Postdoctoral Research Associate

Biosciences Institute

Faculty of Medical Sciences

**The role**

We are seeking a motivated Research fellow to join the Lako group at Bioscience Institute. The 3 year MRC funded project aims to use the patient specific PRPF8-iPSC model to understand how mutations in pre-mRNA splicing factor 8 (PRPF8) results in Retinitis Pigmentosa (RP). This work follows us from our work on PRPF31-RP (PMID: 30315276). The project is a collaboration between Lako’s group at Newcastle University with four other groups located at the University of Leeds, University of Durham, UCL London and Max Planck Institute in Gottingen.

A scientific background on pluripotent stem cell differentiation and retinal biology will be essential and applicants with record of accomplishment and expertise in eye and retinal development are preferred. The post-holder will work under the direction of the principal investigator from 1st of April 2020 fulltime for 3 years on a fixed term contract.

Informal enquiries can contact Professor Linda Lako ([majlinda.lako@ncl.ac.uk](mailto:majlinda.lako@ncl.ac.uk)). The vacancy can be found at: <https://jobs.ncl.ac.uk/job/Newcastle-Research-AssistantAssociate/580469101/>

As part of our commitment to career development for research staff, the University has developed 3 levels of [research role profiles](http://www.ncl.ac.uk/hr/recruitment/role-profiles.php). These profiles set out firstly the generic competences and responsibilities expected of role holders at each level and secondly the general qualifications and experiences needed for entry at a particular level.

**Key Accountabilities**

1. Perform the differentiation of human pluripotent stem cells to kidney and retinal organoids
2. Carry out the characterisation of organoids and cilia length and frequency measurements
3. Be involved in the bioinformatic analysis of differentially spliced transcripts and differentially expressed proteins between patient organoids and isogeneic controls
4. Validate the results of transcriptomic and proteomic analysis
5. Use splice-switching morpholino oligonucleotides to validate the candidate mis-spliced transcripts in retinal and kidney cells
6. Regular liaison with the Principal Investigator, researchers working on retinal and stem cell differentiation team and collaborators to ensure high quality of research and timely delivery of the project goals
7. Perform data extraction and analysis and ensure full compliance with existing ethical regulations as appropriate
8. Lead on the production of high level scientific information including analysing, writing and presenting reports and manuscripts relevant to the transplantation work
9. Continuously review the literature and technology relevant to the project and ensure that the outputs of the project are positioned appropriately in relation to other on-going work.
10. Supervise BSc, MRes and BSc project students

**The Person (Essential)**

Knowledge, Skills and Experience

*Essential*

* Knowledge of retinal development
* Experience in generation of kidney and retinal organoids from pluripotent stem cells
* Experience in kidney and retinal tissue processing and immunohistochemistry or RNA-Scope

*Desirable*

* Experience in splicing field and application to inherited retinal disease
* Knowledge of splice-switching morpholino oligonucleotides in retinal cells
* Evidence of a record of research including publication and presentation of data at conferences
* Experience in generation of kidney organoids

Attributes and Behaviour

*Essential*

* High level laboratory skills
* Excellent organisation
* Attention to detail
* Quick to learn new skills
* IT literate and competent
* Able to communicate effectively at all levels
* Able to analyse and interpret data
* Strong critical thinking skills
* Evidence of good oral communication skills; flexible independent working; initiative; and ability to work as part of a multi-disciplinary team
* Excellent interpersonal skills
* Able to prioritise key task and meet deadlines
* Willingness to work outside normal hours and weekends as necessary
* Highly Motivated and enthusiastic

### *Desirable*

* Experience of supervision of junior staff members
* Experience of managing/organising lab

Qualifications

*Essential*

* Bachelor’s degree (or equivalent) in a science, medicine or health-related subject and
* PhD in a relevant subject area