

Drug Discovery Resources: Compound Libraries & Assay Development

MicroSource Discovery Systems, Inc. (MDSI) provide diverse libraries of FDA-approved drugs synthetic compounds, and natural products. Their test compounds are supplied in a "ready-to-use" microplate format. The US Drug Collection is an important collection of 1040 drugs that have reached clinical trial stages in the USA. Each compound has been assigned USAN or USP status and is included in the USP Dictionary (U.S. Pharmacopeia, 2005), the authorized list of established names for drugs in the USA.

Contact: Toni Kobylinsky, Director of New Product Development.

The Prestwick Chemical Library® contains 1120 small molecules, 90% being marketed drugs and 10% bioactive alkaloids or related substances, thus it presents the greatest possible degree of drug-likeness. The active compounds were selected for their high chemical and pharmacological diversity as well as for their known bioavailability and safety in humans. The Prestwick Chemical Library® was designed to reduce the risk of "low quality" hits, reduce the cost of the initial screening, and accelerate lead discovery. This initial screening will provide hits that will then be used as starting points for a drug optimization program which will rely on medicinal chemistry expertise. If an initial hit has sufficient affinity for the target, it could be immediately tested in patients.

Contact: Eric Jamois

ChemBridge

offers an extensive portfolio of advanced discovery chemistry products and contract research services. These include high-quality screening libraries and proprietary building blocks. Chembridge offers the CNS-Set®; - This CNS Library is a collection of 60,000 drug-like, small molecule compounds, selected with medicinal chemistry expertise. Computational analysis of CNS-Set includes Polar Surface Area, Lipinski's Rule of 5, and other desirability and drug-like filters, which increase probability of finding leads with oral bio-availability and blood-brain barrier penetration.

Contact: Duncan Beniston

Evotec is a leader in the discovery and development of novel small molecule drugs. Evotec has built substantial drug discovery expertise and an industrialized platform that can drive new innovative small molecule compounds into the clinic. In addition, Evotec has built a deep internal knowledge base in the treatment of diseases related to neuroscience, pain, and inflammation. Leveraging these skills and expertise the Company intends to develop best-in-class differentiated therapeutics and deliver superior science-driven discovery alliances with pharmaceutical and biotechnology companies.

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Magellan BioScience Group, Inc. is an innovative discovery company pursuing untapped sources of chemical diversity and identifying lead candidates derived from microorganisms for the development of new chemical entities. Magellan Biosciences libraries utilize the diversity and novelty of natural product compounds in screens against a wide variety of therapeutic targets.

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Cellumen, Inc. is a cellular systems biology (CSB™) company dedicated to helping researchers create greater numbers of efficacious, safe, and patient-targeted drugs. The approaches that have been used in the last decade have produced only a small pipeline of new drugs, at astronomical costs, as a result of approximately 90% of drug candidates failing. This high failure rate is due primarily to two factors: efficacy and toxicity. Cellumen is addressing the problems of efficacy and toxicity with the cellular systems biology (CSB™) approach. The CSB™ approach goes beyond the one gene, one target, and one drug paradigm that has driven the biopharmaceutical industry over the last decade. Instead, CSB analyzes the systems response of cell lines, primary cells, and patient samples to drug treatments. CSB assays use high content screening (HCS) technology platforms but can analyze far more parameters in a systematic way than simple HCS assays. CSB is a major step toward a more efficient process for developing safer, more efficacious drugs.

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