

Professor Mso Pernille B. Lærkegaard Hansen

The group's research interests

The main interests of the lab are the vasculature of the kidney, kidney function and blood pressure regulation. Renal arteriolar function influence regulation of renal blood flow, glomerular filtration rate and salt and water homeostasis and thereby blood pressure. Furthermore, the kidney vascular segments are involved in several pathological conditions such as diabetes and hypertension.

Calcium channel blockers are widely used for treatment of hypertension as they inhibit voltage-gated calcium channels (Cav). The family of Cav consists of several subfamilies and we have previously elucidated the involvement of Cav in contraction of renal blood vessels. We investigate the importance of these channels in kidney function, blood vessels function and blood pressure regulation in man and mouse.

Aldosterone affects blood vessels under normal conditions but are also involved in the pathogenesis during hypertension and other vascular diseases. We have investigated the effect of aldosterone on renal blood vessels and we have discovered a new mechanism for the contractile response to aldosterone involving histamine release. We plan to study this new phenomenon and the mechanisms involved in aldosterone induced histamine release.

Evidence from our animal research form basis for our translational research using human material and our projects will provide new insights to human kidney function.

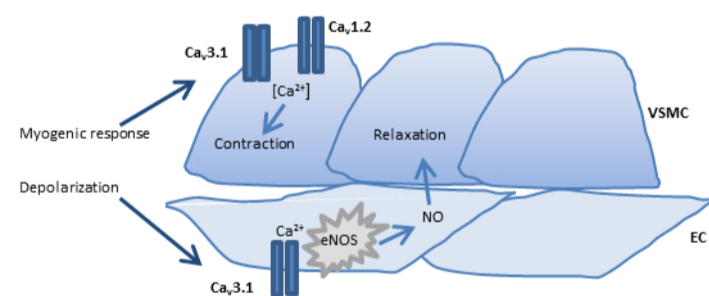
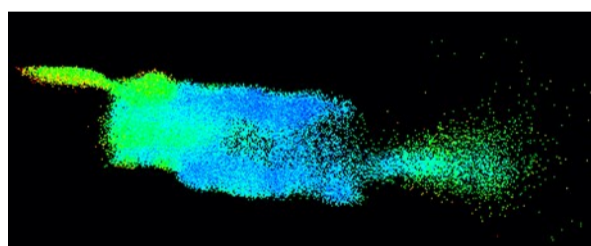


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Project examples

Investigation of functional importance of a newly discovered calcium channel in human and mice blood vessels.

Investigation of the potential role of the calcium channel in vascular disease models.

Damaging effect of aldosterone on blood vessels and investigation of the mechanisms involved.