ARUK PhD Studentship: Experimental analysis of a genetic modifier of ALS/FTD

Applications are invited for an ARUK funded PhD studentship to be hosted jointly between the UCL Institute of Healthy Ageing and the UK Dementia Research Institute at UCL.

Principal Investigator: Professor Linda Partridge, UCL Institute of Healthy Ageing, Research Department of Genetics, Evolution and Environment

Co-Supervisor: Professor Adrian Isaacs, UK Dementia Research Institute at UCL and Department of Neurodegenerative Disease, UCL Institute of Neurology

Collaborator: Dr Teresa Niccoli, UCL Institute of Neurology

Project: Amyotrophic lateral sclerosis (ALS – sometimes known as motor neuron disease) and frontotemporal dementia are devastating neurological diseases with no current preventative or curative measures available. Some cases are familial, and attributable to a highly expanded, hexanucleotide repeat in the C9orf72 gene. Loss of function of C9orf72 could cause toxicity but, although this may contribute, the major problem seems to be the repeat sequence itself. It is transcribed into RNA in both directions, and the transcripts are translated into proteins in all reading frames, producing 5 different dipeptide repeat proteins (DPRs). Our own work, and that of others, has strongly suggested that the two arginine-containing DPRs are particularly toxic. We are trying to find out how to prevent this toxicity.

We have performed a genetic screen in the fruit fly Drosophila for genes that can rescue this toxicity. A top hit, with a strong rescue effect, encodes a transcription factor, which controls expression of other genes and which also has mammalian orthologs. This is an exciting finding, because these transcription factors have not previously been implicated in neuronal survival or protection against neurodegenerative disease. The aim of this project is to investigate how this rescue of toxicity happens, and the implications for therapeutic opportunities. The scientific environment for the student will provide an ideal training in neuroscience and experimental approaches to dementia.

Funding: ARUK provide a student stipend of £17,000 per annum plus tuition fees at Home/EU rate and research/travel costs.

Eligibility: Studentship is open to UK/EU students only. English language criteria apply, for details visit: https://www.ucl.ac.uk/prospective-students/graduate/learning-and-living-ucl/international-students/english-language-requirements
EU students: For EU students accepting a place on a programme as a Home/EU fee student for entry in the academic year 2018/19, the UK Government has confirmed that funding arrangements will also allow them to pay the same tuition fees as UK students for the duration of the student’s enrolment on that specific programme (subject to any annual increase in accordance with the applicable terms and conditions and the UCL fees schedule).

Entry requirements: applicants are required to hold a first or upper-second class UK Bachelor’s degree in an appropriate subject, or a recognised Master’s degree.

Informal enquiries: contact Michael Wright, Executive Officer, UCL Institute of Healthy Ageing michael.wright@ucl.ac.uk

Application procedure: Application is by CV and covering letter emailed to michael.wright@ucl.ac.uk. Please put ARUK studentship in the subject line.

Deadline: applications must be received by 5:00pm on Wednesday, 3rd April 2019.

Interviews: interviews will be held on Friday, 12th April 2019.

References:


