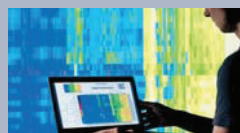




an official partner site of **eu openscreen**



THE PEOPLE

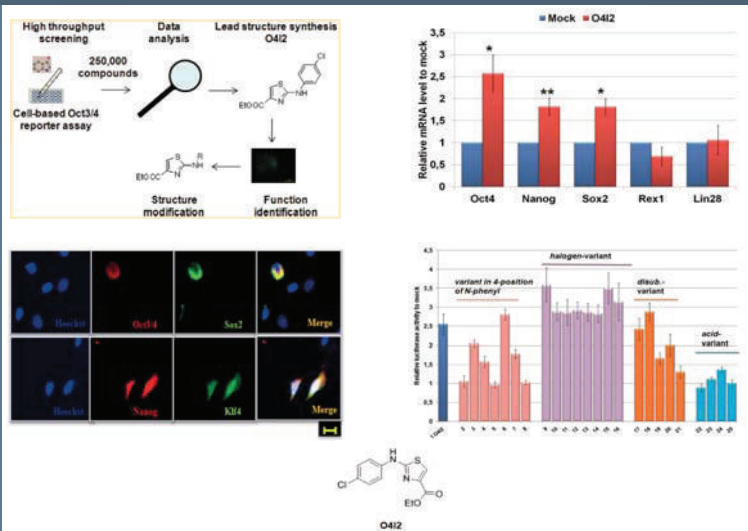
Dr. Sheraz Gul
(sheraz.gul@ime.fraunhofer.de)

Dr. Bernhard Ellinger
(bernhard.ellinger@ime.fraunhofer.de)

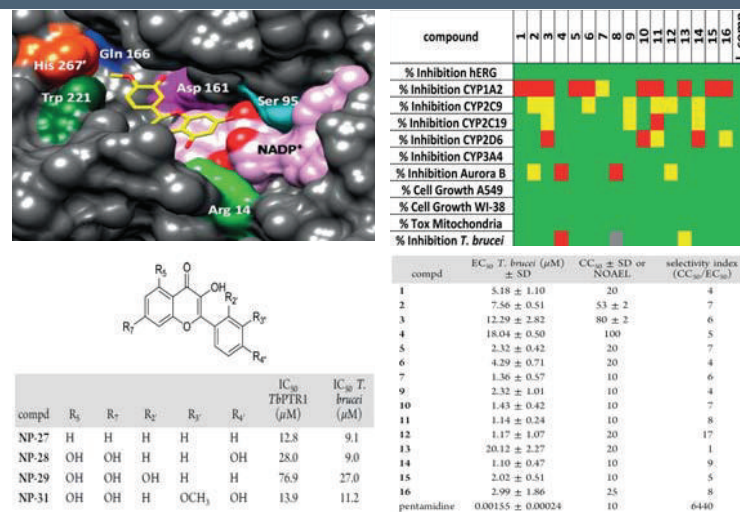
Dr. Björn Windshügel
(bjoern.windshuegel@ime.fraunhofer.de)

THE PROJECTS

drug-iPS (BMBF Systems Biology, MedSys)



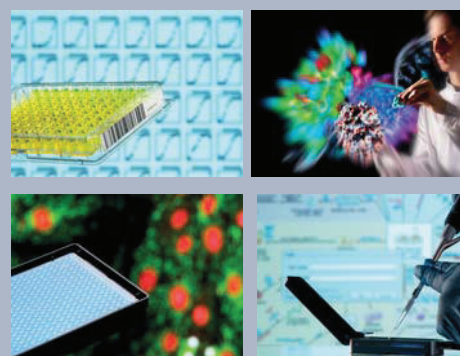
NMTrypI (EU FP7)



THE HARDWARE

- Label free screening including multimode capacity (Enspire EPIC technology, PerkinElmer Inc), SPR screening (384 well, MASS-1, Sierra Sensors), live cell imaging (IncuCyte ZOOM, Essen Instruments), single molecule spectroscopy diffusion and fluorescence intensity analysis (Clarina, Evotec AG), ion channel and transporter protein screening in cell free formats (longate, Nanion), brightfield and fluorescence cell imaging in multimode format (EnSight, PerkinElmer), multimode capacity (EnVision, PerkinElmer Inc) and HCS (Opera, PerkinElmer Inc).
- AlphaScreen, TR-FRET, fluorescence intensity, confocal high content imaging, absorbance, luminescence, reporter gene, cellular biosensors, caspase induction, cAMP, immunocytochemistry, cell migration, translocation, ion sensing (FluxOR, FluO-4 and Fura-2), ELISA, Proximity Ligation Analysis, cell free electrophysiology and fluorescence polarisation.
- Kinase, GPCR, ion channel, HDAC, PDE, deubiquitinylase, PPI, transporter, efflux pump, protease, nuclear receptor, DNA binding protein and toxicity (CYP450, gene toxicity, hERG, mitochondrial toxicity).
- LOPAC, ENZO, Enamine, Evotec, MRCT, HYPHA Discovery, CHEMBRIDGE, Sanofi, MMV and Kailash.

THE SOFTWARE



ActivityBase XE, IDBS, Spotfire, PerkinElmer, Columbus, PerkinElmer, GOLD, CCDC, AutoDock, Scripps, AutoDock Vina, Scripps, KNIME, KNIME, GROMACS, Groningen University, MOE, CCG, SMDDS, Schrödinger.

THE OUTPUT

- ETHYL 2-((4-CHLOROPHENYL)AMINO)THIAZOLE-4-CARBOXYLATE (O412) AND DERIVATIVES ARE POTENT INDUCERS OF OCT3/4. Cheng, et al. Journal of Medicinal Chemistry, 2015, 58, 5742-5750.
- IDENTIFICATION OF 2-((4-(4-METHOXYPHENYL)METHOXY)-PHENYL)ACETONITRILE (O411) AND DERIVATIVES AS POTENT OCT3/4 INDUCERS. Cheng, et al. Journal of Medicinal Chemistry, 2015, 58, 4976-4983.
- PROFILING OF FLAVONOL DERIVATIVES FOR THE DEVELOPMENT OF ANTI-TRYPAZOLAMATIDIC DRUGS. Borsari, et al. Journal of Medicinal Chemistry, 2016, 59, 7598-7616.
- ETHOXYLATED 2'-HYDROXYCHALONES AS ANTIPARASITIC HIT COMPOUNDS. Borsari, et al. European Journal of Medicinal Chemistry, 2017, 126, 1129-1135.
- CHROMAN-4-ONE DERIVATIVES TARGETING PTERIDINE REDUCTASE 1 AND SHOWING ANTI-PARASITIC ACTIVITY. Di Pisa, et al. Molecules, 2017, 22, E426.

EU FP7: MarineFungi, PDE4NP, NMTRYPI, CVgenes@Target, EURhythDia and DropTech.
 Innovative Medicines Initiative - K4DD, ND48B-TRANSLOCATION and EBISC.
 Marie Curie Skłodowska/COST Actions - TRANSLOCATION, INTEGRATE, CM1406, CM1307.
 German National Programs: Neu2 (>10 Multiple Sclerosis drug discovery projects), DZH, DrugIP5, MINAC, NanoCancer, Hepachip, Virtual Liver, NanoUmwelt, Synergine and HUMIT, Pluritest 2 (CIRM/Scripps), Risk-It, NEMBO.
 Industrial collaborations: Qiagen GmbH, Bayer Technologies, Evotec AG, Promega Inc., PerkinElmer Inc., Tecan AG, Eppendorf AG, SigmaAldrich Co. LLC.

THE FUTURE

2017: 3 small, 2 medium and 2 large screens.
 2022: 4-5 small, 4-5 medium and 3 large screens.
 Invest in technologies and provide state-of-the-art solutions for:
 1. iPS cell technologies for drug discovery, including access to patient derived cell lines for in-vitro disease models.
 2. Structure based drug design & virtual screening.
 3. Anti-bacterial drug discovery for gram negative pathogens.

