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Bio-tech

Method of obtaining an antibacterial composition from Drosera gigantea tissues and its topical application

About the solution

The invention concerns a method for obtaining an antibacterial composition based on a mixture of non-toxic yet biologically active natural compounds accumulated in Drosera gigantea tissues cultured in vitro. The process involves extraction of plant tissues in ultrapure water, purification of the extract from unwanted and cytotoxic components (such as plumbagin) by vacuum solid-phase extraction on octadecyl-modified silica, and subsequent combination of the purified extract with a gelling agent – xanthan gum.

The resulting gel is a stable, non-toxic composition containing secondary plant metabolites with strong antibacterial properties, suitable for direct topical application on the skin or wounds. The formulation shows high efficacy against Gram-positive bacteria (Staphylococcus aureus, Enterococcus faecalis, Staphylococcus epidermidis, Staphylococcus intermedius) and Gram-negative bacteria (Escherichia coli, Pseudomonas aeruginosa, Acinetobacter baumannii, Klebsiella pneumoniae).

Research Team

University of Gdańsk

Professor Aleksandra Królicka
Professor Magdalena Podlacha
PhD Marta Krychowiak-Maśnicka
PhD Dorota Myślińska
PhD Marta Bednarek
Michał Rzeszotarski

IP Protection

The invention is the subject of polish patent application:
P.437776

Applications

- Treatment and prevention of skin and wound infections,
- production of natural antibacterial dermocosmetics,
- Veterinary and cosmetic applications
- Support for antibacterial and antibiotic therapies

Cooperation opportunities

- Partnership in further research and clinical testing
- Technology licensing
- Technology sale

biuro@ctt.ug.edu.pl
ul. Wita Stwosza 63,
80-308 Gdańsk
www.ctt.ug.edu.pl

Judyta Gawryś
+48 725 991 257

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