

EU-OPENSREEN: The European Infrastructure for Chemical Biology and Compound Screening

EBS. 03-001

B. Stechmann^I

^I*EU-OPENSREEN / FMP Leibniz Forschungsinstitut für Molekulare Pharmakologie, Berlin, Germany*

Small molecules that can be applied as chemical ‘tool’ compounds (or ‘probes’) have become indispensable in basic research for the elucidation of fundamental biological mechanisms. They act directly with the protein-of-interest and often allow for the interrogation of biological processes that cannot be properly studied with traditional genetic or RNA interference approaches. EU-OPENSREEN (www.eu-openscreen.eu) is the largest emerging academic chemical biology research infrastructure initiative in Europe and will provide access for molecular and cell biologists to compound screening platforms, well-characterized high-quality compound libraries, and facilities for medicinal chemistry services for compound optimization.

Cell and molecular biologists who have a robust and suitable biological assay and are interested in collaboratively developing chemical tool compounds to validate their targets-of-interest are welcome to work with EU-OPENSREEN. Selected assays are screened against a collection of more than 100,000 compounds, incl. confirmatory and counter screening, IC/EC50 determination, SAR (structure-activity relationships) and QC of confirmed hit compounds. EU-OPENSREEN will start operations in late 2017, but it can already look back on a growing number of transnational activities: joint screening projects, exchange of local compound libraries, development of new design principles for its compound collection; exchange of experimental data through its pilot database etc.