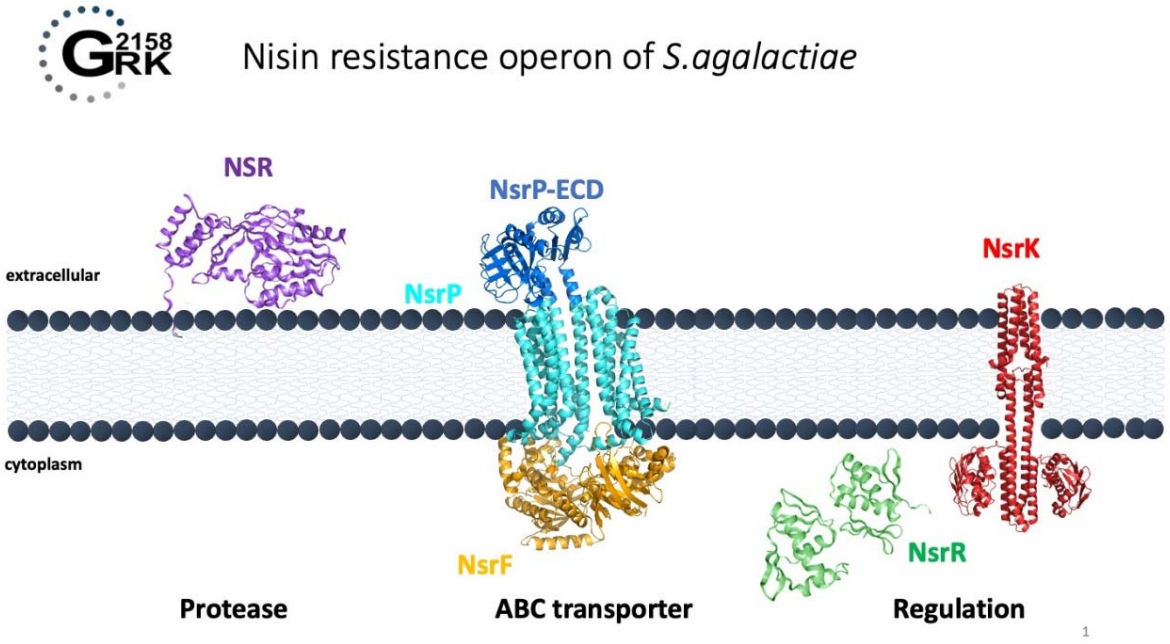
Christian Mammen

The nisin resistance operon from *S. agalactiae*: A modelsystem to inhibit lantibiotic resistance in human pathogens



The well-known lantibiotic nisin has high potential against human pathogenic Gram-positive bacteria. However, human pathogens like *S. agalactiae* are naturally resistant via a mechanism involving several proteins. This resistance is achieved by expression of a membrane associated protease (NSR), an ABC-transporter (NsrFP) and a two-component system (NsrK and NsrR).

Our major aim is to characterize the ABC-transporter NsrFP, its characteristic large extracellular domain (ECD) and the membrane bound sensor histidine kinase (NsrK). Additionally, specific inhibitors with high affinity for the individual proteins as well as the complex are tested, modeled and optimized in cooperation with AG Gohlke.

Christian Mammen is working in the Institute of Biochemistry I (RG S. Smits).

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