



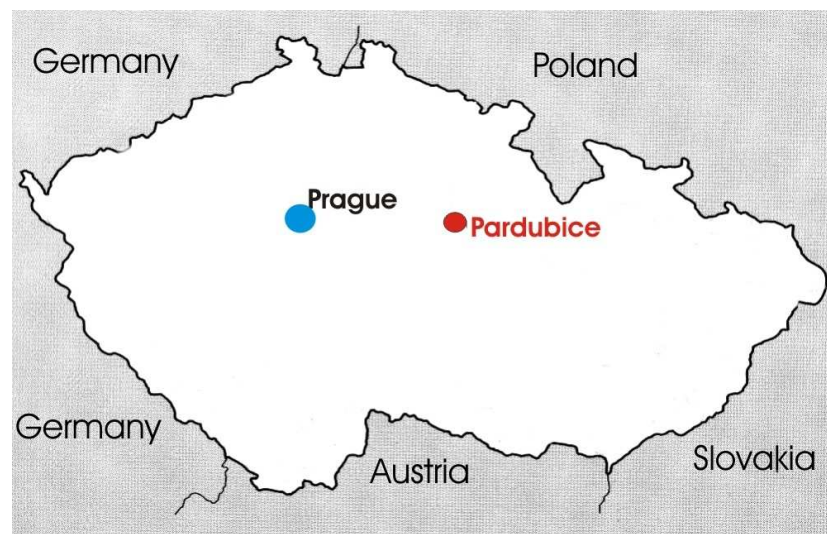
**Centre for Organic Chemistry  
Cooperation in medical science**

**Lubomír Kubáč**

# Company introduction



- Private research company
- R&D of organic compounds for science and industry
- Up scaling and transfer of technology
- Close cooperation with Charles University – Faculty of Medicine Hradec Kralove, departments of **Dermatology, Dentistry, Clinical Microbiology**
- Joint interest in project targeted on clinical application of R&D results



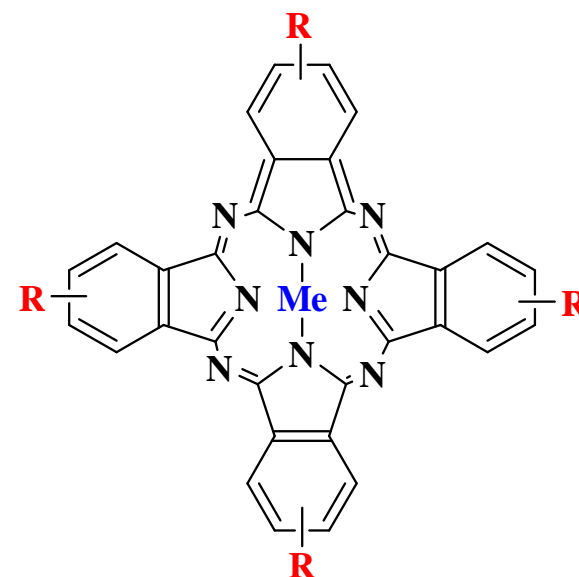
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# Photoactive processes for life sciences



## Phthalocyanines

- Photosensitive materials
- Application against bacteria, yeasts and fungies, self-cleaning application
- PDT active material
- **Me** atom and **R** substitution have key influence on final activity against particular microorganism
- Substitution enables application in the form of solvent in water or organic solvents or dispersions
- Absorption capability of red light radiation 600 - 700 nm



# Topics for project cooperation



## Photodynamic therapy of tumours

- Intravenous way successfully finished by pre-clinic tests
- **Topical** application is our preferred way
- Application on skin tumours by **ointment**
- Photoactive derivative and source of light suggested yet
- Looking for partners for next R&D and clinic tests



## Result

- Study of PDT of topical cancer diseases
- Documentation for next commercial applications and clinical applications





# Topics for project cooperation



## Medicinal tools

- **Stomatology** - antimicrobial system STOMASET
- **Dermatology** - antimicrobial system for skin diseases
- **Lesion and burns therapy** - antimicrobial system for prevention of microbial attack without direct contact
- System of photoactive material and light suggested yet
- Carrier system in development

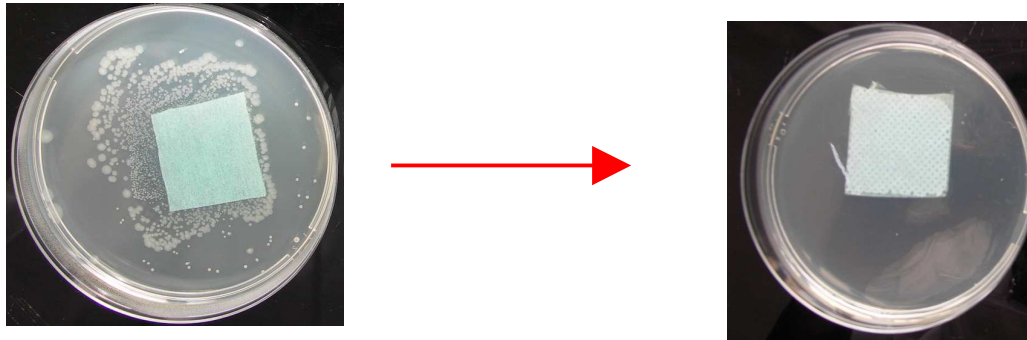


# Topics for project cooperation



## Antimicrobial photo-active nanotextiles

- suitable for hospital air-conditioners
- non resistant system



## Pathogenic prions deactivation

- Photoactive processes protected by CZ 303355 (2012)
- Disinfection of tools
- Treatment of biological materials

# Contacts



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