



Natural products remain quite interesting and, often, represent the most exquisite examples of targeted therapies—selected for their activities through evolution. - Charles L. Sawyers

TimTec NPL, Natural Product Library, is composed of 800 pure natural compounds as lead identifying material. Natural molecules tend to be multi-active across targets being inherently bio-available. The value of the library is in broad diversity representation of selected natural material available in screen-ready format. Compounds are primarily sourced from plants with the remaining samples from bacteria, fungus, and animal sources. Common natural sources and reference information is available for the majority of the samples.

Diversity by nature Purity by science Value by design

NPL is sold as a complete collection or by plate or by individual compounds; available in solid form or in DMSO solution at pre-plated or at custom concentration.

[Rediscovering Natural products Article](#) identifies the causes for the sustained interest in natural compounds:

1. Combinatorial chemistry's promise to fill drug development pipelines with de novo synthetic small-molecule drug candidates is unfulfilled
2. The practical difficulties of natural products drug discovery are being overcome by

advances in separation technologies and in the speed and sensitivity of structure elucidation

3. A compelling case is being made for the intrinsic utility of natural products as sources of drug leads.

TimTec NPL Featured Screening Results

TimTec Natural Product Library was screened to identify compounds that significantly reduce infectivity without cytotoxicity. NPL collection featured 280 compounds at the time of the moderate-throughput screening. MTS assay is adaptable to different virus systems. Out of 280 compounds, [15 molecules showed antiviral activity](#) and were identified as promising models for immunomodulatory agents. [Download](#)

available compounds that reduce rotavirus infectivity without cytotoxicity.

Shaneyfelt, M. E., et al. Natural products that reduce rotavirus infectivity identified by a cell-based moderate-throughput screening assay. *Virology Journal*, 2006, 3:68doi:10.1186/1743-422X-3-68

"We recently published our [paper on the AhR](#) and utilized your NPL library as part of a physical and virtual screen. Thanks for all your help, and if any of your scientists need any help understanding what we did, feel free to contact me again." - Dan Koch

[View available from stock activators of AhR transcription based on initial in silico screening](#)

Bisson H., et.al. Modeling of the Aryl Hydrocarbon Receptor (AhR) Ligand Binding Domain and Its Utility in Virtual Ligand Screening to Predict New AhR Ligands. *J. Med. Chem.* 2009 Sept, 52 (18), 5635-5641

Jadhav A., et al. Quantitative analyses of aggregation, autofluorescence, and reactivity artifacts in a screen for inhibitors of a thiol protease. *J Med Chem.* 2010Jan 14;53(1):37-51

[ST057529](#) from NPL was identified as an inhibitor of cKDM4C, catalytic core of lysine (K)-specific demethylase 4C. [More](#)

Nielsen AL, Kristensen LH, et. al. Identification of catechols as histone-lysine demethylase inhibitors. FEBS Lett. 2012 Apr 24;586(8):1190-4. Epub 2012 Mar 15.
doi:10.1016/j.febslet.2012.03.001

[TimTec Nature-Informed Libraries in Publications](#)

Related products

NPL is one of TimTec nature-inspired collections. **Natural Derivatives Library** ([NDL-3000](#)) elaborates on structural diversity of pure natural molecules and includes natural derivatives, analogs, semi-natural compounds, and mimics. There is no overlap between NPL and NDL compounds. Learn more about the [Natural Derivatives Library](#) design approach.

Flavonoid derivatives collection, [FL-500](#)

[Gossypol and its derivatives](#)

[Plant Extracts](#) , crude mixtures of compounds

[Chem-TCM](#) Database of molecular records, constituents of plants used in traditional Chinese medicine

Related Information

[Natural Product Reports article](#)



TimTec Pure Natural Products Library Purchasing Terms

TimTec Pure Natural Products Library (NPL) includes primarily known natural compounds that are also available through a number of domestic and international commercial sources. The value of the library design is in the broad diversity of selected natural material available in screen-ready format. TimTec does not hold any intellectual property (IP) rights for compounds in our collections nor is responsible for any damages that may result from TimTec products use. TimTec products are for R&D use only and should be handled by trained personnel.