PhD Student 'Innate Immune Activation in Neurodegenerative Disease (InCure)' (36,0 hrs)

'Innate immunity in neurodegenerative diseases' group, Clinical Chemistry & Psychiatry, VUmc

Study shared mechanisms and differences in innate immune activation in the three most frequent neurodegenerative diseases.

The project
The aim of this international EU Joint Programme - Neurodegenerative Disease Research (JPND) funded 'InCure' research project is to study shared mechanisms and differences in innate immune activation in the three most frequent NDs: Alzheimer's disease (AD), Parkinson's disease (PD) and Frontal-Temporal-Dementia (FTD). The partners within the 'InCure' consortium will experimentally analyze effects of innate immunity activation and inflammasome activation / inhibition on gene networks in cellular and animal models of AD, PD and FTD. Shared and overlapping microglial as well as neuronal gene network hubs, modules and checkpoints will be identified at the cellular level by combining a systems biological approach and functional analysis, and results will be validated in brain tissue obtained from AD, PD and FTD patients.

Your challenge
As PhD Student at VUmc, your main tasks and responsibilities are:
- Analyze microglial changes (inflammasome activation) at the cellular level in cell culture studies with adult human microglia exposed to disease relevant immunostimulants (altered proteins and RNA that are specifically found in either AD, PD or FTD), and investigate the effects of activation of the innate immune system on neuronal cells in vitro;
- validate the findings in brain tissue from AD/PD/FTD patients;
- Study modulatory effects of factors of innate immunity (complement system) on microglial inflammasome activation;
- Assess, whether identified network changes correlate to disease phenotypes and progression using CSF samples from AD, PD and FTD patients;
- Complete your research with peer-reviewed scientific publications and a PhD- thesis.

Your profile
We are looking for a PhD Student with the following background and experience:
- You hold a Master’s degree in Biomolecular Sciences, Neurosciences or equivalent;
- You have experience in, or affinity with cell biology and different (protein) chemistry techniques;
- You are able to work independently and take initiatives, but at the same time you are able to work in a team and be communicative;
- You have excellent English speaking, reading and writing skills.

Benefits
Salary scale: OIO (2200 tot 2818 euro based on a 36 hour week), depending on qualifications and experience. Salary scale: OIO (EUR 2.200 in the first year that increases yearly to EUR 2.689 in the third year). In addition to a good base salary, we offer, amongst others, an 8,3% end-of-year bonus and 8% holiday pay. For more information on our fringe benefits, please see our benefits (Dutch version).

As of July 1st, Dutch residents who will start work at VU University Medical Center will have to hand in a VOG before starting work. You need to have an DigID to be able to apply for a VOG.

Additional information
This PhD position is for a total period of three years. You will start with a contract for 12 months.

Interested?
For more information about this position, you can contact dr R. Veerhuis, projectleader, via telephone number: +31(0)20 – 444 386. For more information about the application procedure, you can contact Robert Fidder, via telephone number: +31(0)20 - 444 5635.

Please apply before 16-6-2015 with reference number D5.2015.00070RF via the following link: https://www.werkenbijvumc.nl/vacatures/phd-student-innate-immune-activation-in-neurodegenerative-disease-incure/