Isolation of psychrotrophic *Corynebacterium* strains from *Salmon trutta* that exhibited antimicrobial activity against *Enterococcus faecalis*

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A study has been conducted to isolate and identify bacteria from fish with potential to produce antimicrobial compounds. A wild-type, gram positive, rod shaped, non-spore-forming, aerobic, motile and psychrotrophic bacterium has been isolated from samples of *Salmon trutta*. Biochemical identification using gram-positive ID System BD BBL Crystal GP and Api Coryne System indicated that the bacteria belonged to genus *Corynebacterium*. This strain cultivated in 500 ml Erlenmeyer flask with 100 ml of minimal medium with dextrose as the sole carbon source was able to inhibit growth of *Enterococcus faecalis* ATCC 29212. The culture was centrifuged at 8,000 rpm for 15 min and the supernatant was lyophilized. Precipitates were re-suspended in phosphate buffered saline (PBS), producing an antimicrobial solution (ACS). The antimicrobial activity of the ACS was assessed against *E. faecalis* test strain during its exponential growth phases. The kinetics of growth indicated that the effect of ACS is bacteriostatic. This solution was stable when exposed 30 minutes to temperatures ranging from 40 to 100°C. In addition, the ACS retained its activity within a pH range of 2-8 during a 2 h incubation, showing higher activity at pH 6. However, the antimicrobial activity declined at pH 10. The genus *Corynebacterium* includes some biotechnological relevant species. Some of their products are used as food additives, such as L-lysine and glutamic acid. We describe here the characteristics of a strain with antimicrobial activity against *Enterococcus faecalis*, a species that can be responsible of a variety of human infections.

Biography

Rius N has completed her PhD in 1993 from University of Barcelona and Postdoctoral studies from Department of Biology, Massachusetts Institute of Technology. She is an Associate Professor of Microbiology at the University of Barcelona. She has published more than 20 papers in reputed journals and has reviewed several manuscripts submitted to international journals such as *J. Ind. Microbiol. Biotechnol.*, *J. Basic Microbiol.*, *ACTAPOL*, *J. Agric. Food Chem. and Cytometry. Part A.*

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