THE ION CHANNEL GROUP
FACULTY OF HEALTH SCIENCES
UNIVERSITY OF COPENHAGEN

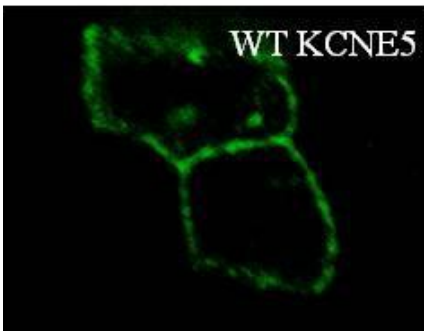
Research year project

"How do potassium channels regulate the kidney?"

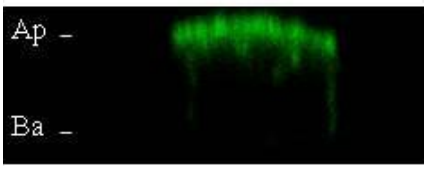
We offer a research year project that aims to delineate the function of KCNE5 in the kidney of mice. You will be trained in a number of techniques including urinalysis of albumin and creatinine, myography on renal arteries and microscopy.

Project in a nutshell

KCNE5 is located on the X-chromosome and its deletion is associated with the AMME syndrome (Alport syndrome, mental retardation, midface hypoplasia, elliptocytosis. KCNE5 is a potassium channel beta-subunit. The development of a KCNE5 knock-out mouse allows us to look selectively at changes associated with KCNE5 and thereby understand the associated diseases. In the knock-out mice the aim is to study if phenotypical changes of the kidney occur similar to changes observed in patients with Alport syndrome. A broad range of methods will be used, amongst those microscopy and studies of kidney function. All findings will aid to elucidate the physiological roles of KCNE5, but also in the future help us in treating the genetic disorders associated with this gene.



KCNE5 expressed in the apical membrane of Madin-Darby Canine Kidney cells.



The project is suitable for medical students who dream of a career in research. At the Ion Channel group YOU will get the chance of contributing to the answering of real scientific questions. The anticipated project start is spring 2015.

Place of project and contact information

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More information about the Ion Channel Group can be found at http://ionchannel.ku.dk.