

The Screening Facility of the Helmholtz Centre for Infection Research

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The Helmholtz Centre for Infection Research has created an integrated research program that aims to discover, create and characterize new bioactive small molecules and to identify their cellular targets and mechanisms of activity: the “Chemical Pipeline”. Its goals will be achieved by exploring both natural and synthetic molecular diversity, combining research on natural products, analytical and synthetic chemistry, and combinatorial chemistry/biochemistry with new developments at the Centre in microbial pathogenesis and cell biology. The pipeline involves the Institute of Organic Chemistry at the University of Hannover and is directly interfaced with essentially all Departments and Junior Research groups of the Centre, the Sonderforschungsbereiche in which the Centre participates, the Technical University of Braunschweig, as well as other institutes of the HGF, and has dynamic interfacing possibilities with many groups, institutes and industries, nationally and internationally. The pipeline also participates as one of the initiating partners in the “ChemBioNet” (www.chembionet.de), a national initiative and resource network for the support of chemical biology in academic research.

The Department of Chemical Biology develops and maintains the required infrastructure and methodologies to provide access for the whole Centre and collaboration partners to competent compound collections, high-throughput screening (HTS) logistics and robotics, HTS compatible assay development and the bio-/cheminformatic tools for data evaluation. The department itself is pursuing studies on bacterial adhesion, invasion and biofilm formation, as well as cell proliferation.

We will present the concept, equipment and activities of the facility.