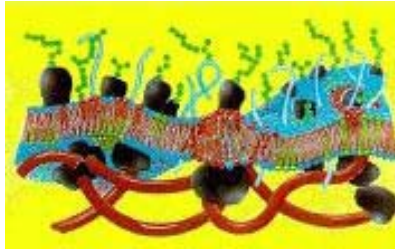


**MEMPHYS-Center for Biomembrane Physics**  
University of Southern Denmark



## Research assistant professor position available

The position is embedded in the newly established Danish National Center for Biophysics (BioNet) which is run by the universities in Aalborg, Copenhagen and Odense. The position is allocated at the MEMPHYS-Center for Biomembrane Physics at the University of Southern Denmark (SDU) in Odense, Denmark, and is available for 3+2 years. The focus of research is dedicated to the structure and dynamics of biomembrane domains *in vivo* and *in vitro* (see below for more details). The background of the applicant is expected to be related to one (or more) of the subsequent fields:

- dynamics of proteins and membranes
- advanced fluorescence microscopy techniques
- single molecule applications in the context of living matter

The MEMPHYS-Center for Biomembrane Physics provides an excellent environment for performing cutting-edge research on the structure and dynamics of biomembranes. Facilities include micromanipulation setups, atomic force microscopy, single-molecule force spectroscopy, fluorescence microscopy (confocal and two-photon), fluorescence spectroscopy, as well as access to a computer cluster at the Danish Center for Scientific Computing (currently about 1000 nodes). The close neighborhood to and interaction with the Department of Biochemistry and Molecular Biology also supports the work on living cells.

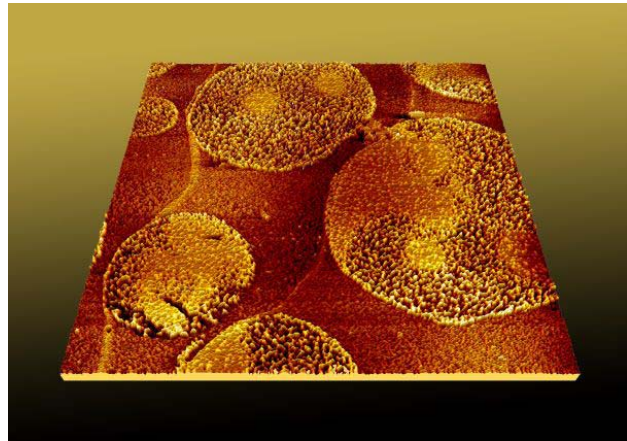
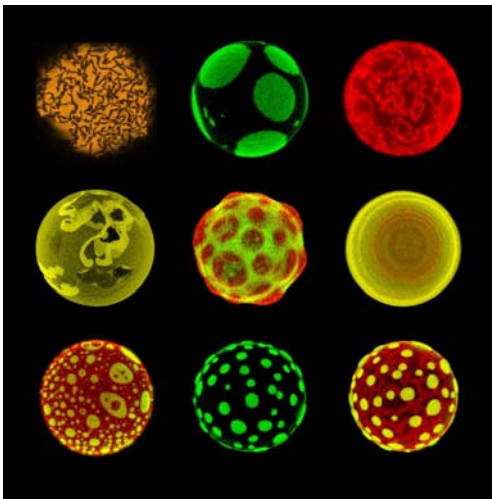
Contact:

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Prof. Luis Bagatolli ([bagatolli@memphys.sdu.dk](mailto:bagatolli@memphys.sdu.dk))

WWW: [www.memphys.sdu.dk](http://www.memphys.sdu.dk).

## Project proposal

The formation of membrane domains ('rafts') is essential for the cell's viability and organization and often these domains act as precursors for the development of organelles (e.g. in the case of exit sites of the endoplasmic reticulum or caveolae). The aim of the project is to elucidate the generic aspects of the interplay between proteins and lipids in the formation, maintenance and dynamics of such domains either in cells or tissues (such as skin). To this end, fluorescence microscopy measurements (e.g. confocal and two-photon imaging, fluorescence correlation spectroscopy, atomic force microscopy) on living cells or tissues are as valuable as the setup and investigation of appropriate *in vitro* assays, e.g. giant unilamellar vesicles composed of native membranes or planar supported bilayers. Using these assays, domain formation has readily been observed by fluorescence microscopy and atomic force microscopy (see pictures below).



see more on <http://scienceinyoureyes.memphys.sdu.dk/galleri.php>