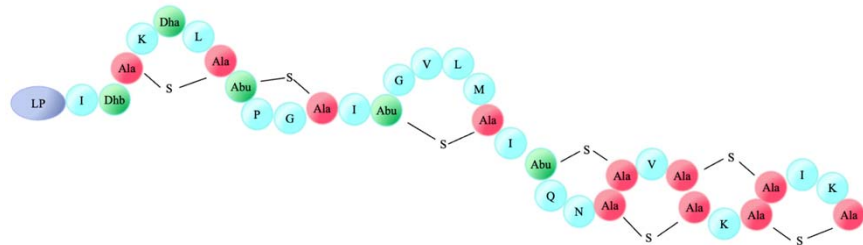
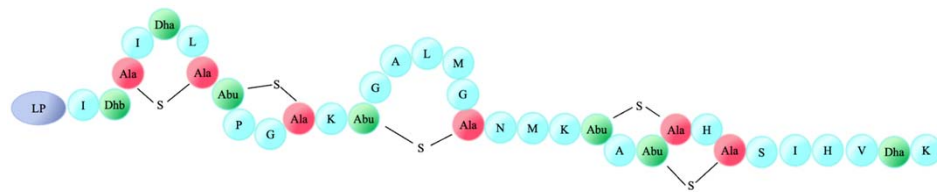


Structure, function and relationship of the novel lantibiotic maddinglicin and its biosynthetic machinery



MadA (predicted structure)



NisA (solved structure)

Lantibiotic maddinglicin is a naturally occurring substance produced by *Clostridium* sp. Maddingley. It belongs to class I lantibiotics, the most prominent representative of which is nisin. Maddinglicin showed activity against several antibiotic resistant strains, such as *M. flavus* and vancomycin resistant *Enterococcus faecalis* VE14089 (VRE). Maddinglicin is predicted to have seven lanthioinine rings and is lacking the hinge region. The structural and functional studies on maddinglicin and its modification machinery will explain its mechanism of action. Maddinglicin can potentially be used against antibiotic resistant bacterial strains and the modification machinery to design novel lantibiotics with for example an combined nisin- maddinglicin activity spectrum.