



Nature-informed chemistry has established well-recognized reputation of success in producing new drug leads heading the count of approved medicines. Natural products research has developed to embrace and become a part of the latest technologies and drug discovery approaches. New synthesis techniques can now produce natural-like compounds and mimics to carry on inherent biological properties in addressing challenging targets. Natural product structures have an immense 62% influence in approved drug therapies, especially for cancers.

*Newman DJ, Cragg GM, et.al. Natural products as sources of new drugs over the period 1981-2002. J Nat Prod. 2003 Jul;66(7):1022-37*

There are number of factors that have contributed to the natural chemistry position of prominence including diminished productivity in the pharmaceutical industry and unfulfilled promises of early combinatorial chemistry. As for the latter, newly emerged diversity oriented synthesis (DOS) technology greatly contributes to the design and synthesis of nature “cross-over” molecules. Natural products and nature-informed chemistry furnishes molecules that tend to be multi-active being bio-available for more than one target.

*Marcaurette LA, Johannes CW. Application of natural product-inspired diversity-oriented synthesis to drug discovery. Prog Drug Res. 2008;66:187, 189-216.*

Natural products research is here to stay and shape the future bringing more novel medicines for breakthrough treatments. There remains the vastly untapped potential of diverse natural sources that offer superior quality of discovery leads. For example, for flora alone “it is supposed that only 5-15% of approximately 250,000 species of higher plants have been investigated for the presence of bioactive compounds”.

Füllbeck M, Michalsky E, Dunkel M, Preissner R. *Natural products: sources and databases. Highlight Nat. Prod. Rep. 2006 April 10; 23, 347 - 356, DOI: 10.1039/b513504b*

In [Natural Product Reports article](#) about research trends and industry survey, TimTec is identified as one of the major suppliers that offer broad range of diverse natural products including pure natural compounds, natural product derivatives, and plant extracts available from stock.

TimTec line of nature-inspired screening products provides broad selection of molecular frameworks that probe chemical diversity space in the following categories:

[NPL, Natural Products Library](#) of pure natural molecules primarily from plants and also from bacteria, fungus, and animal sources

[NDL, Natural Derivatives Library](#) gathers natural compound derivatives, synthetic analogs, semi-naturals, and mimics

[Flavonoids](#) , collection of derivatives built around 9 core Flavonoid structures known for their therapeutic value and natural abundance

[Gossypol Derivatives](#) , explore Gossypol molecule activity potential adding to the history of traditional use

[Plant Extracts](#) , a small sample collection of crude mixtures of compounds extracted from plants grown in Eastern and Middle-Eastern Eurasia. Complete database contains plants available from stock for extraction and plants available for collection.

[Featured Natural Compounds](#) , selected individual natural products available for sale at eChemShop and for scale-up

[Chem-TCM](#) is a digital reference phytochemical database of molecules-constituents of plants used in the Traditional Chinese medicine

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