Delivering Innovation through Collaboration in Cancer Drug Discovery

As your partner in oncology drug discovery, Charles River is committed to helping you realize your strategic goals for the delivery of development candidates. Combining specialty services in biology, chemistry and pharmacology with industry-proven drug discovery experience, our team can support your development of novel cancer therapeutics, every step of the way.

A Comprehensive Oncology Platform
With in-depth oncology expertise and a focus on collaboration, we provide unparalleled target discovery through development candidate drug discovery capabilities. This allows us to anticipate and meet the needs of your complex discovery programs, delivering efficient, effective results.

Utilize our integrated oncology drug discovery infrastructure to access:

- Toxicology
- Pharmaceutical development
- In vivo pharmacology
- Biomarkers and imaging
- In vitro ADMET, In vivo PK/PD
- In vitro pharmacology
- Structural biology and biophysics
- Target discovery and validation
- Hit ID (small molecule, fragment and natural product)
- Synthetic, medicinal and process chemistry

Our track record speaks for itself
- Many long lasting integrated collaborations, some spanning a decade or more
- Co-invention of 12 oncology development candidates including one currently marketed compound
- Programs culminating in over 280 partner patents
- Multiple oncology publications in high impact journals

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Target Identification and Validation
- RNA interference and CRISPR technology
- Multiple technology platforms including high content screening and proteomics.

Assay Development and Hit Identification
- Molecular biology and bespoke protein production
- Structural biology and computational chemistry to support optimization of novel compounds
- Hit identification through
  - small molecule high-throughput screening platforms
  - computational chemistry
  - innovative knowledge-based design
- Medicinal chemistry for the design, synthesis and optimization of novel compounds
- Screening cascade development and optimization, including use of disease-specific primary cells with genomic information.

Lead Optimization
- Development of translational biomarkers to support in vitro target engagement, advancing to in vivo models and the clinic.
- ADME/DMPK to support in vitro and in vivo drug discovery.
- PK/PD model design for accurate measurement of target engagement in tumor-bearing animals.
- Mechanism of action studies and target deconvolution on multiple platforms, including mass spectrometry and flow cytometry.
- Comprehensive in vivo oncology rodent models, including
  - syngeneic
  - xenografts
  - PDX
  - orthotopic
  - humanized
- In-house development of luciferase-expressing cell lines to support in vivo imaging

Preclinical Safety and Toxicology
- Scientific and regulatory staff to assist in the development and execution of individual studies
- Services to support all phases of preclinical oncology
- GLP services to support worldwide regulatory filings

A selection of oncology targets investigated by Charles River scientists*

*Additional targets cannot be disclosed for confidentiality reasons.

Contact us to discuss how we can move your oncology programs forward.