

Accelerating Drug Discovery

Medicinal chemistry

Intuitive drug design

Overview

As one of the leading providers of medicinal chemistry services to the global pharmaceutical and biotech industries, BioFocus DPI provides the experience and expertise necessary to progress all stages of the drug discovery process from hit generation to lead optimization. We have an impressive track record of advancing programs, creating strong IP positions and generating preclinical candidates for our clients.



Benefits

We provide a multi-disciplinary approach to the design and synthesis of drug candidates. Our medicinal chemists are supported by computational chemistry as well as in-house biology and ADMET profiling to provide a fully integrated service. This results in the intuitive design of molecules and enables you to accelerate your drug discovery programs by:

- Generating family-specific drug discovery solutions
- Identifying and expanding the most promising hit compounds from high-throughput screening campaigns
- Optimizing lead compounds to achieve desired preclinical profiles
- Securing strong patent positions

Applications

With our flexible approach to collaborations, we can tailor an integrated program that meets your individual needs. We take a professional approach to all our projects, from the smallest, short-term contracts to the largest, multifaceted collaborations:



- Focused library synthesis with subsequent hit design
- HTS hit validation with subsequent progress to robust lead series
- Hit optimization for activity, selectivity, and/or ADMET criteria
- Complete drug discovery programs including biological assay development

Expertise

Our scientific team has extensive experience working in multidisciplinary environments, including collaborative discovery projects where biology support is provided primarily by external partners. Our greatest strength in medicinal chemistry is the experience and reputation of our chemists. In a competitive marketplace, we continue to win contracts and retain partners based on our ability to deliver results through our expertise in drug design, quality of work, and proven track record:

- Demonstrated successes in collaborations with global pharmaceutical and biotechnology companies
- Recognized experts in key target areas - GPCRs, kinases and ion channels
- Experienced in reviewing and analyzing prior art toward identifying structures that are likely to be patentable
- Experienced in project management at the global pharmaceutical level with contributions to more than 25 NCEs reaching clinical trials
- Authors on more than 500 patents and publications



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Supporting infrastructure

To ensure maximum flexibility, we employ a modular approach to compound synthesis and use state-of-the-art analytical and automated high throughput synthesis equipment for solution phase and solid phase (resins and scavengers) synthesis, analysis, autopurification and processing, including:







- Parallel STEM/carousel equipment to improve efficiency and productivity
- Liquid handlers for processing samples
- Robotics-assisted microwave technology
- Proprietary high-throughput purification technology
- HPLC purification systems including mass-directed and **Accelerated Window Retention** systems
- LC-MS, GC-MS, NMR for structure identification

Our chemists also have access to a broad range of data management and analysis tools as well as chemical information databases. Partner chemistry projects are further supported by *in silico* tools for predicting physicochemical and ADME/Tox properties.



Case studies

Through our integrated approach to drug discovery, we have helped a number of partners advance their drug discovery programs:

Company	Program	Starting point	Finishing point	Resource	Time
	Hit to lead	SoftFocus collection 700 nM	29 nM	1 FTE	3 months
	Hit to lead	Screening hit 2 μ M	19 nM	3 FTEs	6 months
	Lead optimization	Client compound poor permeability and stability	Issues solved resulting in improved profile	3 FTEs	3 months
	Target to lead	Screening hit 2 μ M with poor selectivity	Preclinical candidate	4 FTEs	18 months
	Back up to client clinical candidate	Client compound	IP position obtained with improved profile	2 FTEs	18 months
	Target to lead	SoftFocus collection 700 nM	Preclinical candidate	4 FTEs	20 months

Contact

To learn more about how our medicinal chemistry expertise can advance your discovery programs, contact us at biofocusdpi@glpg.com



biofocusdpi.com

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