

BBB seminar (BMED380)



Thursday, January 19. NB! 14:15 at the 9th floor of BBB (9A110bP)

Salt, hypertension and heart failure: clinical observations and molecular links

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Increased salt intake is one of the main drivers of cardiovascular diseases. In recent years a number of new concepts have been proposed to explain the mechanisms underlying this association. Whilst osmotic effects of sodium with increases in extracellular and intravascular volume explain most of its cardiovascular effects, non-osmotic sodium storage, inflammation, ER stress and novel insights into sodium handling in the kidneys have further added to our understanding. In our research we are interested in the pathogenesis of hypertension and how hypertension leads to overt cardiovascular diseases, particularly heart failure. UMOD, the gene encoding uromodulin, which is the most abundant protein in urine, is linked to hypertension. Uromodulin interacts with sodium transport in the thick ascending limb of Henle but uromodulin expression also responds to salt intake. We study the expression, trafficking and post-translational modification of uromodulin which all provide insights into its role in sodium homeostasis beyond its urinary concentration alone. This research as further sparked our interest in the role of sodium in heart failure and how extra and intracellular spaces communicate. In my presentation I will give an overview of our research that brings sodium, hypertension and heart failure together.

Chairperson: Helge Wiig <helge.wiig@uib.no>, Dept. of Biomedicine