

Postdoctoral position in Neurobiology

Summary of the research project in which your research will be positioned:

The adult mammalian brain possesses two neurogenic niches of which the neurogenic potential declines steeply with age. Yet teleost fish possess sixteen neurogenic niches and exhibit a very high potential for adult neurogenesis. Most remarkably, they can regenerate tissue, including brain, upon injury. The African turquoise killifish recently gained much attention as potent ageing model based on its short life cycle, explosive growth and the finding of peculiar and abundant highly-proliferative neuronal progenitor cells (hpNPCs) in its telencephalon, next to the commonly recognized radial glia type NPCs as in zebrafish. The exact molecular nature of these hpNPCs and possibly other killifish NPC types remains elusive. Their involvement in neuro-re-generation in the (injured) (aged) brain is the topic of this project, targeted at finding new therapies to adapt the non-permissive environment of the aged mammalian brain to combat neurodegenerative disease. Hereto we will characterize in-depth the different stem cell populations at transcriptome and proteome level in the killifish telencephalon. We will define their phenotype in neurogenesis in the young and aged brain. We aim at restoring the decline in neurogenesis via reactivation of NPC-specific genes/proteins and pathways identified in the differential genetic/proteomic screen. In a final work package we will study the function of these different NPC populations during neuroregeneration upon injury in young and aged brain.

JOB DESCRIPTION

* Independent research in the field of postnatal neurogenesis, regenerative neurobiology & stem cell biology, using *Notobranchius furzeri* as model organism
* Co-operation with established research groups and core facilities (Genomics, Imaging etc.)
* Analysis of large genomic/proteomic data sets and interpretation of the results
* Writing of scripts and software to accelerate analysis and result interpretation
* Present results at national and international meetings
* Writing scientific articles, fellowship/research applications

DESIRED SKILLS AND EXPERIENCE

**Your profile:**

* PhD in Biology/Biochemistry or equivalent, with an emphasis on developmental neurobiology
* Knowledge in stem cell biology and regeneration is mandatory
* A strong track record in bioinformatics is desirable
* Previous research experience with killifish or zebrafish neurobiology is a plus
* At least one paper published in a major international journal as first author
* Excellent verbal and writing skills in English
* Independent and responsible way of working
* Interest in supervision of students
* Willing to apply for international funding (EMBO, Marie Curie, FWO Flanders)

ABOUT THE EMPLOYER

Our offer:

* A 3-year full-time position (1 year initial contract, to be prolonged for 2 years upon positive evaluation)
* Excellent training in technical and academic career skills
* A creative and collaborative environment

Do you want to be part of an internationally oriented, academic research team? Do you want to work at a university that is in the top 5 of world's most innovative universities? Are you a motivated researcher with a background in Life Sciences? You might be our next +1 on the team!

Please submit your application documents via email to [lut.arckens@kuleuven.be](mailto:lut.arckens@kuleuven.be) and please make sure your application file includes the following elements:

* A cover letter describing previous experience and career goals, including your motivation in relation to the application
* The contact information of 2 to 3 references
* Your detailed CV

Find out more about us, local funding bodies, … via our website https://bio.kuleuven.be/df/la