of what was done. My take-home-message is poster sessions should have been included in the main transmission, and not individually because sometimes we don't know we might be interested in one topic unless we are being targeted with it.*



## Feedback

Thank you to all the delegates that have provided feedback and suggestions, this will help us to formulate plans for future events. We have received some very positive comments and helpful suggestions;

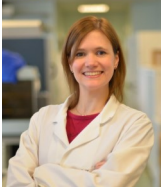




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## Thank you



Thank you and best wishes to Dr Laura Kilpatrick, who will formally become a member the School of Pharmacy at the University of Nottingham from the 1st June on an Anne McLaren/Nottingham Research Fellowship. Laura has been an important member of Cell Signalling and COMPARE for the last ten years as research assistant, BPS A J Clark PhD Student and Postdoc.

The fellowship provides Laura with three years of independent funding and is linked to a permanent academic position in the School of Pharmacy. Laura will remain an important member of COMPARE as Associate PI and will now be eligible to be a full academic supervisor for our Wellcome Trust Four-Year PhD programme on Drug Discovery and Team Science and for ONCORNET2.0. Laura will continue to use the Cell Signalling laboratories and so we hope she will be around to troubleshoot our experimental problems for a long time to come!