BBB Seminar (BMED380)

SCAN ME

Thursday, April 11. 14:30 at the BBB, Auditorium 4

40 years in the black box - where studies of the interstitium in various conditions led me

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The interstitium can be defined as the fluid, proteins, solutes, and the extracellular matrix (often abbreviated as ECM) that comprise the cellular microenvironment in tissues. Even though the interstitium has been frequently considered as a black box from a fluid balance viewpoint, alterations in this space are fundamental to changes in cell function in inflammation, pathogenesis, and cancer. The inherent fluid of the interstitium, the interstitial fluid (IF), is created by transcapillary filtration and homeostasis is maintained when filtered fluid is cleared as lymph and returned to the general circulation by lymphatic vessels. During my career I have been working on exploring the functional implications of IF in normal and pathological tissue states from both fluid balance and cell function perspectives. Essential in this work has been the development of methods to access the interstitial space. These methods have enabled us to quantify elements in the cellular microenvironment, and we have thereby demonstrated, for example, that there can be dramatic gradients between tissue fluid and plasma during inflammation. In my lecture I will focus on studies that have played a central role in my research. These studies have led me into such diverse fields as the biophysical, biomechanical, and biological aspects of interstitial fluid and lymph and its transport in tissue physiology, pathophysiology, notably salt sensitive hypertension, and immune regulation.

Chairperson: Olav Tenstad, Department of Biomedicine