Role of aldosterone and the mineralocorticoid receptor in the kidney

Summary / Zusammenfassung
Aldosterone exerts pleiotropic actions in its target organs and cells involving the mineralocorticoid receptor (MR) and several downstream effectors some of which are only partially examined. The classic functions of aldosterone include regulation of renal salt excretion, thereby affecting blood pressure. The aim of the current project is to dissect the contribution of aldosterone and the mineralocorticoid receptor to the renal control of sodium and potassium homeostasis in health and disease. To reach this end wildtype, aldosterone-deficient, and kidney-specific MR-deficient mice are exposed to different physiological and pathophysiological conditions and are then analyzed by morphological, functional and molecular methods. We anticipate that the studies will provide novel insights into the specific role and signal transduction pathways of aldosterone and the MR in normal and diseased kidneys.

Publications / Publikationen

Keywords / Suchbegriffe
aldosterone, hypertension, homeostasis, sodium, potassium

Project Leadership and Contacts / Projektleitung und Kontakte
Prof. Johannes Loffing (Project Leader) johannes.loffing@anatom.uzh.ch
Dr. Nicolas Picard n.picard@anatom.uzh.ch

Funding Source(s) / Unterstützt durch
Zurich Center for Integrative Human Physiology

In Collaboration with / In Zusammenarbeit mit
Prof. Carsten Wagner, Institute of Physiology, University of Zurich Switzerland
Prof. François Verrey, Institute of Physiology, University of Zurich Switzerland
Prof. Günther Schütz, Dr. Stefan Berger, German Cancer Research Institute, Heidelberg Germany

Duration of Project / Projektdauer
Sep 2007 to Sep 2010