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Developing oral probiotics from Streptococcus salivarius.

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Abstract

Considerable human illness can be linked to the development of oral microbiota disequilibria. The predominant oral cavity commensal, Streptococcus salivarius has emerged as an important source of safe and efficacious probiotics, capable of fostering more balanced, health-associated oral microbiota. Strain K12, the prototype S. salivarius probiotic, originally introduced to counter Streptococcus pyogenes infections, now has an expanded repertoire of health-promoting applications. K12 and several more recently proposed S. salivarius probiotics are now being applied to control diverse bacterial consortia infections including otitis media, halitosis and dental caries. Other potential applications include upregulation of immunological defenses against respiratory viral infections and treatment of oral candidosis. An overview of the key steps required for probiotic development is also presented.

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