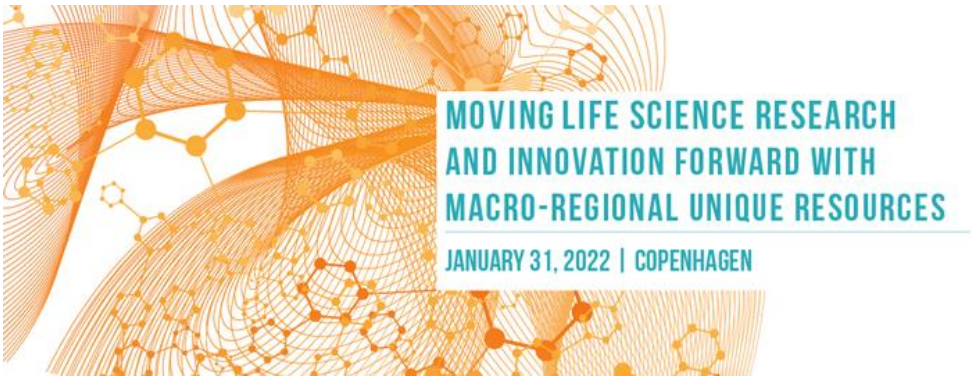

Thomas Boesen, PhD

Senior Researcher and cryo-EM Facility Manager, core group leader in Center for Electromicrobiology and affiliated researcher in Danish node of the Nordic EMBL Network (DANDRITE), Interdisciplinary Nanoscience Center (iNANO) and Department of Molecular Biology and Genetics, Aarhus University.

The primary focus of my current research is the molecular and structural biology associated with biological long distance electron transfer i.e. the transfer of electrons over micrometer to millimeter distances between or within organisms which is studied in the context of Center for Electromicrobiology (CEM, cem.au.dk) and with international collaborators. This includes ultrastructural studies of cable bacteria cellular filaments and other bacteria using a range of methods including scanning electron microscopy and transmission electron microscopy. In addition, studies of selected target proteins involved in electron transport and transfer are conducted using structural, biochemical, electrochemical and physicochemical characterization. The basic idea is to use structural information at all levels from the multicellular organism to protein molecule to understand the mechanisms behind biological long-distance electron transfer.

Selected publications:

Kjeldsen et al. (2019). On the evolution and physiology of cable bacteria. Proc Natl Acad Sci U S A 116(38):19116-19125

Cornelissen et al. (2018). The Cell Envelope Structure of Cable Bacteria. Front Microbiol 9:3044.