

## Method and system for eradication of pathogenic microorganisms from surfaces and skin tissue using cold atmospheric plasma

### About the solution

The invention relates to a method and system for eradicating pathogenic microorganisms from flat surfaces and skin tissue using cold atmospheric plasma (CAPP) generated by dielectric barrier discharge (DBD).

The developed system includes a current generator connected to a quartz capillary with tungsten electrodes, an epoxy resin cavity, and a silica filler.

The plasma is produced using helium as a working gas, enabling efficient inactivation of bacteria and microorganisms responsible for skin infections in humans and animals.

The method provides rapid disinfection while ensuring safety for healthy tissue and eliminating the need for chemical agents.

### IP Protection

The invention is subject to European patent protection no.: **EP4285859**

### Technology readiness level

TRL 4 – Technology validated in laboratory conditions.

**TRL 4**

### Research Team

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### Applications

- Disinfection of surfaces and tissues in medicine and veterinary use,
- Supportive therapy for skin infections,
- Sterilization of delicate medical and laboratory equipment.

### Cooperation opportunities

- Partnership in research on plasma-based medical applications,
- Technology licensing or joint implementation,
- Collaboration with medical and biotechnology industries for commercialization.