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MPIB Scientists Become EMBO Members

The European Molecular Biology Organization EMBO stands for Europe-wide cutting-edge research in the life sciences. Together with 50 outstanding scientists, **Petra Schulle**, Director at the Max Planck Institute of Biochemistry (MPIB), and **Wolfgang Zachariae**, MPIB Research Group Leader, were elected new EMBO members. Every year, the altogether 1,600 EMBO members select excellent scientists for this honor. EMBO supports young talented researchers in their career and systematically stimulates national and international scientific exchange. With the admission of **Petra Schulle**, all eight Directors of the MPI of Biochemistry are now EMBO members.

On May 21, 2013 the European Molecular Biology Organization announced the 52 new EMBO members from 15 different countries who were elected to membership for their outstanding scientific achievements. The 1,600 EMBO members, including 59 Nobel laureates, are among the best European researchers and are regarded as leading scientists in their fields. Through their feedback and active participation in different committees of the organization, they also influence the future direction of life science research. One main goal of EMBO is to support young scientists with a mentoring program, various courses and symposia, as well as to provide the possibility of intensive networking with other national and international researchers.

The ABCs of Life

How did the first cells arise billions of years ago? Which features and capabilities did they have? **Petra Schulle** and her Research Department "Cellular and Molecular Biophysics" want to start from scratch and create a biological system from individual building blocks that is able to self-replicate – an ancestor of all cells. At present, however, even a minimal cell is too complex to reconstruct. Therefore, the scientists have to assemble smaller biological modules first. Schulle's research activities focus on biological membranes, which consist of many proteins and lipids. The biophysicist and her team pioneered the development and application of a biophysical method, Fluorescence Cross Correlation Spectroscopy (FCCS), for single molecule analysis so that it can now be used for biological research.

The Art of Reduction

During sexual reproduction a male and a female cell fuse. In order to create viable offspring, the egg and sperm must each contribute only half of their genetic equipment. Hence, it has to be reduced. The reduction of the genetic equipment takes place during a special type of cell division: meiosis. **Wolfgang Zachariae** and his Research Group "Chromosome Biology" are investigating the details of meiosis. The molecular glue cohesion plays an important role for the correct distribution of the chromosomes. At the beginning of meiosis, it keeps the chromosomes together while it has to be destroyed later in order to separate the



chromosomes. The scientists found out how the destruction of the chromosome glue is switched on at the right time and how this procedure is coordinated with other processes of meiosis.

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