

# Discovery Services

Cheven

Syngene

Innovate

Integrate

Customize

Accelerate

### **30 years of Putting Science to Work**



#### A Global CRO/CDMO

- Integrated Drug Discovery, Development and Manufacturing service provider
- Small Molecules and Biologics, ADCs, Oligonucleotides
- Listed on Indian Stock Exchanges (NSE and BSE)



#### **Scientific Ecosystem**

- 2.2 Mn sq. ft. world-class R&D and Manufacturing infrastructure
- Sites in Bangalore, Mangalore, and Hyderabad
- 6000+ qualified scientists including 550 PhDs
- Highly effective supply chain practices



#### **IP** Position

- IP assigned to clients
- Strong track record of Data Integrity and Security
- Over 400 patent assignments by clients recognizing Syngene



#### **Marquee Clients**

- 420+ active clients last FY
- Partnering with large / mid-size / emerging BioPharma (EBP) and other industries
- Clients concentrated in US, Europe & Japan
- Track record of working with diverse industry sectors



#### **Quality Focus**

- Quality driven organization
- Excellent track record of compliance with global regulators
- US FDA, EMA, ANVISA and PMDA approved, GLP Certified, Ministry of Health of Russian Federation, AAALAC & CAP accredited/certified facilities
- 15+ regulatory and 160+ client audits in the last 3 years



#### Track Record

- Collaborations and partnerships to deliver numerous clinical candidates
- Delivery history for integrated CMC programs towards FIH and beyond

### **Integrated Drug Discovery**

#### Across multiple therapeutic areas and modalities to drive innovation and speed

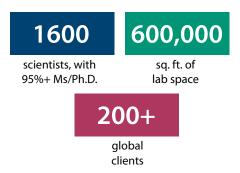
#### **Therapeutic Areas**

- Oncology
- Immunology
- Neuroscience
- Infectious diseases
- Cardiovascular and metabolism
- Inflammation
- Rare/orphan diseases

#### Modalities

- Small molecules
- Peptides
- Oligonucleotides
- Antibodies
- Antibody drug conjugates
- PROTACs
- CAR-Ts

#### Drug discovery at a global scale



#### Efficiency through co-localization of team members and capabilities

- IDD programs for 8 clients over 6 therapeutic areas
- Syngene-Synvent for therapeutic discovery on behalf of clients
- High rate of repeat business and return-clients

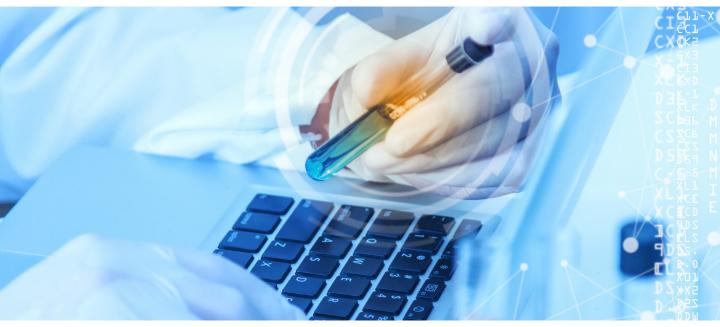




### **Realize Your Next**

# Drug candidate through our Chemistry, Biology, Safety/Tox and Computational and Data Sciences

- 95% on time delivery rate for known target compounds, >90% for unknown targets
- 25,000 reagents and 8,000 unique scaffolds in stock
- LCMS lab with ability to perform 96000 analyses/year and access to NMR lab to run 25000 samples/ year
- High-throughput mass based preparative HPLC lab for purifications with current capacity of 30000 compounds/year
- Completed ~40 PROTACs libraries (>98% success rate)
- 5000+ compounds in HT ADME assays / year
- 2500+ rodent (n=3) PK studies / year
- ADME studies turnaround in ~10 calendar days with >95% TAT adherence
- Computational and Data Sciences support across multiple stages of the discovery paradigm
- Effective use of CADD, cheminformatics and AI for multiparametric optimization





### **Our Discovery Toolbox**

We have the capabilities to apply the most appropriate modality for target validation and therapeutic discovery





## **Our End-to-End Discovery Platform**

Our end-to-end platform allows us to offer integrated as well as standalone services across the discovery continuum

		Target Identification and Validation	Hit Identification	Hit to Lead	Lead optimization	IND enabling	
SynVent (Integrated Drug Discovery)	Biology	Pathway analysis Omics In silico target ID/validation	In vitro assays: Biochemical Orthogonal HTS Formats	<i>In vitro</i> biology / pharmacology In vitro ADME	<i>In vivo</i> PK/PD, Efficacy	Later translational PK/PD/Efficacy	
		Cell er	ngineering and gene e	aiting	Tox-suitable		
	Chemistry	Library Synthesis Hit validation Resynthesis Series Qualification Prioritization	HTS/DEL/ Fragments/ Virtual Screening	Optimization	Formulation (maximize exposure)	Route scouting Scale up	
				Medicinal chemistry Synthetic chemistry	Pre-clinical formulation		
	Safety assessment			In silico	Early screening: In vitro tox, Genotox, hERG, Ion channels, Safety Pharm (in vivo)	DRF Tox (R/NR) GLP Tox (R/NR) Safety Pharmacology Bioanalysis/ TK	
	Computational and Data Sciences	Integrative omics analysis, Target assessment, Disease Models	Virtual Screening, Cheminformatics, Focused libraries, Structure/Ligand/Fragment based design, Predictive models, multiparameter optimization, biologics engineering			Quantitative systems models, Translational informatics, Patient response	

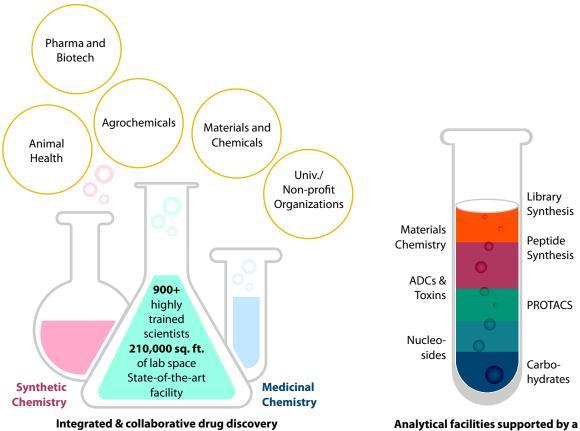
We deliver our services (both Integrated & Functional) via a range of proven collaboration models





### **Discovery Chemistry at Syngene**

Discovery chemistry at Syngene is delivered by 900+ highly qualified scientists, backed by strong analytical chemistry support, robust IT infrastructure and ELN, as well as efficient data and compound management



Seamless co-ordination between Chemistry, Biology, DMPK and animal studies Analytical facilities supported by a team of 80 people Strong IT support for ELN, data and compound management

### **Discovery Biology at Syngene**

The Discovery Biology team supports drug discovery across multi-modal platforms including small and large molecules as well as cell and gene therapy, across multiple therapy areas. Our diverse team of scientists solve complex biological problems in an integrated fashion, embracing scientific excellence, operational efficiency and commercial competitiveness.



### **Syngene Safety Assessment Services**

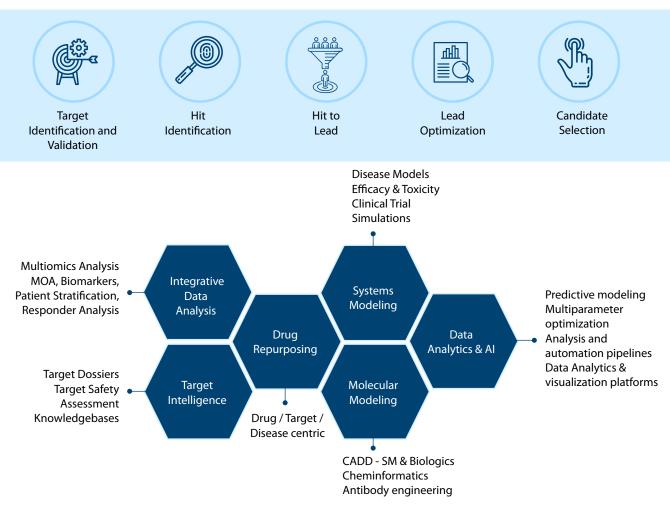
Full range of *in vivo* and *in vitro* toxicology services for comprehensive non-clinical development of drugs

Exploratory studies	GLP studies	Phase I	Phase II	Phase III	Specialty studies
Pharmacokinetics	Analytical and bioanalytical studies to support safety tox program	Repeat dose	Sub-chronic toxicity study		In silico • Derek & Sarah Nexus
	Repeat Dose Toxicology	studies & Genetic toxicology			In vitro • Cytotoxicity • Skin Absorption
	(2 Species)				<ul> <li>Skin</li> <li>Sensitization</li> </ul>
(MTD/Dose Escalation/Short- term repeat dose toxicology)	Genotoxicity (In vitro/ In vivo)	Repeat dose studies & Genetic toxicology	Reproductive Toxicology (Male fertility/ Pre and Postnatal development)		<ul> <li>Skin Irritation</li> <li>Skin Corrosion</li> <li>Eye Irritation</li> <li>Phototoxicity</li> </ul>
	Toxicokinetics Core Battery Safety Pharmacology				In vivo • Impurity
Genotoxicity screening (in vitro)					Qualification Medical Device Testing - ISO10993 Dermal Tox - Rat & Rabbit Local tolerance/ irritation - Rat & Rabbit GPMT/LLNA Intravenous infusion - Rat Phototoxicity
(in vicio)			Chronic Toxicology	gy & Carcinogenicity	
Safety					
Pharmacology: CNS, Respiratory, CV	Reproductive (Seg I-III) & Juvenile Toxicology				



### **Computational and Data Sciences Capabilities**

Syngene's Computational and Data Sciences capabilities enable informed decisions at all stages of the drug discovery continuum





Syngene Putting Science to Work

#### About Syngene

Syngene International Ltd. (BSE: 539268, NSE: SYNGENE, ISIN: INE398R01022) is an integrated research, development, and manufacturing services company serving the global pharmaceutical, biotechnology, nutrition, animal health, consumer goods, and specialty chemical sectors. Syngene's more than 6000 scientists offer both skills and the capacity to deliver great science, robust data security, and quality manufacturing, at speed, to improve time-to-market and lower the cost of innovation. With a combination of dedicated research facilities for Amgen, Baxter, and Bristol-Myers Squibb as well as 2.2 Mn sq. ft of specialist discovery, development and manufacturing facilities, Syngene works with biotech companies pursuing leading-edge science as well as multinationals, including GSK, Zoetis and Merck KGaA.

For more details, visit www.syngeneintl.com or write to us at bdc@syngeneintl.com

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