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EU-OPENSCREEN – New tools for life science research in Europe

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EU-OPENSCREEN is a pan-European research infrastructure initiative that aims at enabling academic chemical biology research to develop novel small molecule research 'tools' for studies in all areas of the Life Sciences. The purpose of EU-OPENSCREEN is to provide researchers access to its shared resources, including the latest screening technologies, a unique compound collection composed of (up to 140 000) commercial and proprietary compounds, and medicinal chemistry support. Recently, we described a collaborative effort to define and apply a protocol for the rational selection of a general-purpose screening library, to be used by the screening platforms affiliated with the EU-OPENSCREEN initiative. Chemists are invited to include their compounds into this jointly-used collection and they receive back rich information about the biological activities from the screening against a wide range of bio-assays.

EU-OPENSCREEN builds on national networks of chemists and biologists in 16 European partner countries and takes advantage of their expertise and specialized facilities with many years of proven high quality services. This distributed network of partner sites embedded in their excellent research environments will serve as a truly pan-European infrastructure of open-access technology platforms with a broad, collaborative purpose. EU-OPENSCREEN covers the whole range of target families, biological topics or models. The chemical tools developed within EU-OPENSCREEN will foster a wider use of the pharmacological approach in biology and help to enter new fields beyond the parent themes of pharmacology, human and veterinary medicine, and toxicology. By testing systematically the chemical collection of EU-OPENSCREEN in a multitude of highly standardized assays originating from very different biological themes, the screening process will generate valuable information on structure-activity relations of the substances and thereby enrich our understanding of how and where they act. Currently in its 'transition phase' EU-OPENSCREEN will start full operations as a permanent ERIC (European Research Infrastructure Consortium) at the beginning of 2017.

Literatur

[1] Horvath, D., Lisurek, M., Rupp, B., Kühne, R., Specker, E., von Kries, J., and Frank, R. (2014). Design of a General Purpose European Compound Screening Library for EU-OPENSCREEN. ChemMedChem.

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