The world of non-coding RNAs in pathogenic and non-pathogenic bacteria

A typical bacterial cell is using several hundreds of different small regulatory RNAs (sRNAs), exceeding the numbers of two-component systems and other regulatory proteins. Bacterial sRNAs are very heterogeneous in lengths, secondary structures and modes of action making their full characterization challenging. Examples from two very different types of bacteria, the human pathogen Staphylococcus aureus and an environmentally relevant photosynthetic cyanobacterium, will be used to illustrate recent breakthroughs and trends in characterizing the functions and global impact of these versatile regulators of gene expression.

Wolfgang Hess studied biology in Rostock and Berlin and graduated in plant genetics from Humboldt University Berlin. Following post-doctoral phases at Humboldt University, the FMI in Basel, the CNRS in Roscoff, France and the Massachusetts Institute of Technology in Cambridge, U.S., he was appointed as funding director of a spin-off from New England Biolabs near Boston, U.S., from 2003 to 2004. Since 2004 Wolfgang Hess works at the University of Freiburg (Germany), since 2008 as full professor for Genetics and Experimental Bioinformatics.

Moderation: Professor Dr. Uwe Völker