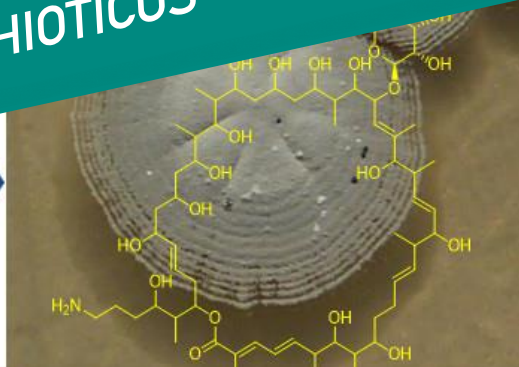




NOVEL ANTIBIOTIC AND ANTITUMOR AGENT PRODUCED BY THE MARINE ACTINOBACTERIUM STREPTOMYCES ALTHIOTICUS

TECHNOLOGY OFFER



COMPETITIVE ADVANTAGES

✓ **Wide and international potential market**, as one novel natural product is made available with antibacterial activity against *Mycobacterium tuberculosis*, and other pathogenic Gram-positive and Gram-negative bacteria, and cytotoxic activity against breast and colon human tumour cell lines.

✓ **Simple, short and economic biotechnological process**: our method allows the production of said compound by fermentation, rather than by chemical synthesis.

INNOVATIVE ASPECTS

✓ The present invention represents a solution to the need for new antibiotic compounds and antitumor agents with biomedical potential in the treatment or prevention of infectious diseases caused by Gram positive and Gram negative pathogenic bacteria, and also against breast and colon carcinoma cell lines.

✓ It also represents a solution to the need for simple, short and economic procedures for obtaining said compounds with antibacterial and antitumor activity as the method of the invention allows to produce such compounds by fermentation with *Streptomyces*, rather than by chemical synthesis, which is more complex, lengthy and costly.

ABSTRACT

Marine environments are emerging as a source of new natural products of pharmacological importance and marine macroalgae have revealed as a medium that should be investigated to discover structurally unique natural products with biomedical relevance. The development of new drugs is necessary due to the increasing need for new antitumor agents with improved activity, fewer undesirable side effects and greater selectivity, and to the increasing emergence of antibiotic-resistant pathogenic bacteria.

The present invention provides a new natural product with cytotoxic activity against different tumour cell lines and antibacterial activity against pathogenic bacteria, which is efficiently produced by the fermentation of a novel bacterial strain of *Streptomyces althioticus*.

It thus relates to a bacterial strain of *Streptomyces althioticus*, to a supernatant or extract of a culture of such bacterial strain, to the use of the bacterial strain for the production of certain desertomycin, to a process for obtaining said desertomycin, to a pharmaceutical or cosmetic composition, to the manufacture of a medicament for the treatment of cancer and for the treatment and/or prevention of bacterial infections or for removal and/or prevention and/or inhibition of bacterial biofilm formation, preferably on inert surfaces, i.e. *ex vivo*.

PATENTS

ES patent applied.

In time to seek international protection.

TYPE OF COLLABORATION

Licence agreement.

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