Drug-induced Nephrogenic diabetes insipidus

The department of Physiology (www.physiology-nijmegen.nl) has a long-standing tradition in transport physiology in epithelia and build up a substantial know-how and infrastructure in the field of molecular and cellular physiology of water and electrolyte transport. The department is, together with basic science and research-oriented clinical departments of the Radboud University Nijmegen, housed in the “Nijmegen Centre for Molecular Life Sciences (NCLMS, www.ncmls.nl)”, which integrates diverse scientific expertises in molecular and medical science for the advancement of innovation in translational research. Within the Osmoregulation group, we are seeking 2 PhD students/postdocs for a combined molecular and cellular physiology, and systems biology project.

Daily we produce 180 liters of pro-urine in the kidney of which 1.5 liter is voided. The remaining 178 liters is reabsorbed through water-selective channels, so-called Aquaporins (AQPs; see Nobel laureate Chemistry 2003). Concentration of urine occurs through insertion of AQP2 into the apical membrane of renal principal cells, which is regulated by the antidiuretic hormone vasopressin (AVP). Several drugs lead to Nephrogenic Diabetes Insipidus (NDI), a disorder in which AQP2 translocation and production is disturbed leading to excessive water loss. Using molecular/cell/system biology techniques on recently-established excellent cell and animal models, our goal in this international project is to unravel the mechanism underlying drug-induced NDI.

Requirements
- Masters/PhD degree in (medical) biology or related discipline
- Experience with molecular & cell biology or relevant animal research
- Independent and well-structured working style
- Strong motivation to succeed in scientific research
- Well-developed social skills directed to work in a team
- Excellent interpersonal and communicative skills
- Interest in transport physiology and clinically-oriented research
- Interest to work abroad

We offer a great PhD/postdoc project in a well-organized, international, and high-profile department

Terms of employment
We offer a 4 years (PhD) or 2 years (postdoc) position (36h/week) in a professional and highly-motivating working environment with about 40 colleagues in a well-equipped department. The salary will be according to the CAO-RUNMC.

Further information:
Additional information about the vacancy can be obtained from Prof. Peter MT Deen (024-2617347/06-13442286; p.deen@fysiol.umcn.nl), dept Physiology, Nijmegen Center for Molecular Life Sciences, Radboud University Nijmegen Medical Center, Nijmegen, the Netherlands. http://www.physiology-nijmegen.nl