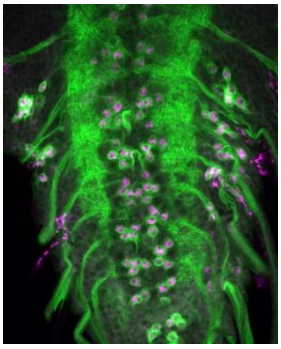
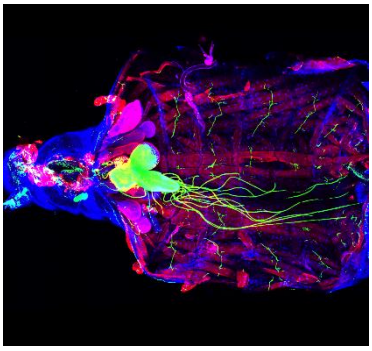
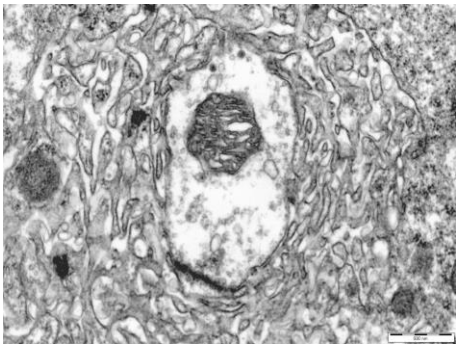
Postdoc position available in mitochondrial stress signalling

Application Deadline: 3rd November 2019

The post-doctoral researcher will use Drosophila models to investigate how mitochondrial dysfunction contributes to neurodegeneration. Mitochondrial dysfunction is strongly associated with Alzheimer's disease and other dementias (Hunt & Bateman 2018, *Febs Lett*. PMID 29086414). We identified hypoxia inducible factor-1 alpha as a key transcriptional regulator of the response to mitochondrial dysfunction in Drosophila (Cagin et al. 2015, *PNAS*, PMID: 26489648). Our studies have shown a number of stress signalling pathways are active in the Drosophila nervous system (Duncan et al. 2018, *PLoS Genetics*, PMID 30059502). Excitingly, we very recently showed that mitochondrial stress causes an increase in the metabolite 2-hydroxyglutarate (2-HG), which promotes neuronal dysfunction in Drosophila (Hunt et al. 2019, *J. Cell Biol.*, DOI: 10.1083/jcb.201904148).

The aim of this project is to determine how HIF-1a and 2-HG combine to cause neuronal dysfunction in the Drosophila nervous system. The postdoc will use genetic and biochemical methods to determine how 2-HG affects HIF-1a in Drosophila neurons. They will also identify genes that are mis-regulated by 2-HG and HIF-1a in neurons using RNA-seq and ChIP-seq. Overall, this project will answer fundamental questions about the response to mitochondrial dysfunction and identify new potential therapeutic strategies for neurological diseases.

For enquiries contact Joseph Bateman joseph_matthew.bateman@kcl.ac.uk

More details on the Bateman lab are here:

https://www.kcl.ac.uk/ioppn/depts/bcn/Our-research/Neurodegeneration/bateman

To apply:

https://my.corehr.com/pls/kingrecruit/erq_jobspec_version_4.display_form?p_company=1&p_internal_external=E&p_display_in_irish=N&p_process_type=&p_applicant_no=&p_form_profile_detail=&p_display_apply_ind=Y&p_refresh_search=Y&p_recruitment_id=021067