



Enamine is the world's largest producer of building blocks and screening libraries. Established in 1991, the company employs over 550 chemists in its only research site in Kyiv, Ukraine. Enamine is deeply involved in chemical research, continuously synthesizing novel chemotypes and developing new chemical reactions and methodologies. Over 270 scientific publications have been made by Enamine scientists in the past 10 years. We believe that the key to discovery of novel therapeutics is in diversifying the available toolkit of pharma researchers with novel building blocks, fragments and screening compounds.

### Building Blocks

- 205,000 building blocks in over 30 functional classes
- World's largest stock, including 40,000 amines and 22,000 carboxylic acids
- 2,000 new building blocks synthesized each month
- 1 day delivery from local warehouses in EU and USA
- API and punch-out integration
- Sets of building blocks in  $\mu\text{mol}$  amounts for immediate use in library synthesis
- 28,000 bi- and tri-functional scaffolds for DNA-encoded library synthesis
- *Enamine exclusive!* – 50 million REAL building blocks

### Screening Libraries

- 2,260,000 screening compounds in stock for cherry-picking
- World's largest collection!
- Enhanced with 150,000 new compounds each year
- Screening libraries for hit finding on established and emerging targets
- Warranted hit follow-up: building blocks and synthesis procedures available
- *Enamine exclusive!* – Over 170 million novel compounds in REAL database for virtual screening and hit follow-up. 85% success rate in synthesis (3 weeks)

### Fragment Libraries

- 50,000 selected fragments in stock for cherry-picking
- Exclusive novel fragments
- Solubility data (200 mM in DMSO, 1 mM in aqueous buffer)
- 1,700 diverse fragments in Golden Fragment Library
- 190 diverse fragments in the high-hit-rate Essential Fragment Library
- 14,200  $sp^3$ -rich fragments
- 3,500 PPI fragments
- 2,100 fluorinated fragments
- 3,000 covalent fragments
- Warranted follow-up with analogous fragments
- *Enamine exclusive!* – 2.2 million novel REAL fragments

## PRODUCTS

## Library Synthesis

- Over 40 standard reactions, HPLC purification
- Novel patent-free compound libraries based on most recently developed 6,000 Enamine's scaffolds
- Decoration of your scaffolds with our building blocks
- *Enamine exclusive!* – Select from over 125,000 building blocks in our stock!
- *Enamine exclusive!* – Virtual screening of over 170 million REAL compounds. The hits will be synthesized with over 85% success rate within only 3 weeks

## Custom Synthesis

- Over 550 chemists, at single Enamine research site, located in Europe
- High standards in handling confidential information
- Milligram to kilogram scale
- Resynthesis of the screening hits and synthesis of the analogues
- Parallel synthesis of small to extra-large compound libraries
- Comprehensive suite of chemical synthesis technologies: photochemistry, fluorination e.g. with SF<sub>4</sub>, ozonolysis, flow chemistry, reduction in pressure reactors, etc.
- Chiral separation by SFC

## Medicinal chemistry

- Highly competitive FTE rate common for chemists, biologists and computational chemists
- Exploration of SAR, synthesis of focused compound libraries
- Hit-to-lead development and lead optimization
- Improvement of biological activity, aqueous solubility, metabolic stability, selectivity, etc.
- *In-silico* modeling
- Integrated projects including hit finding, medicinal chemistry and ADME/PK studies at Enamine
- *Enamine exclusive!* – Included in the FTE rate: immediate access to over 125k building blocks and reagents in stock at Enamine

## Biomolecular screening

- Primary screening throughput of 250k+ compounds per month
- Broad cell-based and biochemical assay capability with all common assay readout modes
- GPCR and Ion Channel Screening FLIPR Tetra and FlexStation
- Differential Scanning Fluorimetry (DSF, TSA)
- Recombinant protein expression and purification, peptide synthesis
- *Enamine exclusive!* – Privileged access to 2,260,000 screening compounds and various screening libraries including 510k compounds Hit Locator Screening library
- Comprehensive ADMET-PK support: aqueous solubility, Log D/Log P, K<sub>a</sub>, plasma protein binding, CYP P450, microsomal stability, cytotoxicity, Ames test, hERG, membrane permeability, metabolite ID
- *In-vivo* tests: PK and acute toxicity in rodents, animal efficacy studies

# SERVICES

