

University of Helsinki, Faculty of Pharmacy (UH)

University of Helsinki, Viikinkaari 5E, 00790 Helsinki, Finland



Prof. Arto Urtti (Head of Unit)

„The Faculty of Pharmacy EU-OPENSSCREEN site has expertise on specialised screening, for instance for antimicrobials, as well as on in silico and in vitro ADMET evaluations, and hosts international level expertise and infrastructure for these studies.“

At a glance

- Specialised screening site
- Target- and cell-based antimicrobial assay development and screening, incl. biofilm, advanced 3D and host-pathogen co-culture models
- Computational and *in vitro* ADMET profiling
- Development of tailored assays e.g. for novel materials
- Expertise on utilizing natural products in screening
- Organotypic cell models, cellular and vesicular drug transport assays and predictive pharmacokinetic models

Infrastructure and technical focus

- Expertise in antimicrobial screening, assay development, and miniaturization
- Biosafety level 1 and 2 microbiology and cell culture facilities
- Platform designed for antimicrobial screening workflows and follow-up assays
- Expertise in natural product discovery
- Predictive computational ADMET models
- Chem-/bioinformatics resources, access to supercomputing facilities



Projects past and present

2020 | SPRINGBOARD for excellence in advanced development of antibacterials ➔ [Link](#)

2019 | NO-ESCAPE Evolving the next generation of Gram-negative antimicrobials through a synergetic approach encompassing medicinal chemistry, microbiology and nanomedicine tools ➔ [Link](#)

2019 | RESET-ME Restoring *E. coli* sensitivity for antibiotics by blocking TolC-mediated efflux ➔ [Link](#)

Our science in selected publications

Ocular barriers to retinal delivery of intravitreal liposomes: Impact of vitreoretinal interface
➔ [Journal of Controlled Release \(2020\), 328, 952-961](#)

Defining conditions for biofilm inhibition and eradication assays for Gram-positive clinical reference strains
➔ [BMC Microbiology \(2018\), 18, 173](#)

Binding Site Interactions of Modulators of Breast Cancer Resistance Protein, Multidrug Resistance-Associated Protein 2, and P-Glycoprotein Activity
➔ [Molecular Pharmaceutics \(2020\), 17, 2398-2410](#)

A New Cell-Based AI-2-Mediated Quorum Sensing Interference Assay in Screening of LsrK-Targeted Inhibitors
➔ [ChemBioChem \(2020\), 21, 1918-1922](#)

Further info and site-contact

Prof. Päivi Tammela: paivi.tammela@helsinki.fi | +358 50 4480 886

Website: <https://www.helsinki.fi/en/infrastructures/drug-discovery-chemical-biology-and-screening/infrastructures/faculty-of-pharmacy>