MANCHESTER 1824 Fly Facility

The University of Manchester

Faculty of Life Sciences

Service training: Manchester Fly Facility reaches out South

Kevin McGhee (top right) and his team

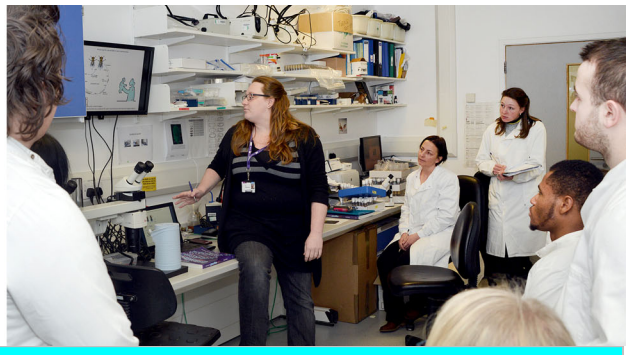
On the 15th and 16th of January a group of 13 people from Bournemouth received special neurogenetics training at the Manchester Fly Facility. The group was led by Kevin McGhee, head of the Translational Genetics research group at Bournemouth University. The aim of Kevin's research is to understand the function of candidate genes contributing to the development of schizophrenia, which were originally identified through Genome Wide Association Studies in the field of Psychiatric Genetics.

To gain insights into the fundamental biological functions of these genes, studying first their related genes in the fruit fly *Drosophila* is a powerful strategy. As demonstrated many times in the past, knowledge gained through research in the fly can then be translated into the human context, eventually leading to testable hypotheses for underlying causes of schizophrenia.

Sanjai Patel (middle) instructs Kevin McGhee and his postdoc Lisha Ma in fly genetics

To gain the skills required for this research, Kevin together with a research associate and 11 undergraduate students underwent intense training in *Drosophila* neurogenetics using the well established teaching strategy which was developed at the Manchester Fly Facility and is now in worldwide use. This training was performed by Sanjai Patel, manager of the Fly Facilty. He also provided training in fly brain dissections, brain histology, and in the performance of simple behavioural assays which are conventionally used to measure impaired motor fitness of flies, for example to assay the impact of ageing or of developmental or degenerative brain disorders. Additional lectures were provided by Andreas Prokop introducing to the model organism *Drosophila*, the major areas of its experimental application, and the fundamental principles of nervous system organisation in the fly. Matthew Ronshaugen lectured about the intricacies of knock-down technologies using small interfering RNAs in the fly, and Ines Hahn shared her experiences with behavioural assays alerting to the specific requirements of genetic and technical standardisation.

Doing brain dissections (bottom left) and viewing the stained brains (bottom right) on the Facility's microscope



Andreas Prokop (left) explaining crossing tasks, and Ines Hahn (right) talking about technical issues of nervous system and behavioural analyses.

The feedback received from the trainees was overwhelmingly positive, as reflected in the statement by Kevin McGhee's: "A really good course, thank you. Andreas and Sanjai (et al), I'd love to offer more students this opportunity in the future." We wish Kevin and his team that the new research direction taken in Bournemouth will be a great success and that our training was a helpful step towards that goal!

If you are interested in Drosophila specific training courses, please get in touch:

www.flyfacility.ls.manchester.ac.uk/contact