University of St Andrews

School of Psychology & Neuroscience

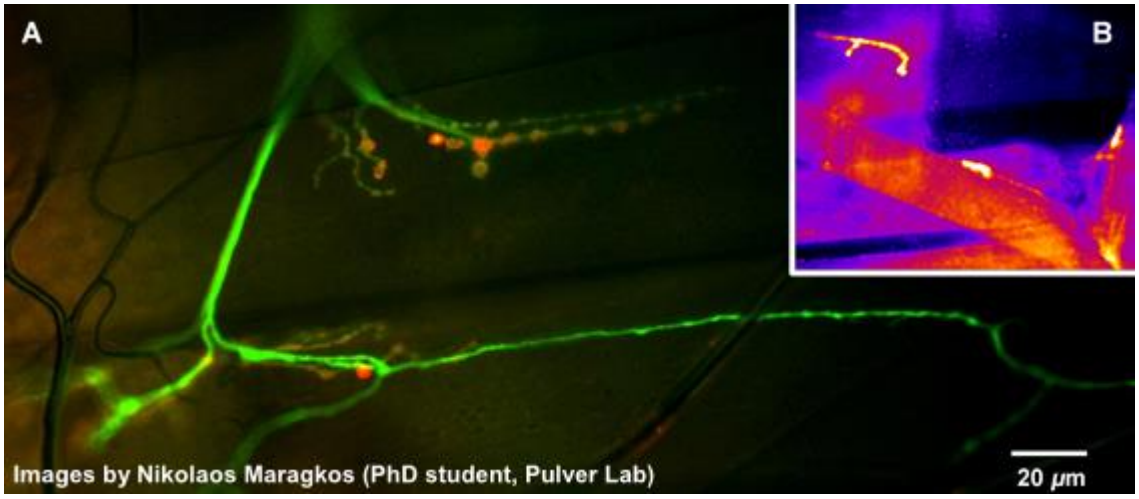
Research opportunity for undergraduates

Animals are "restless creatures", as Matt Wilkinson remarks[1]. In terms of natural selection, efficient and effective *locomotion* allows animals to move from place to place and maximise their chances of finding food, avoiding predators, and producing healthy offspring. But how is all that movement generated, orchestrated, and regulated by the underlying neural circuitry? How animals move is one of the fundamental questions in Biology. The Pulver Lab, at the School of Psychology and Neuroscience, studies the fruit-fly, *Drosophila*, in order to address this problem (http://pulverlab.wp.st-andrews.ac.uk/). Our research is highly integrative, ranging from structural analysis of neurones, synapses, and circuits, to functional imaging and electrophysiological recording of neural circuit activity, to the analysis of behaviour in the intact organism.

This year, the Pulver Lab wishes to provide an opportunity to 1–2 interested first- or second-year undergraduate students to join our team as volunteer research intern(s). The successful applicant(s) will assist in the analysis of real biological data, obtained by a range of methodologies employed for the study of the neural basis of locomotion in the *Drosophila* model system. Volunteers will typically work approximately 8hrs/week, but exact hours are flexible.

We welcome applications from motivated first- and second-year undergraduate students studying for a BSc in Neuroscience, Biology, Psychology, Physics, or related discipline. Previous research experience is not required. If you are interested in applying, please send an email to Nikolaos Maragkos at nm218@st-andrews.ac.uk. Please include your CV and a Personal Statement (up to 250 words), outlining why you aspire to pursue this internship in the Pulver Lab, and what you hope to gain from the experience. Shortlisted candidates will be interviewed in the Pulver Lab. The internship(s) will typically run during either the Summer or Autumn of 2019 and may continue beyond that depending on performance and achievement.

Application deadline: 5pm, March 1st, 2019



(A) Fluorescence imaging of larval *Drosophila* motoneurones (green: GFP) and neuromuscular junctions, NMJs (red: Bruchpilot). **(B)** Calcium imaging of muscle fibres and NMJs during motoneuronal stimulation.

[1] Wilkinson, M. (2016) *Restless Creatures: The Story of Life in Ten Movements*. Icon Books. London, UK.