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Bacillus as a source of novel antibiotics

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B*acillus subtilis* and *Bacillus amyloliquefaciens* have more than 10% of their genome devoted to antibiotic production. These compounds could be ribosomally synthesized or obtained by the so-called multicarrier thiotemplate mechanism, in which small monomer units, amino-acids and aryl-acids in NRPS and acyl-CoAs in PKS, are loaded, activated and condensed by mega-enzymes organized in iterative functional units. Two of these compounds, namely mycosubtilin and amylolysin, will be presented in details from a structural, mechanistic and biological mode of action. Mycosubtilin is a lipopeptide that possess an antifungal activity on pathogenic yeasts such as *Candida albicans* while amylolysin is a lanthibiotic whose biological activity is centered on pathogenic bacteria such as *Listeria monocytogenese* or *Staphylococcus aureus*.

Biography

Patrick Fickers has completed a PhD from Université de Liège (Belgium) and postdoctoral studies from Polytech' Lille (France). He joined then the Centre of Protein Engineering (Liège, Belgium) as a FNRS fellow. Since 2009, he is an Associate Professor at Unversité libre de Bruxelles and the head of the Biotechnology and Bioprocess Unit. He has published 34 research papers in peer-reviewed journals and 6 book chapters. His researches focus on the development of yeast and bacterial strains by metabolic engineering and on process development in bioreactor for the production of valuable compounds.

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