

Innovative dichlone–silver mixture with antibacterial activity against *Pseudomonas aeruginosa*

About the solution

The mixture based on 2,3-dichloro-1,4-naphthoquinone (dichlone) and silver nanoparticles exhibits strong antibacterial activity against resistant *Pseudomonas aeruginosa*.

The use of nanosilver activates and enhances the bactericidal properties of dichlone, creating a synergistic effect and significantly reducing the minimal effective doses required for bacterial elimination.

The developed solution combines high efficacy with low toxicity and can be used in topical formulations for treating wounds, burns, or skin infections.

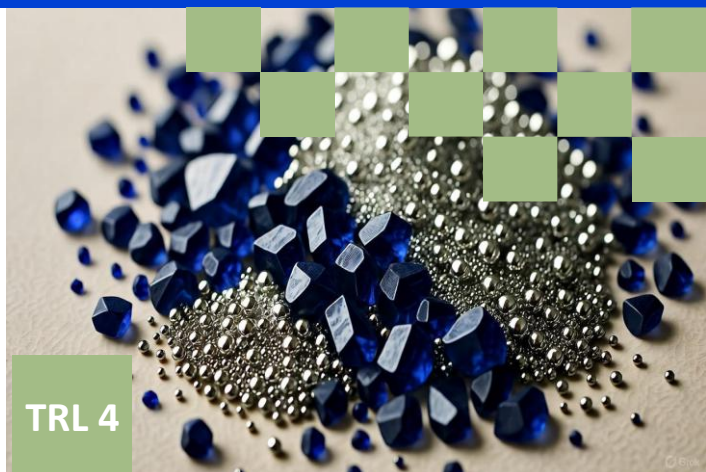
This technology offers a promising alternative to conventional antibiotics in the face of growing antimicrobial resistance.

IP Protection

The invention is protected by the Polish Patent Office under the following number: **Pat.242507**, **Pat.243213**, **Pat.245017**

Technology readiness level

TRL 4 – Technology validated in laboratory conditions.



Research Team

University of Gdańsk

Prof. Aleksandra Królicka

PhD Aleksandra Bielicka-Giełdoń

PhD Marta Krychowiak-Maśnicka

Applications

- Antibacterial preparations for treating wounds infected with *P. aeruginosa*
- Component of antiseptic creams, ointments, and wound dressings,
- Adjunct therapy for skin infections caused by resistant bacteria.

Cooperation opportunities

- Partnership in pre-implementation studies and formulation optimization,
- Licensing or co-development of medicinal products,
- Collaboration with the pharmaceutical and biotechnology sectors.