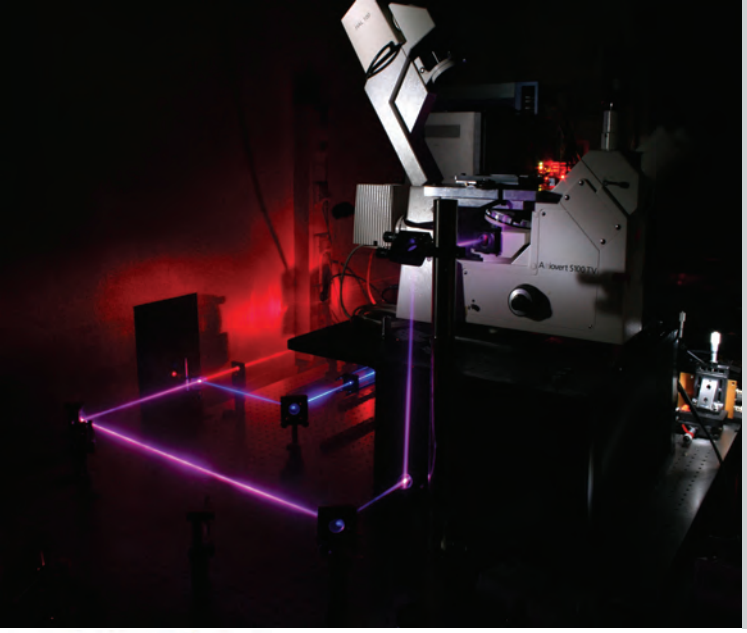
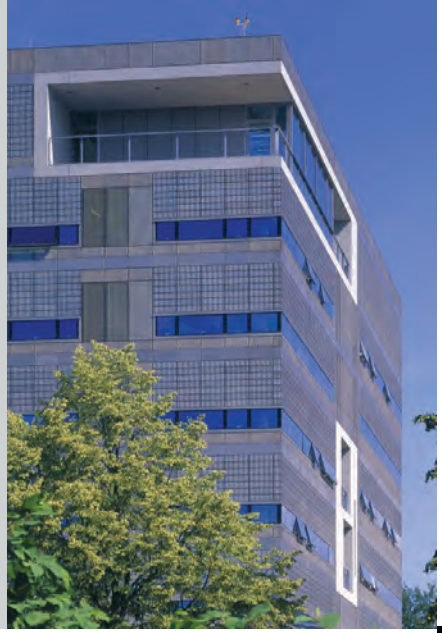
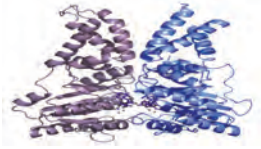




CellNetworks
Bioquant
BQ0002
Im Neuenheimer Feld 267
D-69120 Heidelberg
Germany



- - - - - - - - - - - - - - - ► get connected - - - - ►

CellNetworks: *The Cluster of Excellence, centered on world-renowned Heidelberg University, unites leading research groups from the University (faculties of Medical Science, Bioscience and Natural Science), European Molecular Biology Lab, German Cancer Research Center, Max-Planck Center for Medical Research and the Central Institute for Mental Health in one common objective:*

Explore complex networks within and beyond the cell, describe functional interaction in unprecedented detail and truly understand how it all fits into place.

For further information regarding research opportunities and collaborations please contact

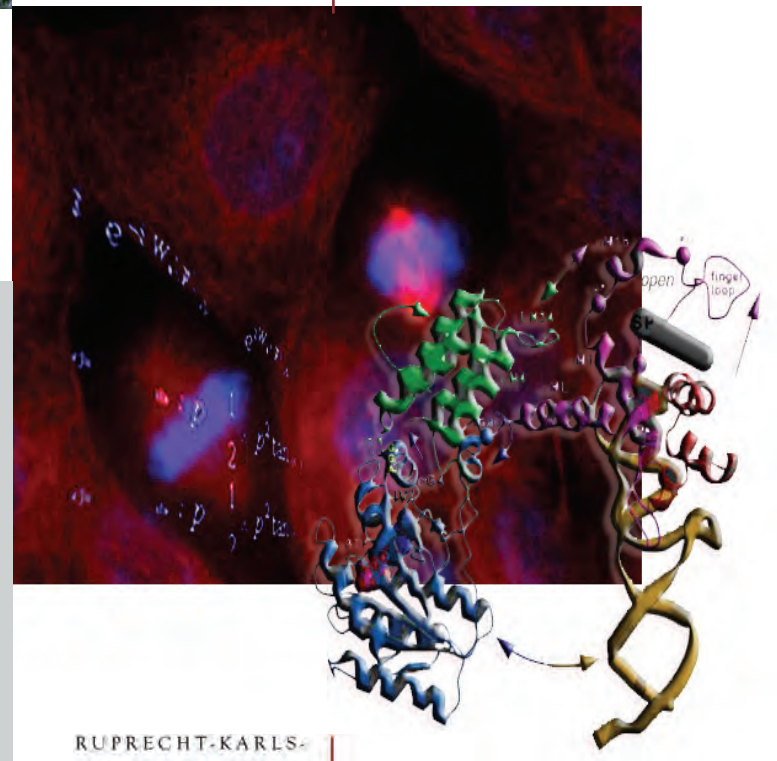
EXZELLENZCLUSTER
CellNetworks

Coordinator H. G. Kräusslich
cellnetworks@bioquant.uni-heidelberg.de
or visit our website at
www.cellnetworks.uni-hd.de

Discovering Nature's Secrets and the Molecular Basis of Life

CellNetworks

Cluster of Excellence



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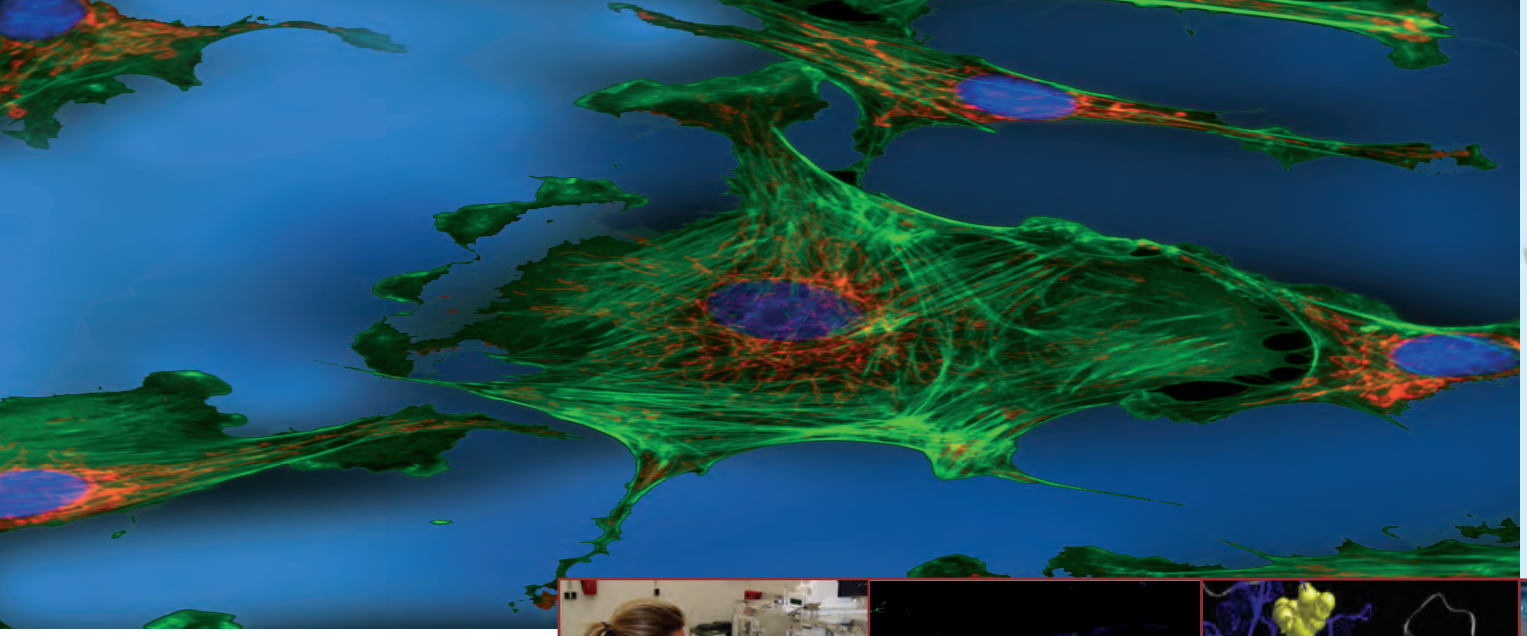
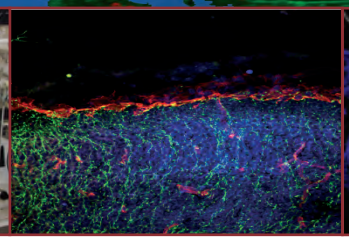
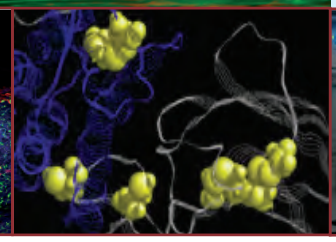
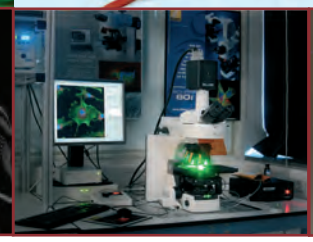
UNIVERSITÄT
HEIDELBERG









Science

Cellular phenomena surpass the conventional borders of scientific disciplines. CellNetworks is designed to do the same.

The cluster enhances Heidelberg's outstanding focus on life-science with expertise from physical chemistry, biophysics, material science, engineering and advanced computation to create a powerful interdisciplinary platform well suited to sophisticated challenges. CellNetworks applies this integrative approach to achieve new and profound insight into biological networks drawn from the four focus areas

- *Biogenesis, Interactions and Regulation of Protein Machines,*
- *Dynamics of Cell Architecture,*
- *Information Processing in Complex Multi-Cellular Networks,*
- *Alteration of Networks by Infectious Pathogens.*

People

***CellNetworks** – like the networks it explores – is all about communication.*

The cluster not only links more than 90 excellent groups from Heidelberg University and internationally outstanding research institutions, but truly makes a point of bringing them together.

Taking special care in integrating the future generation of excellent scientists, CellNetworks interacts closely with the HBIGS Graduate School of Molecular and Cellular Biology.

At the heart of this interaction lies the Bioquant building, housing biomedical wetlabs as well as powerful computing power. Bringing it all together under one roof it is specifically designed for promoting short-route interdisciplinary communication and creates the powerful synergies the cluster builds on.

Technology

Frontier Science requires frontier technology. The sophisticated challenges the cluster faces demand powerful and often costly technology, normally exceeding single groups' capabilities. Its unique structure allows CellNetworks to provide state-of-the-art technology to all cluster members, including

- *deep sequencing*
- *electron and cryoelectron microscopy*
- *light microscopy (Nikon Imaging Center)*
- *RNAi screening*
- *protein crystallisation*
- *mass spectrometry*
- *single molecule spectroscopy*
- *high-end computation, simulation and modeling*

Strongly emphasising method development, CellNetworks continuously expands available technologies and techniques. Cluster membership thus provides research groups with powerful technological resources otherwise not at their disposal.