

Newsletter

Edition 15 May 2019

COMPARE clinical/non-clinical fellowships

The Strategic Oversight Group have approved the funding of four positions to increase the translational research in COMPARE (two in each university). This funding can be used to support a clinician for one year with the expectation that they will obtain further funding to undertake a PhD or a postdoctoral fellow for 18 months. It is expected that there will be a minimum of two supervisors and that one will be a clinician and one a member of COMPARE: both supervisors can be from the same university. For further information, please contact Steve Hill or Steve Watson.

Congratulations

Congratulations to **Professor Paula Mendes**, COMPARE PI who as part of the lifeTIME CDT Group has been awarded a £7million grant from EPSRC. The lifETIME CDT is formed from leading academics from Universities of Glasgow, Birmingham, Aston and is also supported by Science Foundation Ireland with CÚRAM. The lifETIME CDT will focus on the development of non-animal technologies (NATs) for use in drug development, toxicology and regenerative medicine.



Professor Mendes has also received a grant worth over £275,000 from Prostate Cancer UK. Professor Mendes, said: "Prostate specific antigen, or PSA, is produced naturally by the prostate. A raised level in the blood can indicate a problem, but this doesn't always mean cancer. This research uses coloured nanoparticles which bind to sugars attached to PSA proteins to see if they can help us tell whether there is actually cancer, and if so, how aggressive it's likely to be. If we're successful, we could start clinical trials in the near future, and hope to eventually see this test rolled out for men across the country."

Tri-Campus Postgraduate Prize Awards. Chloe Peach, a COMPARE PhD student supervised by Jeanette Woolard and Steve Hill, has been awarded the Tri-Campus Postgraduate Prize - Ian Tomlin Award for 2018/2019. with the citation reading "in recognition of the progress you have made with your research and your contribution to the postgraduate community".



The awards celebrate the work and achievements of postgraduate students across our three international campuses who are excelling in their respective fields. Chloe will be presented with her prize at a special event on 15th May 2019 in the Senate Chamber.

Key Dates

Journal Club

30th May 16:-00

IBR Seminar Room

"Structural and Functional Characterization of G Protein-Coupled Receptors with Deep Mutational Scanning" Jones et al
April 2019

Team Science Away Day

13th June 2019

St James Hotel, Nottingham

Annual Research Symposium

26th September 2019

Jubilee Conference Centre
Nottingham

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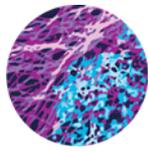
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If you have any items for the next newsletter please send to:

compare@birmingham-nottingham.ac.uk



Microscopes—The Ultramicroscopell – Imaging macro-scale samples at cellular resolution.

The Ultramicroscopell is a light sheet microscope used for 3D imaging of large, clarified samples. The microscope is capable of delivering cellular details while keeping the overview of your sample. Large samples need to be cleared to reduce opacity, the Ultramicroscopell is compatible with a range of aqueous and solvent based clearing solutions including CLARITY, CUBIC, 3DSICO and DISCO. The system is equipped with dual light sheets that excite the sample from two views improving signal homogeneity and reducing shadows.

Advantages of the system compared to a confocal microscope include high speed acquisition of 3D data (x,y,z), decreased photo bleaching, compatibility with clearing solutions and ability to image large samples.

Example applications of the Ultramicroscopell

- Projects on vasculature, lymphatic vessels in organs (rodent), tumours, embryos and biopsies (from larger animals).
- Imaging neuronal projections from a region of the brain (rodent).
- Finding sparse populations of cells in large samples e.g. metastatic cells.

The microscope is not suitable for projects that require sub-cellular resolution or live imaging.

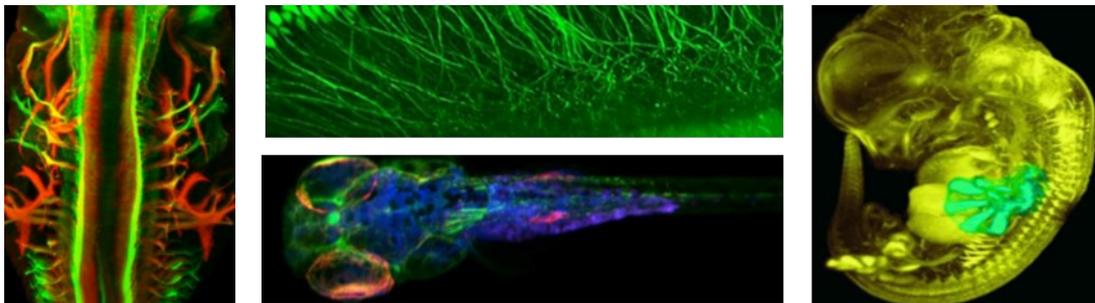
COMPARE has a range of microscope for these applications, please visit our website for information.

References

Bozycki et al., Optimized perfusion-based CUBIC protocol for the efficient whole-body clearing and imaging of rat organs. J Biophotonics. 2018.

Lozovaya et al., GABAergic inhibition in dual-transmission cholinergic and GABAergic striatal interneurons is abolished in Parkinson disease. Nat Commun. 2018.

Please contact Dee Kavanagh (D.M.Kavanagh@bham.ac.uk) for Ultramicroscopell related enquiries.



Images from LaVision website