

PhD-student/post-doc M/V



Within the department of Physiology, section Cell Physiology, of the UMC St Radboud in Nijmegen, we are looking for PhD student and/or post-doc *m/v* (2-4 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 litres 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). AVP action is counteracted by several other hormones, which mediate internalization of AQP2 through protein kinase C (PKC). Interestingly, we found that PKC activation internalizes AQP2 through its short-chain ubiquitination and phosphorylation and that AQP2 mutants in the disease nephrogenic diabetes insipidus are extensively ubiquitinated/phosphorylated. Here, we will unravel the role of AQP2 phosphorylation/ubiquitination in health and disease and how AVP-counteracting hormones down-regulate AQP2-mediated water permeability. Additionally, it may lay the first molecular connection between renal water and salt transport.

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 research
- Experience with the FRET is a pre
- Independent and well-structured working style
- Well-developed social skills directed to work in a team

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.