

ACTINOMYCETEMCOMITIN: A NEW BACTERIOCIN PRODUCED BY
AGGREGATIBACTER (ACTINOBACILLUS) ACTINOMYCETEMCOMITANS

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Aggregatibacter (Actinobacillus) actinomycetemcomitans P₇₋₂₀ strain isolated from a periodontally diseased patient has produced a bacteriocin (actinomycetemcomitin) which is active against *Peptostreptococcus anaerobius* ATCC 27337. Actinomycetemcomitin was produced during exponential and stationary growth phases, and its amount decreased until disappearing during the decline growth phase. It was purified by ammonium sulphate precipitation (30-60% saturation), and further by FPLC (mono-Q ionic exchange and Phenyl Superose hydrophobic interaction) and HPLC (C-18 reverse phase). This bacteriocin has lost its activity after incubation at pH below 7.0 or above 8.0, following heating for 30 min at 45°C, and after treatment with proteolytic enzymes such as trypsin, α -chymotrypsin, and papain. Using Edman degradation it was possible to sequence 11 residues from the amino-terminus of this protein in the following order: S-Q-R-L-V-V-Y-C-S-A-Y. This sequence is similar to others from various microorganisms, whose proteins are linked to the iron metabolism and to the ABC type transport system. Actinomycetemcomitin has a molecular mass of 20,3 KDa and it represents a new bacteriocin from *A. actinomycetemcomitans*.

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