PhD position in the Institute of Physiology, University of Zürich – Endocrine control of phosphate balance

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

**Background** The concentration of phosphate in blood is tightly controlled to avoid the consequences of hypo- and hyperphosphatemia. Several hormones participate in an endocrine network including parathyroid hormone, vitamin D, and FGF23 and its cofactor alpha-klotho. These hormones are linked through multiple feedback loops. Dysregulation of this network is associated with various diseases including kidney and cardiovascular disease as well as affecting bone health.

**Aim of the project** Understanding the endocrine mechanisms by which phosphate homeostasis is acutely controlled and consequences of phosphate overload avoided.

**Methodology** Several methodological approaches will be combined to dissect the regulation of this network. We will use various transgenic mouse lines applying deep phenotyping and cell culture applying immunohistochemistry and confocal microscopy to address the interactions between hormones and their impact on renal control of phosphate balance. All required methods are established and our group has a long tradition in the study of epithelial transport. For further information, see: [http://www.physiol.uzh.ch/en/research/institutegroups/Acidbasetransport.html](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. 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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