Dr. Oscar Kuipers

Dr. Kuipers studied Biology at the University of Utrecht, where he graduated in Biochemistry, Molecular Microbiology and Informatics in 1986. Subsequently a PhD was obtained in 1990 in Biochemistry on the subject of protein engineering of porcine pancreatic phospholipase A_2. In 1990 he was appointed as a post-doc at NIZO, Ede, on the subject of biosynthesis, engineering and application of antimicrobial peptides, particularly nisin. He became project leader of several projects on genetics and biochemistry of lactic acid bacteria in the following years and was appointed group leader of the Genetics group in 1997. In 1999 he was appointed full professor at the University of Groningen in Molecular Genetics of Prokaryotes, a group now consisting of about 36 people (2 full and 1 assistant professor, 5 technicians permanent staff, and 29 temporary scientists, i.e. 20 PhD students and 9 post-docs) and about 10 students and foreign visiting scientists on average. Specific current interests are functional genomics studies, Systems Biology and Synthetic Biology using Gram-positive bacteria (*Lactococcus lactis*, *Bacillus subtilis*, *Streptococcus pneumoniae*, *Bacillus cereus)*, especially on the elucidation and visualization of complex gene regulatory networks with the aid of DNA-microarrays. The Molecular Genetics group runs a fully equipped DNA-microarray design, production and analysis unit, including sound Bioinformatics back-up (5 scientists).

His main research areas are in the molecular biology of competence development and sporulation in *B. subtilis*, phenotypic heterogeneity and bistability, antimicrobial peptides, pathogenesis mechanisms, cell-wall anchoring, controlled gene expression systems, protein secretion mechanisms, stress responses, quorum sensing and in biotechnological applications. Various national and international collaborations exist, in particular within the scope of EU programs. Oscar Kuipers has been involved in over 220 PubMed listed publications and in 20 contributions to books as well as in 12 patent applications (h-factor 48).