

Droserone–silver antibacterial mixture against *Pseudomonas aeruginosa*

About the solution

The invention concerns an antibacterial mixture containing 3,5-dihydroxy-2-methyl-1,4-naphthoquinone (droserone) and silver nanoparticles, exhibiting synergistic bactericidal activity against resistant *Pseudomonas aeruginosa* strains.

The use of nanosilver enables activation of droserone's antibacterial properties and restores bacterial susceptibility.

The mixture shows a strong synergistic effect, significantly reducing the effective concentrations of both components while maintaining high biological efficacy.

The invention offers a promising approach for treating *P. aeruginosa* infections of the skin and wounds, including multidrug-resistant strains.

IP Protection

The invention is the subject of a patent application in the Polish Patent Office No. **P.437292** and is protected by the Polish Patent Office under the number: **Pat.243140**

Technology readiness level

TRL 4 – Technology validated in laboratory conditions.



TRL 4

Research Team

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Applications

- Topical preparations for treating skin and wound infections caused by *Staphylococcus aureus*
- Sntiseptic and disinfectant agents in medical and veterinary use,
- Component of wound dressings and healing–support formulations.

Cooperation opportunities

- licensing or joint development of application-ready formulations,
- Partnership with pharmaceutical and biomedical industries for product implementation,
- Collaboration in applied research on synergistic bioactive systems.