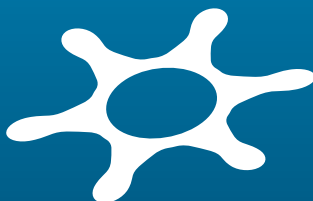




VIB Compound Screening service Facility

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COMPOUND SCREENING
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COMPOUND SCREENING
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High-throughput compound screenings

The central points in a successful compound screen are a high quality **chemical library** and a robust **biological assay** that is miniaturized to a 96-well or 384-well plate format. Possible model systems for these assays include cell-free or cellular systems up to small model organisms such as *Danio rerio* embryos, *Xenopus laevis* embryos, *Caenorhabditis elegans* and *Arabidopsis thaliana*. Furthermore, to study the effect of compounds on model systems using high-throughput technology, there is need for a **robotic screening platform**.

Platform at the Compound Screening service Facility

DIVERSet™ chemical library

We have acquired the DIVERSet™ chemical library from ChemBridge Corporation (<http://chembridge.com/chembridge/>), a pre-designed collection of **10,000** small molecules selected from a collection of **450,000 drug-like** and **quality-verified** compounds.

The DIVERSet™ compounds are rationally selected based on 3D pharmacophore analysis to cover a **broad range** of biologically relevant chemical structures. The DIVERSet™ chemical library is a highly **recognized** and **proven** screening library in both phenotype- and target-based assays.

Equipment

We have established a state-of-the-art high-throughput platform for screening chemical compound libraries. The platform consists of **robotic systems** that make it possible to prepare the assay plates and to add the compounds to the assay system in a high-throughput fashion. The exerted effects of the compounds can be analyzed using different equipment for visual (**microscopy-based**) or digital (**plate reader-based**) read-out. These include light and fluorescence stereomicroscopes, a confocal microscope and plate readers for luminescence and fluorescence measurements.

Services at the Compound Screening service Facility

Core Services

We have the expertise and equipment to perform a **full screening project**. This includes:

- Cultivating the model system and preparation of the assay plates (**pre-screen**)
- Compound screening and hit confirmation (**high-throughput screen**)
- Analyzing the effect of the compounds using microscopes or plate readers (**post-screen**).

Ultimately, the **deliverable** is a set of **chemical compounds** in dry format or dissolved in DMSO, which target the biological process under study.

Additional Services

In the pre-screening stage, we can advise on and assist in **assay development**, i.e. optimizing, validating and downscaling the assay to 96-well or 384-well plate format.

After hit compound identification, we can provide services for further **compound characterization**, i.e. determining the EC₅₀ values, identifying the active substructures of a compound through analysis of structural analogues and initial lead optimization of identified hit compounds.