

Institute of Molecular Genetics of the Czech Academy of Sciences (IMG)

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„IMG is proud to be a part of EU-OPENSREEN, which connects laboratories around Europe. All data generated by this consortium will be stored in the European Chemical Biology Database and will be accessible to the scientific community based on open access principles.“

At a glance

- High capacity screening site with access to unique collections of chemical compounds
- Platform for nuclear receptors: Receptor X – a portfolio of cellular and biochemical assays for nuclear receptors and enzymes
- Drug sensitivity profiling platform for systematic chemosensitive profiling of libraries of small molecules on the panel of cell lines of various histological origin
- Assay adaptation to the 384- and 1536-well format for High-throughput screening (HTS) campaigns
- Probes & Drugs portal (www.probes-drugs.org)

Infrastructure and technical focus

- Integrated robotic HTS stations
- Integrated system for compound storage and sample preparation
- Laboratory Information Management System (LIMS) for compound management with an incorporated ScreenX database
- High-capacity zebrafish facility for in vivo bioactivity/toxicity studies of lead compounds from HTS and High-content screening (HCS) projects
- Excellent cheminformatics supports with a broad range of in-house developed new analytical tools and database systems



Projects past and present

- 2021 | ALGAE4IBD** Horizon 2020 project From Nature to Bedside- Algae Based Bio Compound for Prevention and Treatment of Inflammation, Pain and IBD
- 2020 | EXPRO** Czech grant agency project Uncovering of missing genetic components and new chemical regulators of juvenile hormone signalling
- 2020 | CZ-OPENSREEN** Ministry of Education Youth and Sports project National infrastructure for Chemical Biology
- 2019 | EXPLORE** JPI-EC-AMR project Exploration of the TPP riboswitch as a new target for antibiotics

Our science in selected publications

Probes & Drugs portal: an interactive, open data resource for chemical biology

➔ [Nature Methods 2017, 14, 759–760](#)

Estradiol dimer inhibits tubulin polymerization and microtubule dynamics

➔ [The Journal of Steroid Biochemistry and Molecular Biology 2018, 183, 68-79](#)

Cell-Based Reporter System for High-Throughput Screening of MicroRNA Pathway Inhibitors and Its Limitations

➔ [Frontiers in Genetics 2018](#)

Heterocyclic sterol probes for live monitoring of sterol trafficking and lysosomal storage disorders

➔ [Scientific Reports 2018, 8, 14428](#)

Further info and site-contact

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