



**Werken aan beter worden
is jezelf blijven ontwikkelen**

WerkenbijErasmusMC.nl

Erasmus MC, Department of Neuroscience plans to appoint a

PhD student on a program on nutritional prevention of Dementia.

36 hours per week

Job description

The project, funded by a ZonMw 'Memorabel' grant (Deltaplan dementia), is embedded in a long-term collaboration between the departments of Molecular Genetics (Jan Hoeijmakers, Wilbert Vermeij, Joris Pothof) and Neuroscience (Dick Jaarsma, Ype Elgersma) on the role of DNA damage in aging and degeneration of the nervous system using DNA repair deficient/accelerated aging mutant mice. Dietary restriction (DR) is well known for its anti-aging and neuroprotective effects in mammals including primates. We have found that 30% DR dramatically improves neurological health in our mutant mice (Vermeij, W.P. et al., Nature, 2016).

The overall goal of the project is to dissect the mechanisms underlying the neuroprotective effects of DR in our accelerated aging models, and to identify interventional approaches that reproduce the effects of 30% DR. The work of the PhD student will include a variety of technologies including cell-specific transcriptomics and proteomics, combined with interventional approaches in our mouse models. The specific objectives include:

- to precisely document the extent to which neurodegenerative events that operate in our mouse models (genotoxic and proteotoxic stress, transcriptional dysregulation, neuroinflammation) are reversed by 30% DR;
- to characterize genes/pathways that are altered in different nervous system cells (macroglia, neurons, microglia) by 30% DR;
- to evaluate genetic and non-genetic interventional approaches that may mimic 30% DR.

Work environment

A healthy population and excellence in healthcare through research and education. This is what Erasmus MC stands for. Conducting groundbreaking work, pushing boundaries and leading the way. In research, education, and healthcare. We are practical people with a high level of expertise, working hard to improve and renew the healthcare of today and the public health of tomorrow.

The central theme of research at the Department of Neuroscience (www.neuro.nl) is “Plasticity and Dynamics of Sensori-Motor Systems”. This central theme is investigated using a variety of technical approaches, including molecular biology, cell biology and physiology, neuroanatomy, systems electrophysiology, and behavioral and clinical studies.

The research of the group of Jaarsma focusses on the generation and precise characterization of mouse models of neurodegenerative disorders, including mouse models of amyotrophic lateral sclerosis (ALS) and DNA repair deficiency syndromes. The department of Neuroscience is a dynamic and internationally successful department with an extensive PhD teaching program.

Qualifications and skills

We are seeking an enthusiastic and self-driven PhD candidate that holds a MSc degree in biomedical science, molecular neuroscience or related field (Molecular Medicine, Nutritional Biology, Systems Biology, Nanobiology). Experience with molecular and cellular approaches, or analysis of the mouse nervous system, will be considered a plus.

Being able to present a certificate of good conduct is a condition for the appointment.

Terms of employment

You will receive a temporary position for 4 years. The gross monthly salary is € 2.279,- in the 1st year and increases to € 2.919,- in the 4th year (scale OIO). The terms of employment are according to the Collective Bargaining Agreement for Dutch University Medical Centers (CAO UMC).

Information and application

For more information about this position, please contact Dr. D. Jaarsma, Assistant Professor Neuroscience, phone number: +31 (0)10 704 33 05 or e-mail: d.jaarsma@erasmusmc.nl.

If you are excited by the thought of this position and would like to apply, please do so by using [the application form](#) on our website.

www.werkenbijerasmusmc.nl