

LASU: Light-activated antimicrobial substances and materials

We have invented a novel dye molecule for Photodynamic Antimicrobial Treatment. It is highly efficient against microorganisms; easy to synthesize; works indoor with consumer LED lamps; has no dark toxicity; does not induce resistivity in pathogens.

Inactivation of microbes on dyed surface after ½-1 hour under LED light:

- ☑ Drug-resistant *E. coli* 10 000 times
- ☑ Drug-resistant *A. baylyi* 10 000 times
- ☑ Meticillin-resistant *S. aureus* 1 000 000 times
- ☑ Vancomycin-resistant *E. faecium* 1 000 000 times

We offer a way to produce light-activated self-desinfecting materials for • hospitals • households • personal hygiene • military • paramedical • public transportation • schools and kindergardens.

SPARK VALUE: We aim to select best use case scenarios, to obtain important contacts in clinics and industry and to find innovation partners.



- Dr. Alexander Efimov is the Team leader, with over 20 years experience in photoactive substances.
- Associate Professor Ville Santala is the microbiology expert of the Team.
- MSc. Lijo George, is a talented chemist, who synthesized the molecules and developed antimicrobial protocols.