eu:openscreen

CZ | High-capacity screening site

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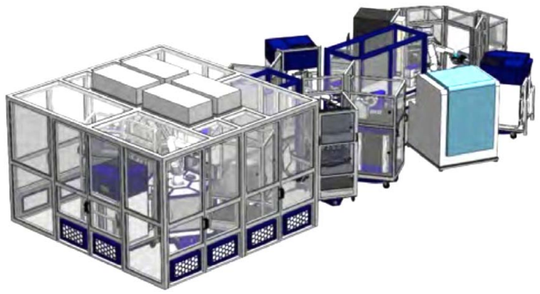
„We support the challenges of biological research with state-of-the-art technology in medicinal chemistry.“

At a glance

- High content analysis platform providing screening and high volume biology data on a broad diversity of assays and detection systems
- Industry strong, modular and flexible screening technology
- Testing in BSL3 and BSL2+ environment
- Screening in combination with ionizing radiation (X-rays), mass spectrometry, high content analysis and others
- Screening assays provide leads for downstream drug research and development
- Automated chemical library, capacity about 1.000.000 compounds



Infrastructure and technical focus

- The HTS/HCA screening platform is based on a state-of-art robotic system provided by HighResBiosolutions Ltd. The system consists of three robotic arms, automatic incubators, liquid handlers for microliter and nanoliter volumes, sealers, de-sealers, centrifuges and readers for fluorescence, luminescence, absorbance and ionizing radiation (LumijetBeta, FLIPR-PENTA, Envision, Viewlux).
- Also integrated with the system are wide-field or spinning disc confocal microscopes (Operetta, Yokogawa CV8000) equipped with software tools (Collumbus, CellProbiler) for image analysis and data evaluation.

Projects past and present

2020 - 2022 | CZ-OPENSCREEN National infrastructure for chemical biology Link

2018 - 2022 | PERMED Personalised Medicine - Diagnostics and Therapy Link

2018 - 2023 | ENOCH Molecular, cellular and clinical approach to healthy ageing Link

Our science in selected publications

Steroid Glycosides Hyrcanoside and Deglucohyrcanoside: On Isolation, Structural Identification, and Anticancer Activity
Foods, 2021, 10, 136

Fluorinated derivatives of 2-phenyl-3-hydroxy-4(1H)-quinolinone as tubulin polymerization inhibitors
European Journal of Medicinal Chemistry, 2020, 192, 112176

Alcohol-abuse drug disulfiram targets cancer via p97 segregase adaptor NPL4
Nature, 2017, 552, 194

Metallacarborane Sulfamides: Unconventional, Specific, and Highly Selective Inhibitors of Carbonic Anhydrase IX
Journal of Medicinal Chemistry, 2019, 62, 9560

Synthesis and Cytotoxic and Antiviral Profiling of Pyrrolo- and Furo-fused 7-Deazapurine Ribonucleosides
Journal of Medicinal Chemistry, 2018, 61, 9347

Further info and site-contact

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