PhD candidate on zebrafish model for paragangliomas - Radboudumc


PhD candidate on zebrafish model for paragangliomas

- Temporary
- 36 hours a week
- 3 years
- Date of publication: 19 November 2019
- Deadline: 17 December 2019
- Scale 10: min € 2826 - max € 4481 gross per month at full employment (excl. vacation bonus and end of year payments) apply to job

Job description
Paragangliomas are tumors that originate from chromaffin cells in the adrenal medulla (also called paraganglioma) or sympathetic ganglia. Chromaffin cells are neuro-endocrine cells that can produce catecholamines such as adrenaline, noradrenaline and dopamine. Every year, between 100 and 150 new paraganglioma cases are reported in the Netherlands. Currently, there is no effective treatment for patients with metastatic or inoperable paraganglioma. There is an urgent clinical need for development of therapeutics against this disease, which requires a better understanding of the etiology and pathophysiology of paraganglioma. About 40 percent of the paraganglioma can be explained by germline mutation in a variety of genes. So far, 18 paraganglioma-related genes have been identified. A mutation in one of these paraganglioma-related genes, the succinate dehydrogenase B (SDHB), is the strongest indicator of malignancy. The SDHB protein is part of a four subunit (A-D) protein complex, the succinate dehydrogenase (SDH) complex. The SDH complex converts succinate to fumarate, one of the steps of the TCA cycle. When this complex is dysfunctional there is a build-up of succinate in the cell. Succinate stabilizes hypoxia-inducible transcription factors (HIFs). HIF-targets are subsequently transcribed and in turn boost proliferation and angiogenesis, two essential processes of tumor formation. To further unravel the pathogenesis and etiology of this disease and to develop and test new therapeutic strategies we use an existing zebrafish as animal model.

Tasks and responsibilities
- The PhD candidate will design and perform scientific research in health and disease.
- Characterization of inter-renal tumor formation in systemic and tissue-specific sdhb mutant zebrafish.
- Identification of potentially therapeutic targets and drugs.
- Generates and critically analyses the data in order to contribute to scientific publications and presents findings at scientific meetings.
- Works in a team with other students and scientists to discuss, plans and performs research in a stimulating environment.
- Works in a highly international research group with fellows from many countries.
- Supervise MSc and/or BSc students.
- Write and defend a PhD thesis within four years of starting the project.
- Candidate will take part in the graduate school of Radboudumc.

Profile
- MSc degree in Biomedical Sciences or Molecular Life Sciences or a related field.
- Experience with molecular and cell biology is considered a strong plus.
- Article 9 of the Dutch Law on Animal Experimentation is considered a strong plus.
- Experience with in vitro and in vivo modeling using zebrafish and/or cell lines is considered a plus.
- Experience with bio-informatics is considered a plus.
- Structured working style.
- A strong motivation, flexibility, and willingness to learn.
- Critical scientific attitude and be able to work both independently as well as in a group.
- Excellent communication skills; oral and in writing.

Organization
The Laboratory of Experimental Medicine, part of the Department Internal Medicine, is heading by Prof. Mihai Netea and Prof. Leo Joosten and is a large research laboratory, in which approximately 40 PhD students work together with postdoc’s and technicians.

Radboudumc
Radboudumc strives to be a leading developer of sustainable, innovative and affordable healthcare to improve the health and wellbeing of people and society in the Netherlands and beyond. This is the core of our mission: To have a significant impact on healthcare. To get a better picture of what this entails, check out our strategy.

Read more about what it means to work at Radboudumc and how you can do your part.

Employment conditions
Upon commencement of employment we require a certificate of conduct (Verklaring Omtrent het Gedrag, VOG) and there will be, depending on the type of job, a screening based on the provided cv. Radboud university medical center’s HR Department will apply for this certificate on your behalf.

Read more about the Radboudumc employment conditions and what our International Office can do for you when moving to the Netherlands.

Comments and contact information
Applicants should include a letter of intent outlining special interest in the position, related qualifications, experience and career goals, a curriculum vitae, including a list of grades of your BSc MSc components and names and addresses of professional references in the application.

All additional information about the vacancy can be obtained from Dr. Margo Dona, post-doc Internal Medicine and Henri Timmers, MD, PhD, associate professor Internal Medicine. Use the Apply button to submit your application.

Please apply before December 17.