

# HitGen OpenDEL<sup>TM</sup>

Affordable Access to Billions of Novel Molecules & Data for AI/ML in Drug Discovery Research







## OpenDEL<sup>™</sup> - Fully Transparent Open Access

- Access to
  - Small Molecule Structures DNA Codons
  - · Building Blocks
  - · Scaffolds

- Synthetic Schemes
- Selection Manual
- No Structure Disclosure Fee
- No Compound IP License Fee

## OpenDEL<sup>™</sup> to Help Your Research

- ► For AI/ML:
  - Post-selection DEL data for AI/ML
- For Drug Discovery:
  - Rapid and efficient target ligandability evaluation
  - Novel Hit discovery

# ■ Content of OpenDEL<sup>TM</sup>

- ▶ 3 Billion Compounds
- ▶ 50 Encoded Libraries
- ▶ 10 2-Cycle Libraries
- ▶ 40 3-Cycle Libraries
- ► No 4-Cycle Libraries
- Physical Materials
- Selection Manual
- Synthetic Schemes
- Building Block lists
- DNA Codon lists

#### Chemistry Diversity



Formation

- · Indole C3 alkylation · Suzuki coupling
- · Photoredox
- · Sonogashira coupling

· SN<sub>a</sub>/SN<sub>-</sub>

· Sulfonylation

C-N Bond Formation

· Reductive Amination with Aldehyde

Reductive Amination with Ketone

· Buchwald-Hartwig Cross Coupling



NO, to Amine

Halide to azide

Halide to amine

· Halide to alkyne

**Functional Group** Transformation

- · Halide to acid · Halide to cyanide
- Azide to amine Amine to azide · Aldehyde to alkyne
  - · Alkené to aldehyde
  - · Thioether oxidation
- · Triazoles

In-situ Heterocycle

- Pyridones
- Benzimidazole · Imidazolindinone · Benzotriazole
  - Indazolone

Formation

- · 2-pyridinone
- · 1,2,4-oxadiazole isoindolinone





## Building Block/Scaffold Diversity

Mono-functional group BBs: >20,000

Bi-functional group BBs: >3,000

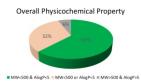
Novel scaffolds: >550

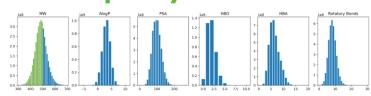
BBs: amines, acids, aldehydes, boronates,

protected amino acids, free amino acids, amino esters,

diamines, acid-aldehydes, acid-aryl-halides, etc.

#### Physicochemical Property





	Average MW (Da)	MW<500 & AlogP<5	MW<550	MW<500	MW<450
2-Cycle DELs	414	88%	99.7%	95%	74%
3-Cycle DELs	484	62%	91.5%	66%	23%

## ■ OpenDEL<sup>™</sup> Service

HitGen provides full technical support and/or on-demand services for the entire drug discovery process

OpenDEL™ Kit

OpenDEL<sup>™</sup> Selection Manual On-DNA Reference Compound OpenDEL<sup>™</sup> selection

Sequencing (NGS) Data Analysis & Hit Proposal

Off-DNA Synthesis Binding/ Functional Confirmatio

Hit Expansion ADMET &
Other
Profiling

## ■ OpenDEL<sup>™</sup> Access Model

	OpenDEL™ Kits	OpenDEL <sup>™</sup> Selection Manual	On-DNA Reference Compound	OpenDEL <sup>™</sup> Selection	Sequencing (NGS)	Data analysis & Hit Proposal	Off-DNA Synthesis	Binding/ Functional Confirmation
OpenDEL <sup>™</sup> Taster	4 selection samples	√				<b>√</b>		
OpenDEL <sup>™</sup> Standard	10 selection samples	√				√		
OpenDEL <sup>™</sup> Premium	10 selection samples	√	(If having)	√	√	√		
OpenDEL <sup>™</sup> Premium Plus	10 selection samples	√	(If having)	√	√	<b>√</b>	Up to 10 compounds	Up to 10 compounds





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#### **Customer Testimonial**

HitGen has created one of the most exciting new DEL products. Septerna was initially attracted to the openness and flexibility with the OpenDEL model. And we have now successfully identified functionally validated hits for multiple GPCR targets from the OpenDEL libraries. Most importantly, the HitGen team has been a very open and collaborative partner throughout the process.

By Septerna, A US-based biotechnology company discovering and advancing novel small molecule medicines targeting G Protein-Coupled Receptors

#### **About HitGen Inc.**

HitGen Inc. (SSE: 688222.SH), is a drug discovery research company with headquarters in Chengdu, China, and subsidiaries in Cambridge, UK and Houston, USA. HitGen has established leading technology platforms to enable the discovery and optimization of small molecules and nucleic acid drugs. Our key technology platforms include world-leading DNA-encoded library technology (DEL), fragment-based drug discovery and structure-based drug design technologies (FBDD/SBDD), as well as the emerging technology platforms for synthetic therapeutic oligonucleotide technology (STO), and targeted protein degradation technology (TPD). Through our diverse and flexible business models, we have built up collaboration partnership with several hundred biopharmaceutical research organizations worldwide. HitGen has multiple programmes from early discovery to clinical trial stage.



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