

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*).



TRL 4

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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