



Postdoctoral and research technician positions in understanding how PAR proteins cooperate to establish cell polarity

Start date: Flexible

(applicants that will need a UK Work Permit are encouraged to apply ASAP).

The laboratory of Dr Josana Rodriguez has a full-time postdoctoral and a part-time (25-50%) research technician position available. The funding is initially available for 3 years. The lab (<https://www.staff.ncl.ac.uk/josana.rodriguez/>) enjoys state of the art equipment and is situated in the ambitious and supportive research environment of the Institute for Cell and Molecular Biosciences (<https://www.ncl.ac.uk/camb/>), within the Medical School at Newcastle University (Newcastle upon Tyne, UK). We are part of a vibrant scientific community studying cell division from different angles (<https://research.ncl.ac.uk/celldivisionbiology/>).

We are seeking enthusiastic and highly motivated scientists keen to investigate the fundamental principles of cell polarity establishment and asymmetric cell division, both essential to tissue and organ development. We have recently uncovered novel cross-talk regulation/cooperation between key effectors of cell polarity, the PAR proteins. This project will reveal the molecular mechanisms and dynamics underlying this PAR-protein functional cooperation. We will use a multi-disciplinary approach, including proteomics, genetic screens, biochemical assays, genome editing, and cutting-edge microscopy (super-resolution). The project will use mainly the nematode *C. elegans* as a model, but mammalian systems are also available in the lab.

Relevant papers

- Rodriguez J *et al.* aPKC Cycles between Functionally Distinct PAR Protein Assemblies to Drive Cell Polarity. *Dev Cell*, 2017 pp. 1-35.
- Rodriguez J *et al.* Systematic genetic interaction screens uncover cell polarity regulators and functional redundancy. *Nat Cell Biol*, 2013 vol. 15 (1) pp. 103-112.

Requirements

Postdoctoral position: **1)** Possession of, or nearing the completion of, a PhD in biology, biochemistry, biotechnology or equivalent, **2)** Evidence of previous high quality work in this or a related area, **3)** Strong background in cell biology and/or molecular techniques, **4)** Experience in at least one of the following would be an advantage: i) proteomics; ii) genetic screens; iii) live cell imaging or single molecule fluorescence techniques; iv) *C. elegans* biology and genetics, **5)** Clear commitment to a career in research.

Research Technician: **1)** Ideally a degree in biology or relevant field, **2)** Experience in at least one of the following would be an advantage: i) provision of technical support to a *C. elegans* or microbiology laboratory; ii) cell biology and/or molecular techniques; iii) *C. elegans* genetics, **3)** Strong organisation skills and attention to detail.

Informal enquiries should be directed to Dr Josana Rodriguez (josana.rodriguez@ncl.ac.uk). It would be great if you could provide: 1) cover letter expressing your interest on the proposed research project, 2) CV and 3) 2-3 reference letters including referee contact details.