

PhD student/post-doc M/F



Within the department of Physiology, section Cell Physiology, of the UMC St Radboud in Nijmegen we are looking for a PhD student and/or post-doc *m/f* (3-4 years, 38 hours/week).

Within the section Cell Physiology, research is performed towards the regulation of water and iontransport in epithelial cells of organs like the kidney or intestine. We are housed in the 'Nijmegen Center for Molecular Life Sciences (NCMLS), the new research center of the University of Nijmegen, in which fundamental and clinical applied research are merged.

Daily we produce 180 litres of pro-urine in the kidney of which 1.5 litre is voided. The remaining 178 litres are reabsorbed. Concentration of urine in the kidney occurs through insertion and retrieval of Aquaporin-2 water channels into the apical plasma membrane, which is regulated by the antidiuretic hormone vasopressin (AVP), binding to its vasopressin type-2 receptor (V2R). Activating V2R mutations cause hyponatremia, while inactivating V2R gene mutations cause nephrogenic diabetes insipidus (NDI), a disease in which the kidney is unresponsive to AVP, resulting in polyuria and polydipsia. Excitingly, we recently discovered that cell permeable V2R agonists can functionally rescue V2R mutants in NDI *in vitro*. In this project we will determine the mechanism by which V2R mutants cause hyponatremia and we will test whether cell permeable V2R agonists can cure NDI in patients. Data obtained will increase our knowledge on the functioning of the V2R and is anticipated to provide a first cure of a folding disease by pharmacochaperones ever.

You should offer:

- A finished university education in (medical) biology or chemistry (masters, Drs or Dr)
- Strong motivation to succeed in scientific research
- Experience in relevant Molecular and Cell Biological techniques
- Independent and well-structured working style
- Well-developed social skills directed to work in a team
- Interest to work with patients

Closing date:

Ongoing

Further information and contact:

can be obtained from Dr. Peter M.T. Deen (P.Deen@ncmls.ru.nl; 024-3617347). Detailed information about the department can be found at <http://www.physiology-nijmegen.nl>. Applicants should send a letter of intent outlining special interest in the position, overall related qualifications, experience and career goals, a curriculum vitae, including a list of publications, and names and addresses of 2/3 professional references to Info@FYSIOL.umcn.nl.