PhD position in the Institute of Physiology, University of Zürich – Molecular identification of phosphate sensing pathways

We invite applications for a PhD student position in the Institute of Physiology of the University of Zürich.

Background  Phosphate is essential for life. In complex organisms such as mammals, the concentration of phosphate in blood is tightly controlled to avoid the consequences of hypo- and hyperphosphatemia. Even though much is known about phosphate sensing mechanisms in bacteria or yeast, little is known about mammalian phosphate sensing.

Aim of the project  Here we aim to identify the molecules involved in mammalian cellular phosphate sensing

Methodology  We will use cutting edge technologies combining multiple transgenic animal lines with CRISPR/Cas based gene modifications in various mammalian cell lines sensitive to phosphate. In animals timed and organ specific gene deletions will be used and deep phenotyping applied to detect the consequences on endocrine, renal, intestinal and bone functions. In cell lines, activation of phosphate-sensitive pathways will be monitored and candidate genes modified. Most required methods are established and our group has a long tradition in the study of epithelial transport and its regulation. For further information, see:  

http://www.physiol.uzh.ch/en/research/institutegroups/Acidbasetransport.html  or  pubmed  (“Wagner-ca”)

Qualification:  We are looking for highly motivated students, holding a Master degree in Biology, Biotechnology, Biochemistry or equivalent. Basic knowledge in molecular biology and cell biology is required and knowledge in the area of (human) physiology is a plus. Acceptance into one of the PhD programs at the faculty of Sciences is required and is subject to the full recognition of the Master degree by the University of Zurich (http://www.lifescience-graduateschool.uzh.ch). Candidates should be fluent in written and spoken English. The student will be enrolled in the Integrative Molecular Medicine PhD program in the Life Science Zurich Graduate School. This is a multidisciplinary program that lasts for 3 years and offers graduate courses, retreats and symposia.

Starting date:  January 2018 or later

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