

DANDRITE Topical Seminar
by visitor Jarema Malicki

Thursday 19 November 2015
From 14:00 – 15:00

Aud. 6, 3rd floor, building 1170, room 347
Aarhus University, Ole Worms Allé 3, 8000 Aarhus C



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Cilium - a Unique Subcellular Compartment that Functions as a Signal Detection Device

Cilia form a morphologically distinct polarized compartment on the surface of cells. Their function is intimately associated with at least five aspects of vertebrate biology: early embryonic patterning, the differentiation and function of sensory neurons, morphogenesis and physiology of duct epithelia, cell motility and metabolism. Cilia defects result in many human abnormalities ranging from aberrations of left-right asymmetry to blindness.

The function of cilia requires efficient transport of many specialized tissue-specific proteins both into and inside the ciliary compartment. One of the main interests of the Jarema Malicki laboratory are mechanisms that transport proteins in cilia, including microtubule-dependent motors and their interactions with proteins that mediate signal transduction such as transmembrane receptors. The laboratory exploits several parallel experimental approaches, including genetic analysis in the zebrafish model, imaging and genetic manipulation of mammalian tissue culture cells, and, more recently, proteomics and imaging of cilia in an unicellular organism, *Tetrahymena*.

Host: Affiliated Researcher Olav Andersen, DANDRITE