



The Physical Biology group of Prof. Ernst H.K. Stelzer at the Goethe University in Frankfurt am Main has two open positions for

Postdocs

interested in three-dimensional cell biology, high content screening, light-sheet-based fluorescence microscopy and three-dimensional image processing

Most optical technologies (microscopy, optical tweezers, laser nanoscalpel) are applied to two-dimensional cellular systems, this means they are used in a cellular context that is defined by hard and flat surfaces. However, physiological meaningful information relies on the morphology, the mechanical properties, the media flux and the biochemistry of a cell's context as it is usually found in live tissue. A physiological context is certainly not found in single cells cultivated on cover slips. It requires the complex three-dimensional relationship of cells cultivated in an ECM-based gel or in naturally developing small embryos of fish or flies and, of course, in tissue sections.

FMLS (Goethe University Frankfurt am Main), Bayer-Schering Pharma AG (Berlin), Spherotec AG (Munich) and Max-Planck-Institute for Molecular Cell Biology and Genetics (MPI-CBG, Dresden) have formed a consortium that will establish novel high-content drug-screening assays based on three-dimensional cellular spheroids. The consortium is funded by the German Ministry for Education and Research (BMBF). Goals of the project are 1) the development of a high-content analysis platform applying a light sheet-based fluorescence microscope (LSFM), 2) the development of drug screening assays based on 3D cellular spheroids and 3) the application of the assays to oncology and toxicology.

We seek to employ enthusiastic, highly motivated personalities with a degree in biology, biochemistry, biotechnology and/or physics and an interest in the modern life sciences, three-dimensional microscopy and three-dimensional image processing/visualization.

The group of Prof. Stelzer (<http://www.lmg.embl.de>) is part of the Frankfurt Institute for Molecular Life Science (FMLS). It constitutes an interdisciplinary team of chemists, biologists, biotechnologists, mathematicians and physicists. The laboratory is equipped with state-of-the-art facilities for cell culture and molecular biology, as well as with advanced fluorescence microscopy equipment, including light-sheet-based fluorescence microscopy.

Come on, give your life a twist and contact Dr. F. Pampaloni or Prof. E. Stelzer
francesco.pampaloni@physikalischebiologie.de or ernst.stelzer@physikalischebiologie.de

Administrative issues are handled by Ms. Sonja P. Stamness
sonja.stamness@physikalischebiologie.de, Tel. +49 (69) 798 29660

