Novel Molecules for Innovative Medicines

Stock code：HitGen Inc. (688222.SH)

2026/06

GREETINGS FROM THE CEO

Dr. Jin Li
Chairman and CEO

Dr. Jin Li has over 30 years biopharmaceutical experience (at Protherics, AstraZeneca, HitGen), with senior scientific and leadership roles in early stage research, as well as experience in initiating and leading major collaboration, research and outsourcing programmes. Before founding HitGen, he held Global Director positions of Compound Sciences and Computational Sciences at AstraZeneca. This included responsibility for computational chemistry, computational biology and compound collection enhancement.

Dr. Li completed his BSc at Sichuan University, and PhD in macromolecular sciences at Aston University. He then undertook post-doctoral research in theoretical biochemistry at Manchester University, UK. Dr. Li is also a Fellow of the Royal Society of Chemistry, and a Guest Professor of Sichuan University.

In 2012, he founded HitGen in Chengdu. HitGen is a biotech company focused on innovative drug discovery research based on the development and applications of large scale and novel DNA-encoded libraries. HitGen DELs have exceeded 1.2 trillion small molecules. The company now has over 500 employees, and has entered into research collaborations with over 300 pharmaceutical and biotechnology companies. HitGen's own drug discovery programmes have entered clinical trials.

“ Dear valued customers and partners,

On behalf of HitGen, I would like to extend my gratitude to you and your interest in our company!

I would like to take a few moments to share with you what HitGen is about, what we could do to add value to your business, and what roles we aspire to play in the industry.

In recent years, the biopharmaceutical industry has been undergoing some fundamental changes and transformation. These changes are underlined by the unwavering demands for innovative medicines to treat serious diseases in both developed and developing countries. There is a great sense of responsibility and opportunity bestowed on all those working in this important industry. At the same time, these changes also highlight the urgent need to foster greater innovation, to focus on developing more differentiated therapies, and to forge effective collaborations and partnerships.

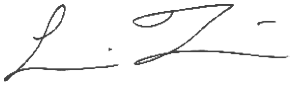
In the process of new drug development, it is crucial to find molecular solutions to modulate the functions of biological targets causing a particular disease. The DNA-encoded library (DEL) technology provides access to unprecedented diversity of molecules important to the drug discovery for a wide range of targets.

HitGen has been engaged in advancing drug discovery research for over a decade, with our DELs now containing more than 1.2 trillion novel, diverse, drug-like small molecules and macrocyclic compounds. In addition to DEL, HitGen has further expanded our drug discovery and optimization platform by integrating the fragment-based drug discovery and structure-based drug design technologies (FBDD/SBDD), synthetic therapeutic oligonucleotide technology (STO), targeted protein degradation technology (TPD), as well as lead optimization capabilities (medicinal chemistry, in vitro/in vivo biology, ADMET/DMPK, CMC, etc.) to transform the output from those lead generation technologies into clinical candidates, with an aim to meet the needs of our customers and partners in a more efficient manner and to support their drug discovery and development effort.

Through diversified business models including research and development services, out-licensing of projects at different R&D stages, and new drug launches in the long term, we are committed to addressing the unmet clinical needs with innovative therapeutic solutions, boosting the development of the pharmaceutical industry, and bringing benefits to patients worldwide.

At HitGen, we will do our utmost to understand your business and scientific needs, and to build long-term partnership through high-quality delivery and effective interactions. We look forward to working with you to shape the future of the industry! ”

sincerely,
Dr. Jin Li



Chairman and CEO , HitGen Inc.

About HitGen

HitGen Inc. (SSE: 688222.SH) is dedicated to building a world-class innovative biopharmaceutical enterprise. Driven by the mission to advance human health and quality of life, it provides innovative therapeutic solutions to address unmet medical needs. Centered on its internationally leading DEL (DNA-encoded Library) technology, the Company has expanded into Fragment-Based Drug Discovery and Structure-Based Drug Design and a suite of complementary platforms based on Oligonucleotide-based Therapeutics, Targeted Proximity Drugs, and Cyclic Peptidomimetics, and has developed HAILO, a proprietary "DEL+AI+Automation" molecular optimization platform, thereby establishing a distinctive novel molecule discovery engine that delivers both therapeutics molecules and tool molecules to the global pharmaceutical industry. Headquartered in Chengdu, China, HitGen maintains subsidiaries in Cambridge, UK, and Houston, USA, with its operational network spanning the globe. Through diversified and flexible business models including technical services, project out-licensing and product sales, the Company has forged extensive collaborations with a broad range of pharmaceutical and biotechnology companies, chemical firms, foundations, and research institutions. As of the end of 2025, it has empowered over 600 clients globally and contributed to thousands of their innovative drug development projects. HitGen also advances multiple internal programmes at various clinical and preclinical stages. For more information, please visit www.hitgen.com.

PhD: about 20%

Master: about 30%

Bachelor and others: about 50%

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History of HitGen

2012 Establishment of HitGen

Feb. HitGen Ltd., based in Chengdu, P. R. China, aiming to discover and develop innovative drugs based on its core platform of DNA-Encoded Libraries (DELs).

2013 DNA-Encoded Library Size: 300 million

Oct. Dr. Jin Li became "Fellow of the Royal Society of Chemistry";Held 2nd International Symposium on Lead Generation Technology and Industry Development.

Dec. HitGen won "Chengdu Talents Plan Top Team" from The Organization Department of The Chengdu Municipal Party Committee.

2014 DNA-Encoded Library Size: 1.3 billion

Sep. Dr. Jin Li won "Overseas Chinese Returnees Contribution Award" from All-China Federation of Returned Overseas Chinese.

Dec. HitGen won "Leading Innovative and Entrepreneurial" from The Organization Department of The Sichuan Provincial Municipal Party Committee.

2015 DNA-Encoded Library Size: 4.2 billion

Jan. HitGen was recognized as "Sichuan Postdoctoral Innovation Practice Base" by Sichuan Provincial Human Resources and Social Security Department;Dr. Jin Li won "Sichuan Outstanding Contributions of Outstanding Experts" from Sichuan Provincial Party Committee.

Oct. The core patents granted: ZL201210555548.3 ZL201210555088.4

2016 DNA-Encoded Library Size: 8 billion

Apr. HitGen, as a "high-tech pioneer" of biotechnology field in China, was inspected and encouraged by Premier Li Keqiang.;Professor Richard Lerner and Professor Barry Sharpless visited HitGen.

May. **Nature BioTechnology** published an article "DNA-Encoded Drug Libraries Come of Age" and gave recognition of contribution in innovative drug discoveries area of HitGen and other DEL companies worldwide.

Jul. HitGen Pharmaceuticals Inc. (a subsidiary of HitGen) was founded.

Nov. HitGen was recognized as "National Hi-Tech Enterprise" by Ministry of Science and Technology of The People's Republic of China.

2017 DNA-Encoded Library Size: >85 billion

Jul. HitGen is mentioned in **Nature** (Chinese Biopharma Starts Feeding the Global Pipeline).

2018 DNA-Encoded Library Size: 300 billion

May. HitGen's small molecule HDACi HG146 receives IND approval from National Medical Products Administration.

Jul. Dr. Jin Li received the Award of Honorary Doctor of Science from Aston University, UK.

Nov. **BioCentury Innovation** published cover report: HitGen's DNA for Small Molecules.

2019 DNA-Encoded Library Size: 400 billion

Aug. HitGen was recognized as a 2019 top innovator among Asia-Pacific pharmaceutical companies by Cortellis.

Oct. Held 2019 International Symposium on the Frontiers and Practice of Innovative Drug with more than 1200 attendees.

Dec. HitGen was recognized as China Best Employer Award 2019 - China Most Aspiring Employers in Chengdu by Zhilian.

2020 DNA-Encoded Library Size: > 500 billion

Mar. HitGen's 2nd generation NTRK/ROS1 inhibitor HG030 receives IND approval from National Medical Products Administration.

Apr. HitGen received approval to be listed on the Shanghai Stock Exchange.Stock code：HitGen 688222.SH.

Oct. HitGen announced the acquisition of Vernalis (R&D) Limited, taking the first step towards overseas Mergers and Acquisitions.

Nov. HitGen entered the public list of National Enterprise Technology Center and listed in China Top 500 New Economy Enterprises. Obtained the title of “CHENGDU listed key industry and listed leading enterprise”.

Dec. HitGen announced it has entered into a collaboration and licensing agreement with Guangzhou Baiyunshan Pharmaceutical Holdings Co., Ltd (Baiyunshan, 600332.SH/00874.HK). Officially confirmed as National Enterprise Technology Center.

History of HitGen

2021

DNA-Encoded Library Size: > 1 trillion

Apr. 2 INDs got clearance from National Medical Products Administration, for HitGen's i.v. injectable STING agonist HG381 and HG146 for its second indication exploration respectively.
May. Whitepaper: Advancing Drug Discovery through DNA-Encoded Library Technology has been officially released by HitGen.
Oct. HitGen was awarded of China Pharmaceutical R&D Top 50.

2022

DNA-Encoded Library Size: > 1.2 trillion

Jan. HitGen's first FDA IND clearance from HG030.
Sep. HitGen and the PACS1 Syndrome Research Foundation announce an agreement.
Jun. HitGen obtained ISO27001 certification, its information security management capability was internationally recognized; HitGen launched OpenDEL®3.0, which is a new upgrade product for Open access.
Dec. Recognized as a "CAS Registry® Innovator" .

2023

DNA-Encoded Library Size: > 1.2 trillion

Jan. PROTAC molecule discovery and optimization strategy and case study on ACS Chemical Biology and selected as an "ACS Editors' Choice".
Mar. HitGen held a ceremony to celebrate its tenth anniversary of establishment and third anniversary of being listed on Shanghai Stock Exchange. Mr. Wenhui CHENG, Vice Chairman of the National Council for Social Security Fund, led a delegation to visit HitGen Inc.
Jun. HitGen ranked in 2022 China CXO enterprises top20.
Jul. HitGen released DEL For series of services.
Aug. HitGen Enters into DNA-Encoded Library Based Research Service Agreement with Nested Therapeutics.
Nov. HitGen's Holding Subsidiary Hitston, officially put into production.

2024

DNA-Encoded Library Size: > 1.2 trillion

Mar. HitGen Partners with LabCentral / BioLabs / MBC BioLabs to Accelerate Biotechnology Discovery.
Oct. HitGen and ABLINK have signed a strategic cooperation agreement to jointly advance the research and development services of Antibody-Oligonucleotide Conjugates (AOC) drugs.
Nov. HitGen was selected as one of the "2024 Top 100 Chinese Pharmaceutical Innovation Enterprises" and "2024 Top 100 Brands of Chinese Life Science Service Enterprises", and Dr. Jin Li, Chairman and CEO of HitGen was honored as one of the "Decade of Innovation - Decade of the Future" person.
Dec. HitGen Analytical Testing Platform Receives CNAS Laboratory Accreditation Certificate.

2025

DNA-Encoded Library Size: > 1.2 trillion

Feb. HitGen co-publishes the new monograph: DNA-Encoded Library Technology for Drug Discovery
Jun. HitGen has been listed on the "Top 20 Enterprises of the 2025 China CRO Outstanding Brand List".
Jun. HitGen Releases Its Inaugural Sustainability Report.
Aug. HitGen Launches OpenDEL™ 5.0 – Boasting Expanded Chemical Diversity, Optional Macrocycle Library, Streamlined Workflows and Faster Access.
Nov. HitGen announces the launch of the OpenDEL™ Community – a dedicated platform for drug discovery professionals passionate about DNA-encoded library (DEL) technology.
Dec. HitGen-Backed Equity Investment Fund to Invest RMB40 Million for Controlling Stake in Moshang Intelligence, an AI Pharma Data Service Provider.

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HITGEN

BUSINESS MODELS

DEL Synthesis

DEL Screening

Chemical/Biological Services

Strategic Collaborations/JV

Out-licensing Collaboration

Integrated Drug Discovery Project

Publicly Announced Collaboration Partners

Pfizer | Johnson&Johnson | MSD | Bristol Myers Squibb | Roche | AstraZeneca | Boehringer Ingelheim
GILEAD | Takeda | Biogen | sanofi | Genentech A Member of the Roche Group | Bayer CropSCience | BASF We create chemistry
SERVIER | Mitsubishi Tanabe Pharma | LG Chem | sparc | Galápagos | Onco design | almirall feel the science
Gates Foundation | Lotus23 THERAPEUTICS | FORMA THERAPEUTICS | 華氏醫藥 HUASKY MEDICAL | Calibr | GBT | Scripps Research
KAKEN PHARMACEUTICAL CO.,LTD. | CANCER RESEARCH UK | ARCLIGHT Therapeutics | NESTED THERAPEUTICS | evotec | CRYSTAL PHARMA,INC | KYMERA
先为达生物 | 先声药业 Simcere | 扬子江药业集团 | LEO | Jemincare 济民可信 | HOX THERAPEUTICS | BIOAGE | Cedilla THERAPEUTICS
MORPHIC THERAPEUTIC | DORIAN THERAPEUTICS | InterX.Inc. | 岛津 SHIMADZU Excellence in Science | ADURO BIOTECH | P | GBL | KELUN-BIOTECH 科伦博泰 | UPPTHERA
GW 国为医药 Gowell Pharma | 14Si Veritas In Silico | UNISON | Pierre Fabre | SGC | Duke UNIVERSITY | HHMI HOWARD HUGHES MEDICAL INSTITUTE | Cambridge Molecular
charles river 维通利华 | ALMAC | 海昶生物 HAICHANG BIOTECH | LIPIGON PHARMACEUTICALS | C4XD | AIChemEco | DAEWOONG
NITRASE THERAPEUTICS | CONTERA PHARMA | ARase THERAPEUTICS | Lab Central | biolabs | MBC biolabs | bridgebio therapeutics | 盛世君联 ABLINK

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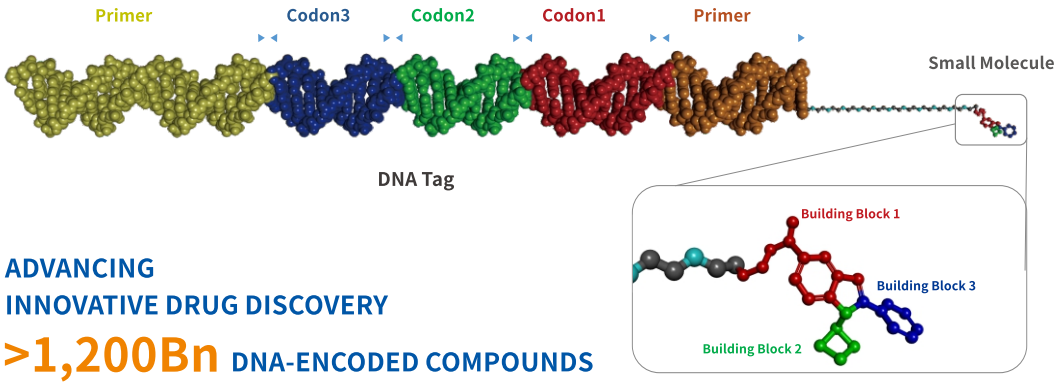
Basic Construct of a DEL Compound



ADVANCING
INNOVATIVE DRUG DISCOVERY
>1,200Bn DNA-ENCODED COMPOUNDS

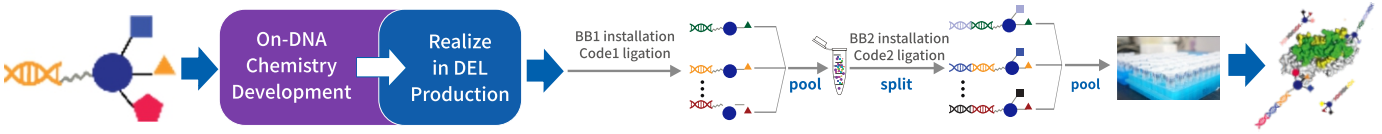
DNA-encoded Library Design and Synthesis

DEL Design by Customer or Co-design by Two Parties

Realization of DEL Compatible Chemistry by HitGen

DEL Synthesis by HitGen

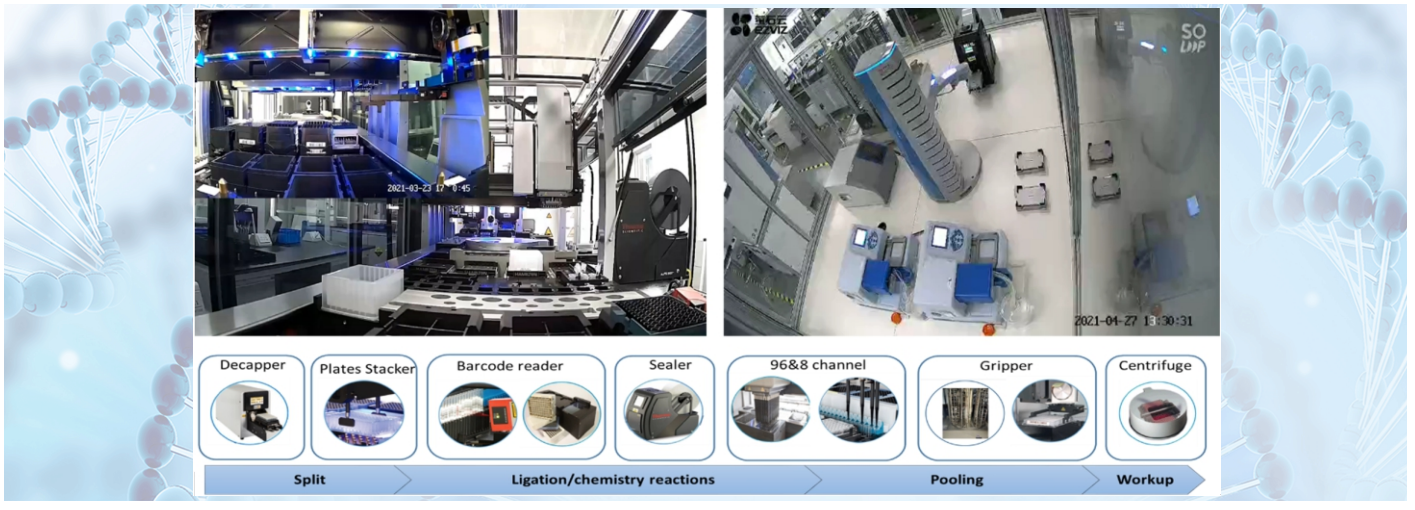
Screening against Customer Target



An experienced team to help customer design diverse, drug-like, novel libraries	**Experienced scientists to:** • Realize new chemistry/idea in DEL production; • Validate building blocks; • Evaluate DNA damage along the development; • Analyze by-product.	• Easy-access DNA-encoded library synthesis platform to build and deliver high quality libraries to Customer in 3 months; • High-quality control of DEL Synthesis; • Full DEL package; • Library product can be delivered to customer sites or stored at HitGen for downstream screening.	Tech. transfer of downstream screening

HitGen's custom DELs offer
flexible business models tailored to different customer needs

Apply Automation to High-Fidelity DEL Synthesis



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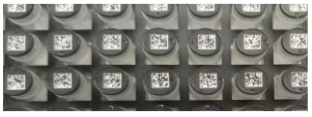
DEL Products and Deliverables

- Customers may design DELs with their own medchem experience and chemical resources;
- HitGen will build and deliver high quality libraries to customer with billions of compounds;
- Trackable records for DEL synthesis and QC;
- Libraries generated in this collaboration can be selected against any Customer targets ;
- Enable Customer to do own selections, sequencing, data analysis and hit-proposal.

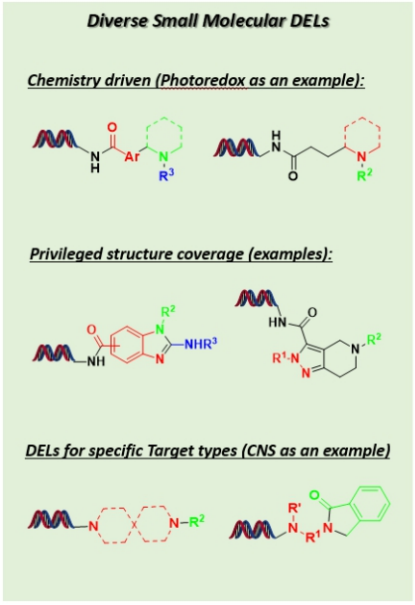
DELs are stored in 96-well plates

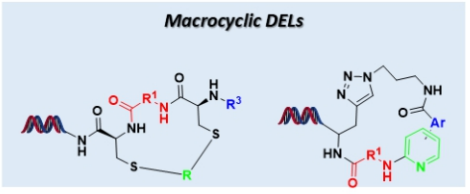


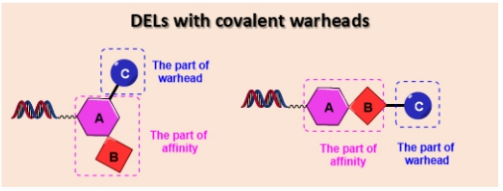
One DEL sample is splitted into2D barcode tubes

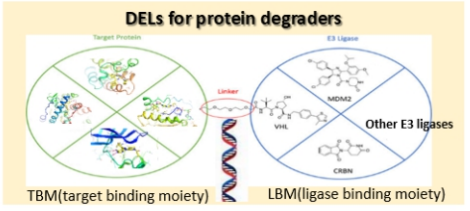
- One synthesis campaign will provide samples for hundreds or thousands of selections against many targets;
- DEL samples are stored as dry powders at -20°C freezers;
- The products are stable for at least several years as monitored by sequencing and selection validation;
- All the library information including synthesis procedures and QC data will be transferred along with library samples.

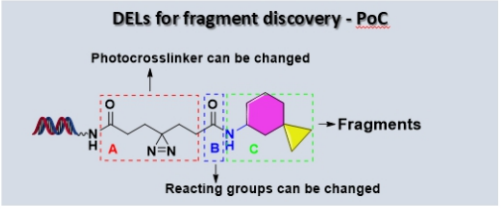
Specific Types of DELs at HitGen

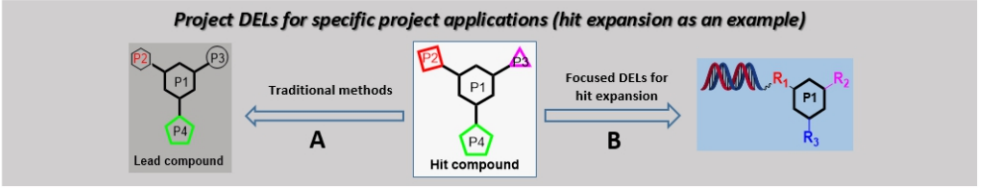




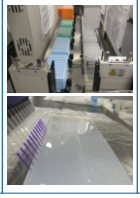








DNA-encoded Library Synthesis Platform

Scaffold Chemistry	Oligo Chemistry	DNA-encoded Library Chemistry	Encoding	QC and Purification
				

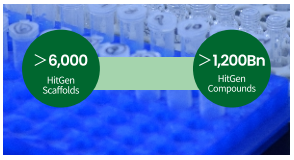
From library design to final product:

Experienced oligonucleotide chemists, organic chemists, computational chemists and molecular biologists in one team;

Reliable in-house facilities for the full workflow of DNA-encoded library synthesis and quality control;

High-throughput on DNA-encoded library synthesis and QC.

HitGen DEL Synthesis Achivements



HitGen Compounds Collection:

- More than 1,200 Bn compounds and growing
- More than 6,000 scaffolds and 40,000 building blocks

Pfizer, MERCK, Johnson & Johnson, forma THERAPEUTICS

4 announced partners in custom DEL design and synthesis.

HitGen's DELT platform was reported by Biocentury as cover letter in 2018.

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OpenDEL™ -- Empowering Your Drug Discovery Journey

- **Hit Discovery**
  Identify novel compounds directly from the OpenDEL library
- **AI/ML**
  Use post-selection DEL for prediction of new chemical space outside of DEL
- **Target Ligandability**
  Perform screening of novel targets to assess their ligandability

OpenDEL™ -- Fully Transparent Open Access

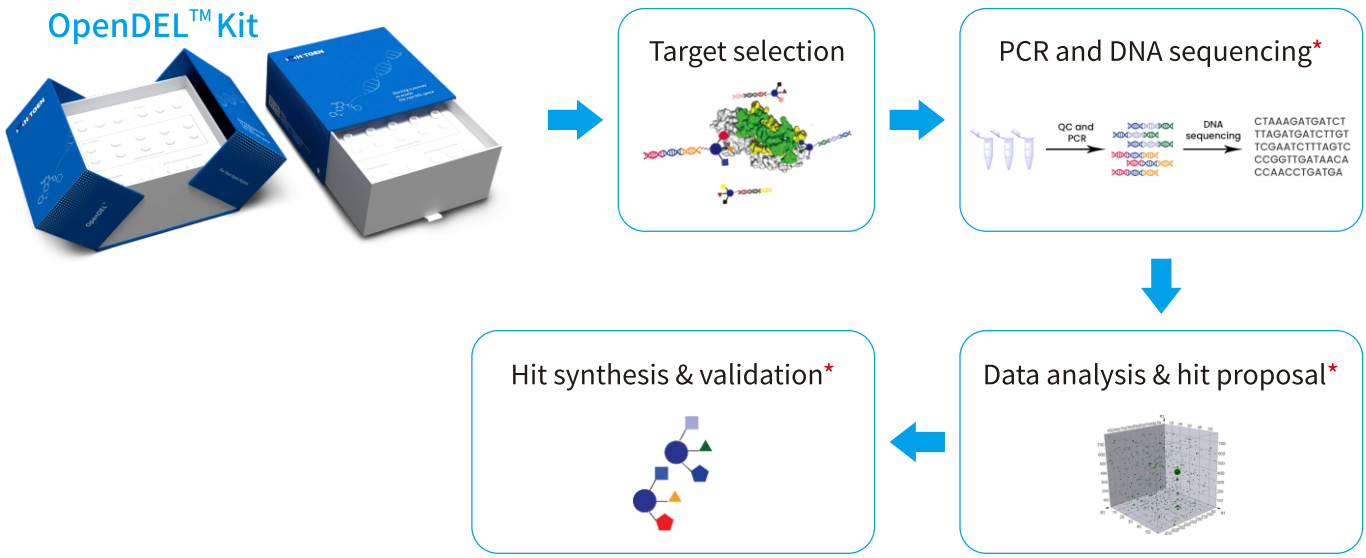
- **The Kit**

  OpenDEL™ - Small Molecule Library
  - 57 Libraries
  - 12 2-Cycle Libraries, ~20M Compounds
  - 45 3-Cycle Libraries, ~3.8Bn Compounds

  OpenDEL™ - Macrocycle Library
  - 1 Macrocycle Library +1 Linear Control
  - ~200M Compounds

- **Access to**
  - Small Molecule/Macrocycle Structures
  - Building Blocks
  - DNA Codons
  - Scaffolds
  - Selection Manual
- **No Structure Disclosure Fee**
- **No Compound IP License Fee**

OpenDEL™ -- Expert Discovery Science at Your Disposal



*Post-selection services available at HitGen

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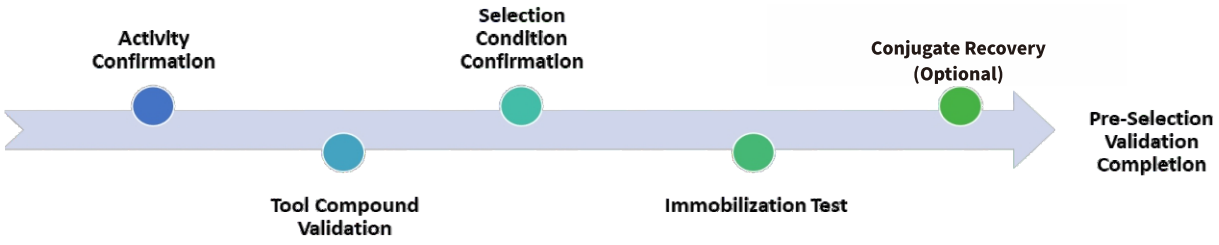
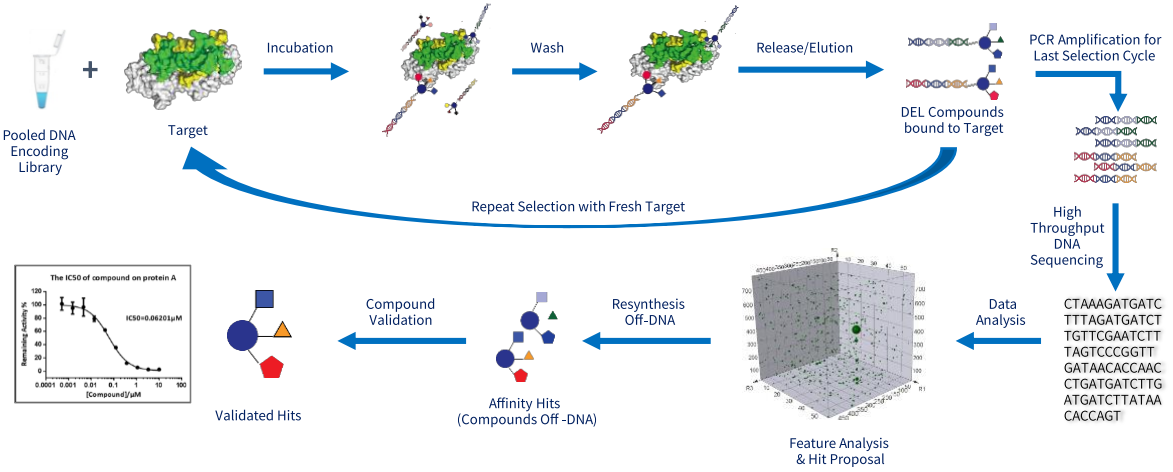
DNA Encoded Library (DEL) Selection

Pre-Selection Studies

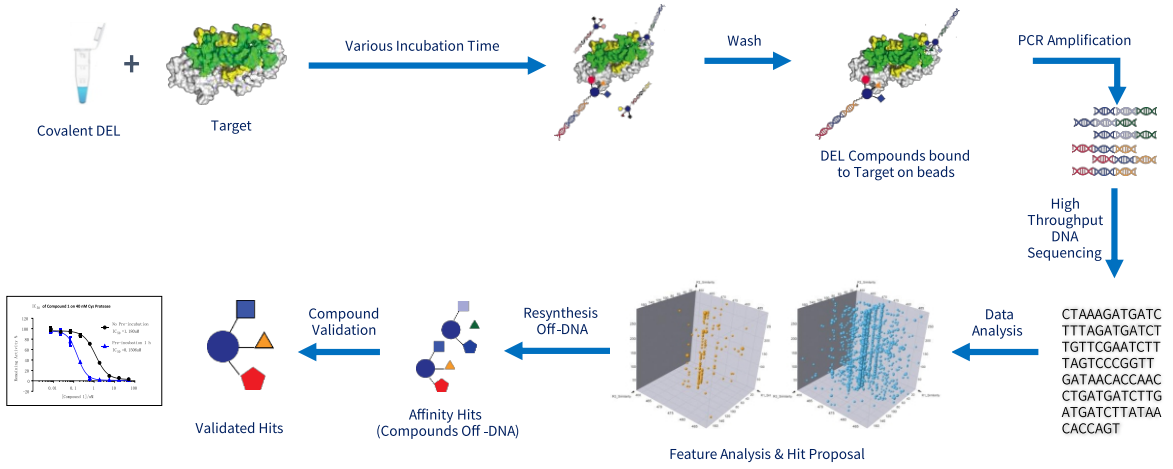


Regardless of the library type, DEL selection involves the following general steps: target-DEL incubation, unbound molecule removal, and bound molecule recovery. Each step is of great importance in effectively identifying hits. HitGen provides various DEL selection options involving different types of libraries, and each type of selection follows distinct procedures. Next-Generation Sequencing (NGS) is utilized for the sequencing process. In order to achieve high data usage efficiency, proper range of copy number in each sample is critical. To achieve this, we monitor total copy number of the elution with Quantitative Real-time PCR (qPCR) and make decision how many rounds of selection run are needed.

Classical DEL Selection



Covalent DEL Selection



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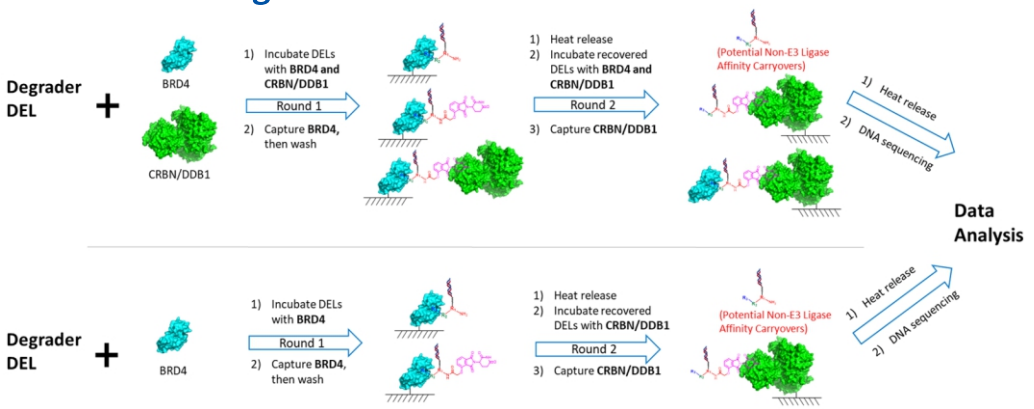
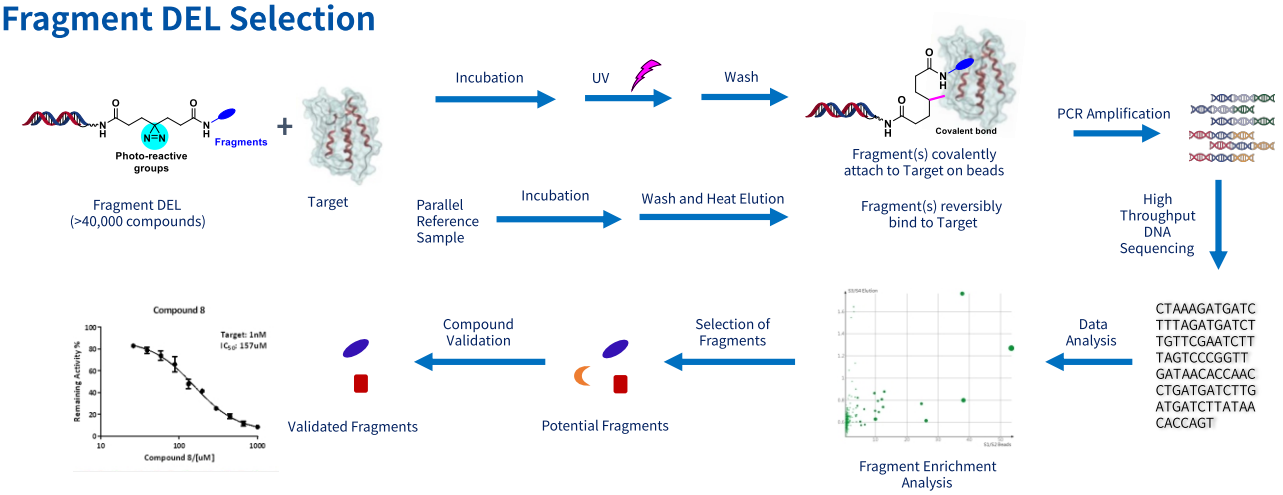
DNA Encoded Library (DEL) Selection

DEL Selection for Protein Degraders

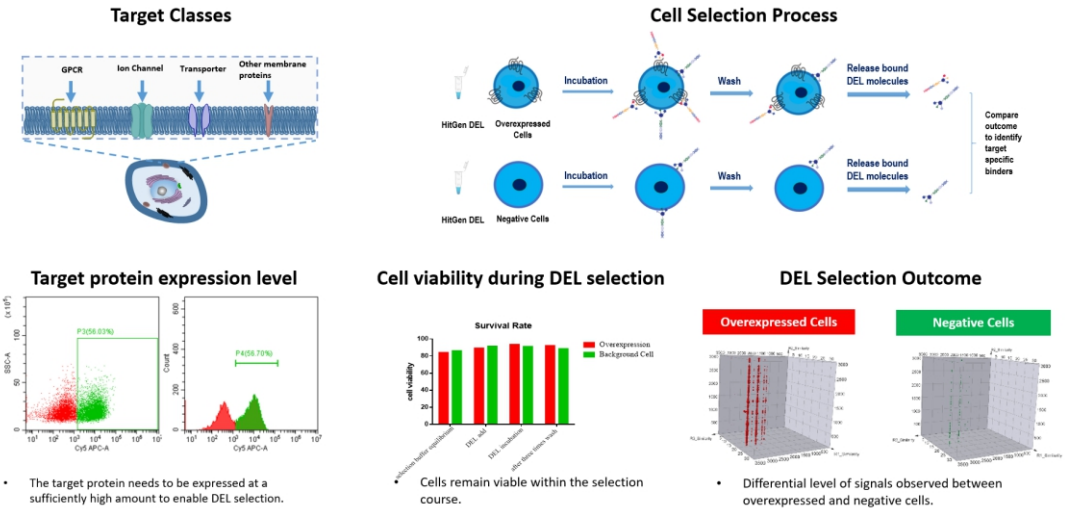


* Find details from "Case Study: Novel BRD4 Degrader Discovery using DEL Technology" Page or ACS Chem. Biol. 2023, 18, 25-33.

Fragment DEL Selection



Cell based DEL Selection



- The target protein needs to be expressed at a sufficiently high amount to enable DEL selection.
- Cells remain viable within the selection course.
- Differential level of signals observed between overexpressed and negative cells.

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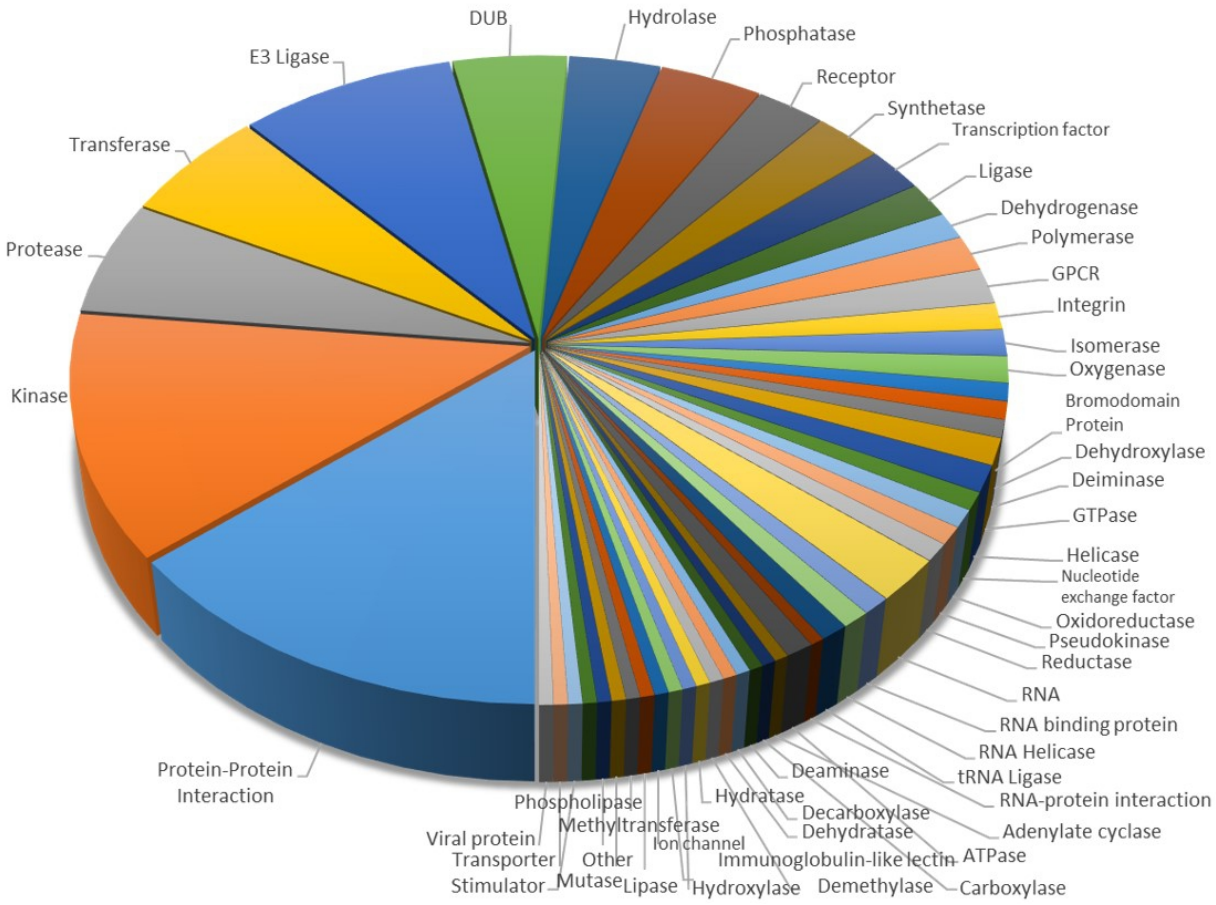
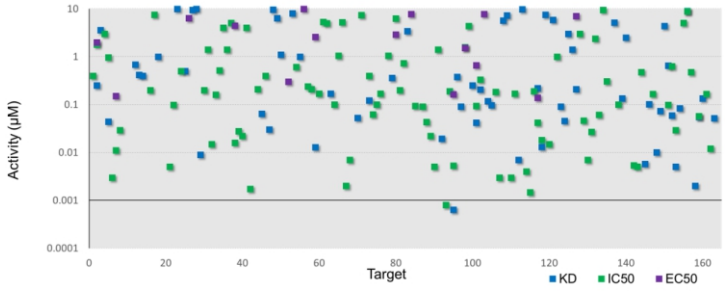
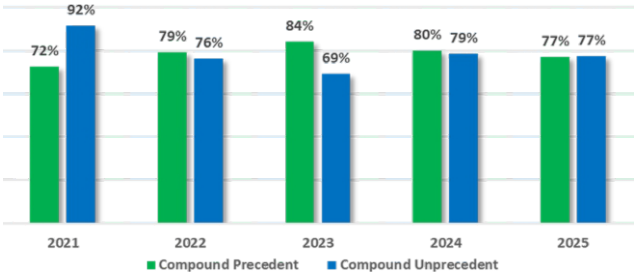
Target Class Distribution (53 Target Classes)



Representative DEL Hit Potency Range



DEL Screening Success Rate Comparison



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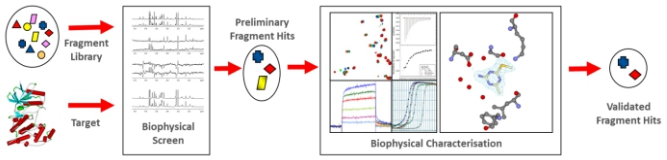
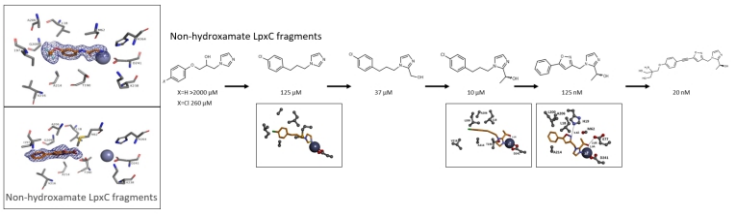
Fragment- and Structure- Based Drug Discovery (FBDD and SBDD)

Fragment Based Drug Discovery (FBDD)

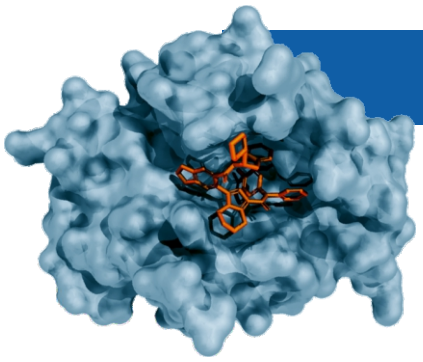
FBDD Screening



FBDD Structure-guided evolution



Structure Based Drug Discovery (SBDD)



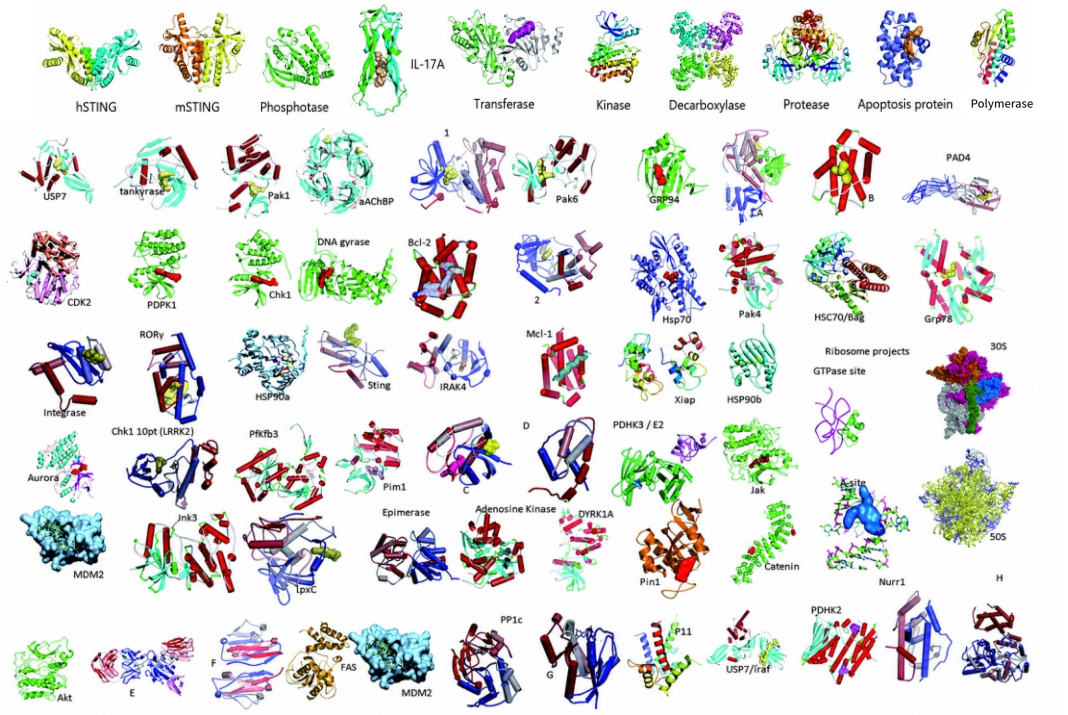
3D structure guides our approach

8000+ crystal structures determined for more than **60** targets

Parallel approaches

- Protein engineering
- Protein NMR
- Chimeras & Surrogate proteins
- Data-guided modelling

Over 8,000 Protein/Protein-Ligand Structures Produced



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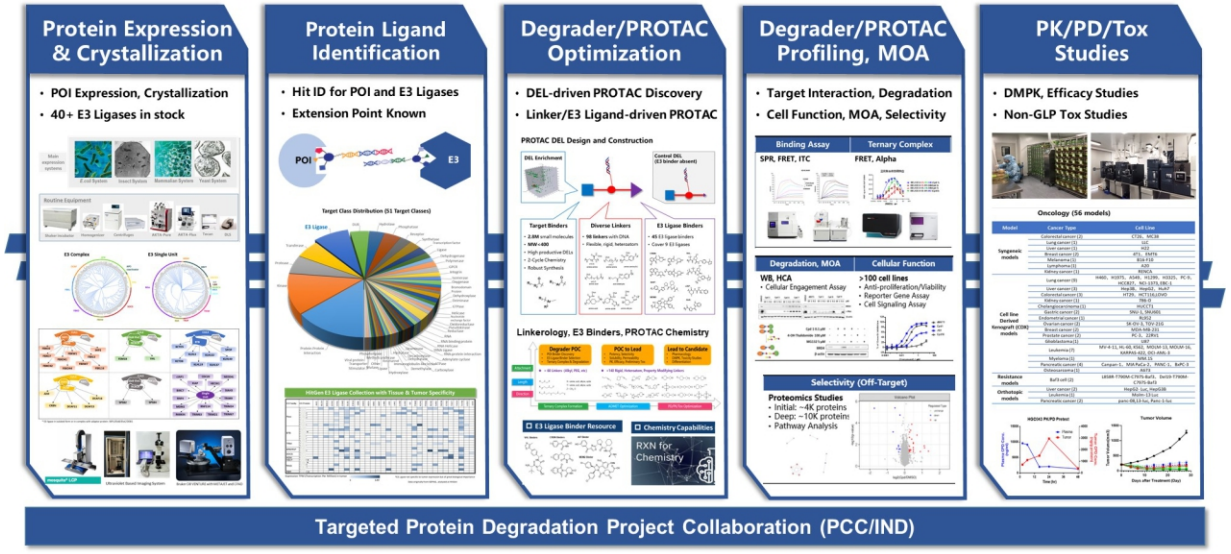
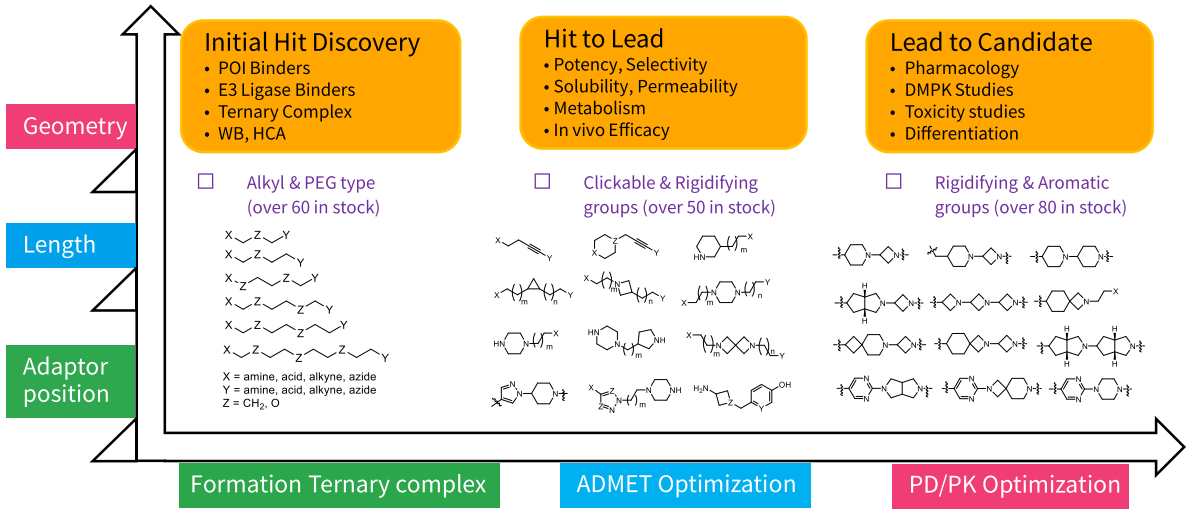
Targeted Protein Degradation Platform



Linkerology



PROTAC Discovery Strategy：Challenges and Opportunities

POI Ligand	Linker	E3 Ligand	Current Status	Challenges	Opportunities
Known	Novel	Known	Many programs entered clinic	Crowded in future target selection; Potential IP issues	Expanding to more Disease Areas (beyond oncology)
Novel	Novel	Known	Programs in pre-clinical	Require large library screening for ligand identification of challenging targets	Expanding to undruggable targets
Known	Novel	Novel	Very limited programs heading to clinic	Limited knowledge in E3 and their protein substrates; Exploration of E3 expect to have more outcome	Tissue selective targeting therapies
Novel	Novel	Novel	In early discovery stage	Challenging in Target:E3 pairing; Discovery and validation of both ligands	Preferable degradation profile beyond current; Targeting CNS targets

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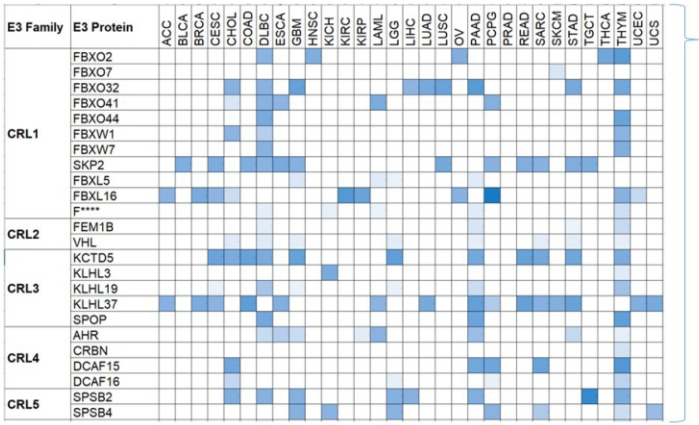
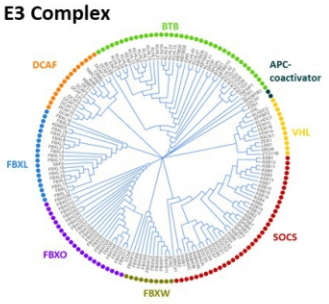
Exploration of Novel E3 Ligases

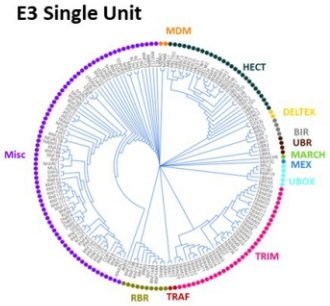
- Current widely used E3 ligase and binders are limited (mostly CRBN, VHL binders)
- Identification of E3 ligase binders from putative 600 E3 ligase space is highly valuable for reshaping degradable protein spectrum and expansion of degradable proteins
- Based on gene expression profile across tumor samples and paired normal tissues, together with literature analysis, 50+ tumor-enriched E3 ligases have been chosen for protein expression and structural studies
- DEL technology is used for novel E3 ligase ligand discovery at HitGen

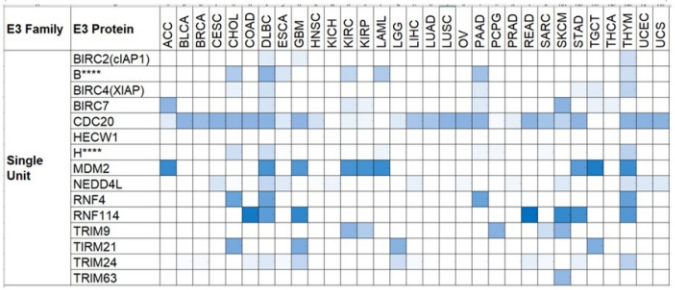


E3 Complex



E3 Single Unit





HitGen Available E3 Ligases

Protein name (Tag)	Catalog Number
ABTB1 (His-MBP)	HGE3_ABTB1_AHM
BIRC3 (His & Avi-Biotin)	HGE3_BIRC3_AHAB
BIRC3 (His & Avi-Biotin)	HGE3_BIRC3_BHAB
BIRC3 (His & Avi-Biotin)	HGE3_BIRC3_CHAB
BIRC3 (His)	HGE3_BIRC3_DH
BIRC3 (Strep)	HGE3_BIRC3_DS
BIRC7 (no tag)	HGE3_BIRC7_AN
BTRC/SKP1 Complex	HGE3_BTRCc_BHSM
BTRC/SKP1 Complex	HGE3_BTRCc_BS
CDC20 (His)	HGE3_CDC20_AH
CDC20 (Strep)	HGE3_CDC20_AS
cIAP1 (Strep)	HGE3_cIAP1_BS
cIAP1 (His & Avi-Biotin)	HGE3_cIAP1_CHAB
cIAP1 (Strep)	HGE3_cIAP1_CS
CRBN/DDB1 Complex	HGE3_CRBNc_AH
CRBN/DDB1 Complex	HGE3_CRBNc_AHA
CRBN/DDB1 Complex	HGE3_CRBNc_AF
CRBN/DDB1 (dBPB) Complex	HGE3_CRBNc_BH
CUL3 (His)	HGE3_CUL3_AH
CUL3 (Strep)	HGE3_CUL3_AS
DCAF2/DDB1 (dBPB) Complex	HGE3_DCAF2c_BHG
DCAF11/DDB1 Complex	HGE3_DCAF11c_AHG
DCAF15/DDB1/DDA Complex	HGE3_DCAF15c_AH
DCAF16/DDB1 Complex	HGE3_DCAF16c_AHG
DDB1(Strep)	HGE3_DDB1_BS
DDB1/DDA Complex	HGE3_DDB1c_BS
ELOB/ELOC Complex	HGE3_ELOBC_AH
ELOB/ELOC Complex	HGE3_ELOBC_AS
ENC1 (His)	HGE3_ENC1_AH
FBXL16/SKP1 Complex	HGE3_FBXL16c_AHG
FBXL17/SKP1 Complex	HGE3_FBXL17c_CHMS
FBXL5 (Strep)	HGE3_FBXL5_AS
FBXL5/SKP1 Complex	HGE3_FBXL5c_BH
FBXL5/SKP1 Complex	HGE3_FBXL5c_BS

Protein name (Tag)	Catalog Number
FBXO2 (GST & His)	HGE3_FBXO2_AGH
FBXO2 (His)	HGE3_FBXO2_AH
FBXO2/SKP1 Complex	HGE3_FBXO2c_AH
FBXO41/SKP1 Complex	HGE3_FBXO41c_AHG
FBXO7 (Strep)	HGE3_FBXO7_AS
FBXO7/SKP1 Complex	HGE3_FBXO7c_AS
FBXW7/SKP1 Complex	HGE3_FBXW7c_BH
FBXW7/SKP1 Complex	HGE3_FBXW7c_BS
FEM1B/ELOB/ELOC Complex	HGE3_FEM1Bc_AGH
FEM1B/ELOB/ELOC Complex	HGE3_FEM1Bc_AGS
HECW1 (Strep)	HGE3_HECW1_AS
HECW1 (His-GST)	HGE3_HECW1_BHG
HUWE1 (His)	HGE3_HUWE1_AH
HUWE1 (Strep)	HGE3_HUWE1_AS
HUWE1 (His-GST)	HGE3_HUWE1_BHG
HUWE1 (His-GST)	HGE3_HUWE1_CHG
KCTD5 (Strep)	HGE3_KCTD5_AS
KCTD8 (Strep)	HGE3_KCTD8_AS
KEAP1 (His)	HGE3_KEAP1_AH
KEAP1 (His)	HGE3_KEAP1_AH01
KEAP1 (His-GST)	HGE3_KEAP1_AHG
KEAP1 (no tag)	HGE3_KEAP1_AN
KLHL3 (His)	HGE3_KLHL3_BH
KLHL3 (Strep)	HGE3_KLHL3_BS
KLHL3/CUL3 Complex	HGE3_KLHL3c_AS
KLHL40 (His)	HGE3_KLHL40_BH
MDM2 (Strep)	HGE3_MDM2_AS
MDM2 (His)	HGE3_MDM2_BH
MDM2 (Strep)	HGE3_MDM2_BS
NEDD4L (His)	HGE3_NEDD4L_AH
RNF114 (His-SUMO)	HGE3_RNF114_AHSM
RNF114 (Strep-SUMO)	HGE3_RNF114_ASSM
RNF4 (Strep-SUMO)	HGE3_RNF4_ASSM

Protein name (Tag)	Catalog Number
RNF4 (His)	HGE3_RNF4_BH
RNF4 (Strep)	HGE3_RNF4_BS
SIAH3 (Strep-SUMO)	HGE3_SIAH3_ASS
SKP1 (His-Strep)	HGE3_SKP1_AHS
SKP1 (His)	HGE3_SKP1_BH
SKP1 (Strep)	HGE3_SKP1_BS
SKP2/SKP1 Complex	HGE3_SKP2c_ANH
SKP2/SKP1 Complex	HGE3_SKP2c_ANS
SKP2/SKP1 Complex	HGE3_SKP2c_ASH
SPSB2 (His)	HGE3_SPSB2_BH
SPSB2 (Strep)	HGE3_SPSB2_BS
SPSB2/ELOB/ELOC Complex	HGE3_SPSB2c_AS
SPSB4/ELOB/ELOC Complex	HGE3_SPSB4c_AH
SPSB4/ELOB/ELOC Complex	HGE3_SPSB4c_AS
SV5V/DDB1 Complex	HGE3_SV5Vc_AN
TRIM21 (His)	HGE3_TRIM21_AH
TRIM21 (Strep)	HGE3_TRIM21_AS
TRIM21 (His)	HGE3_TRIM21_CH
TRIM21 (Strep)	HGE3_TRIM21_CS
TRIM24 (His)	HGE3_TRIM24_AH
TRIM24 (Strep-SUMO)	HGE3_TRIM24_ASSM
Trim67 (His-GST)	HGE3_TRIM67_AHG
TRIM9 (His)	HGE3_TRIM9_BH
TRIM9 (Strep)	HGE3_TRIM9_BS
TRIM9 (His)	HGE3_TRIM9_CH
TRIM9 (Strep)	HGE3_TRIM9_CS
VHL/ELOB/ELOC Complex	HGE3_VHLc_AF
VHL/ELOB/ELOC Complex	HGE3_VHLc_AGS
VHL/ELOB/ELOC Complex	HGE3_VHLc_AH
VHL/ELOB/ELOC Complex	HGE3_VHLc_AHA
VHL/ELOB/ELOC Complex	HGE3_VHLc_AS
VHL/ELOB/ELOC Complex	HGE3_VHLc_BN
XIAP (His & Avi-Biotin)	HGE3_XIAP_AHAB

Delivery time: 1 week for domestic shipping, ~3 weeks for international shipping.

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Oligonucleotide-Based Therapeutics Platform

RNAi Design | Chemistry | Delivery | Biology | PK/PD Toxicology | API/Formulation/CMC | PM/IND | Clinical

Bioinformatics
- siRNA design and chemical modification:
  - Canonical 21/21, 21/23-mer siRNA
  - High potency 25/27-mer Dicer substrate siRNA (DsiRNA)
  - Predict siRNA activity based on AI algorithms
- saRNA design and chemical modification
- Target analysis: mRNA transcript; abnormal gene (fused or mutated transcript)
- on/off-target by in silico
- Patent、FTO analysis

RNA HTS chemistry
- Special monomer
- Oligo synthesis (DNA, RNA, RNase-free HPLC purified, > 95%)
- Oligo Chemical modification, conjugates, fluorescent oligos

RNA delivery
- GalNAc-RNA (Liver)
- Lipid-RNA (CNS)
- Receptor based extrahepatic

Molecular/Cell/Animal Biology
- Cell based high-throughput screening
- on/off-target analysis
- Immunogenicity, Cell viability
- Delivery evaluation
- mRNA and protein knockdown study
- Stability in serum and duration test
- In vitro ADME; in vivo toxicology、PD/PK evaluation

Oligo CDMO
- Process chemistry of oligos
- GMP compliance
- Hundreds-grams scale to satisfy phase I to III needs

HITGEN — CRO — CRO

Hitston — CDMO

Leaderna Therapeutics 先衍生物 — Oligonucleotide pipeline development

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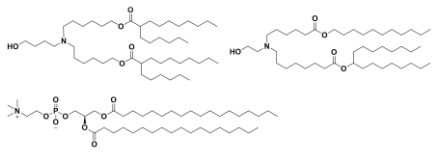
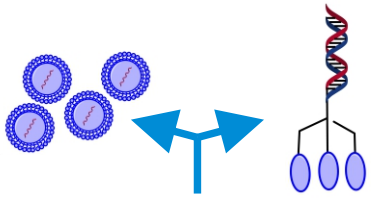
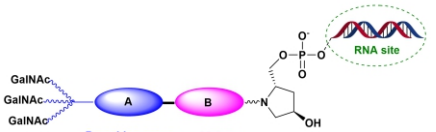
Nucleic Acid Drug Development

Lipid

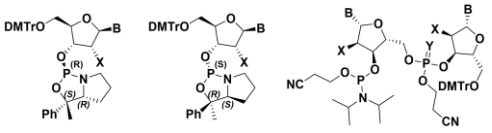




GalNAc-mediated Conjugate

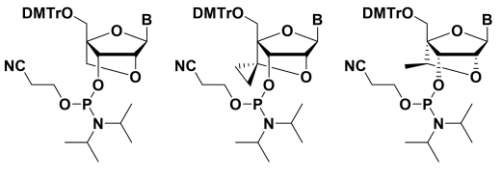


Backbone modifications (Stereo definded monomers)



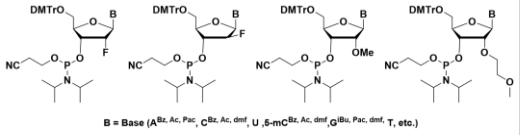
X = H, F, OMe, OMOE,OTBS, etc
Y = O, S
B = Base ($A^{Bz, Ac, Pac}$, $C^{Bz, Ac, dmf}$, U ,5-$mC^{Bz, Ac, dmf}$,$G^{iBu, Pac, dmf}$, T, etc.)

Ribose modifications and bridged nucleic acids



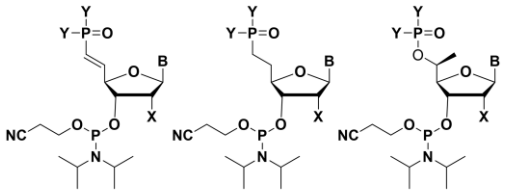
B = Base ($A^{Bz, Ac, Pac}$, $C^{Bz, Ac, dmf}$, U ,5-$mC^{Bz, Ac, dmf}$,$G^{iBu, Pac, dmf}$, T, etc.)

2'-Ribose substitutions



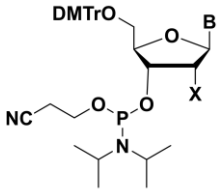
B = Base ($A^{Bz, Ac, Pac}$, $C^{Bz, Ac, dmf}$, U ,5-$mC^{Bz, Ac, dmf}$,$G^{iBu, Pac, dmf}$, T, etc.)

5'-phosphate stabilization



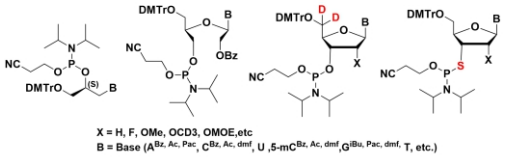
X = H, F, OMe, OMOE,etc
Y = OMe,OEt, OPOM
B = Base ($A^{Bz, Ac, Pac}$, $C^{Bz, Ac, dmf}$, U ,5-$mC^{Bz, Ac, dmf}$,$G^{iBu, Pac, dmf}$, T, etc.)

Nucleobase modifications



X = H, OMe, F, etc
B = H, Phenly, Naphthyl, 8-NH_2 A & G, 2-thio U &T, 6-thio G, 5-OH U&C, etc

Other modified amidite(UNA,GNA)



X = H, F, OMe, OCD3, OMOE,etc
B = Base ($A^{Bz, Ac, Pac}$, $C^{Bz, Ac, dmf}$, U ,5-$mC^{Bz, Ac, dmf}$,$G^{iBu, Pac, dmf}$, T, etc.)

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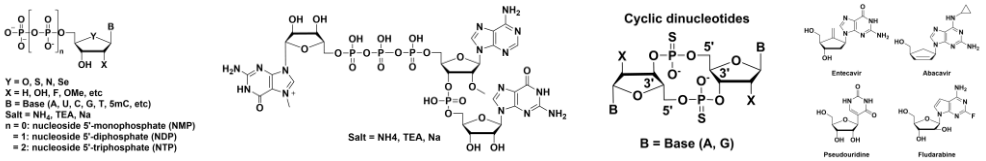
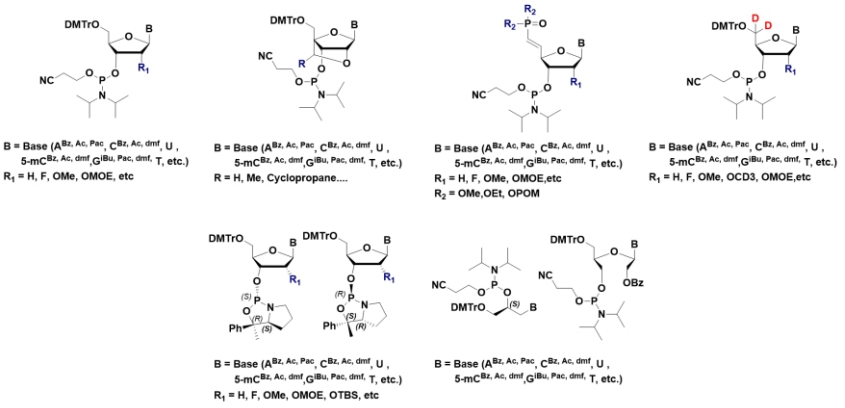
Nucleic Acid Drug Development

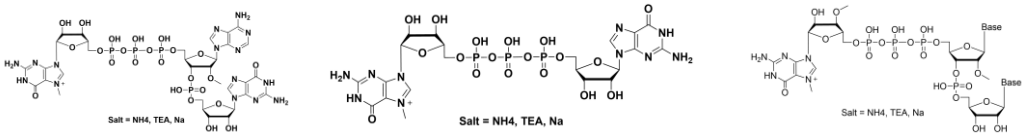
Nucleotides/ Nucleosides



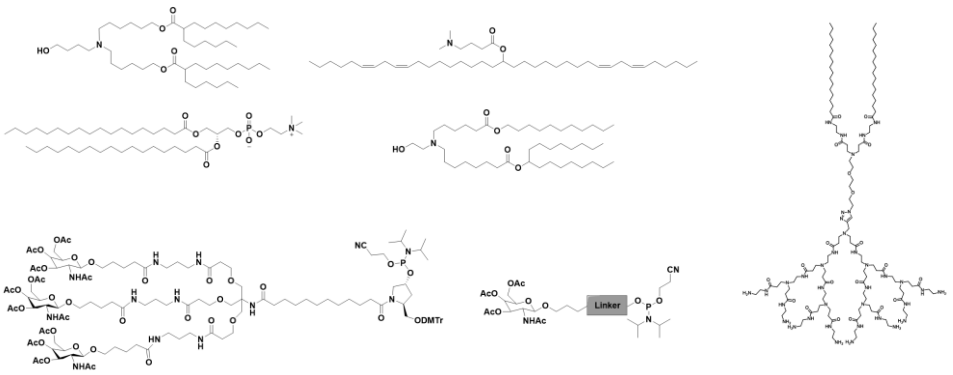
Phosphoramidites



Cap analogs



Delivery Vector



Note: The compounds listed in this catalog are for scientific research and experimentation relevant to the intellectual property or providing information necessary for administrative approval purposes only. Without the authorization of the intellectual property owner of individual products, they will not be commercially sold in the protected areas.

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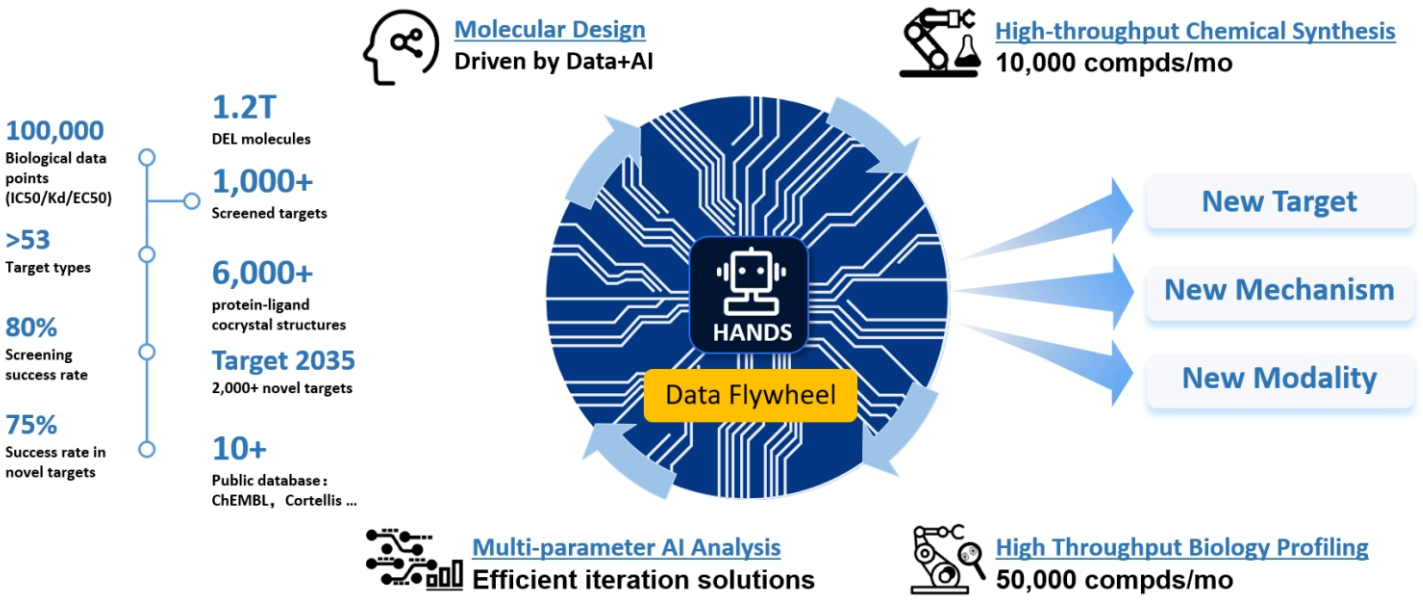
HAILO Platform to Accelerate Lead Optimization

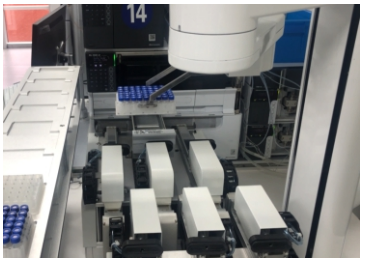


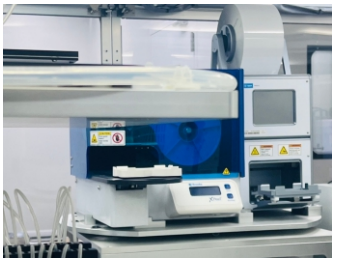
HAILO: **H**igh-throughput **AI** driven **L**ead **O**ptimization

High-Throughput Automated Data Generation Platform


High Throughput Chemistry Lab


High Throughput Biology Lab





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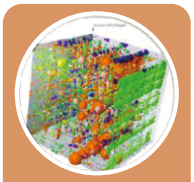
Hit-2-Lead Optimization at HitGen



Structure -Affinity Relationship

· Extremely rich compound binding info readily available out of DEL screening

· Cluster analysis reveal pharmacophore

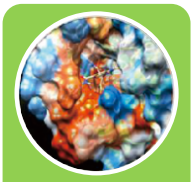
· Building block analysis prevent making unnecessary compounds

Protein -Ligand Co-crystallization

· Dedicated protein science group for protein expression and purification

· Structural biology lab for protein-compound co-crystallization

· Reveal/confirm compound MOA



Structure -based Design (SBDD)

· Molecular modeling based on crystal structure information and SAR

· Identify pharmacophore

· Identify key interactions and suggest strategy for compound design

Quick Access to More Reagents

· Tens of thousands of reagents in stock

· Readily available scaffolds and well developed synthesis

· Zero delay for Hit to Lead stage transition

Synthetic Chemistry

· Experienced Senior leaders with well-trained team

· State-of-art laboratory equipment

· DEL technology to support discovering novel molecules

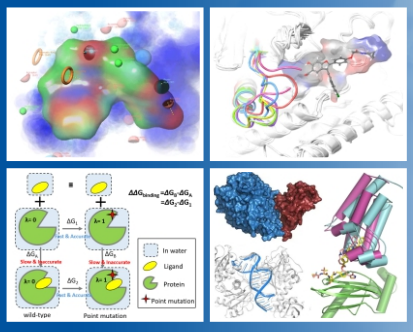
In vivo Biology

· Capability to perform most biophysical and biochemical assays

· Cell line bank of 100+ cell lines

· In vivo PK/PD assays

· Early toxicology studies



Structure-based Drug Design

Use structural biology information to guide the design of new and improved compounds. Our computational capabilities including: binding site analysis, docking, ligand design, molecular dynamic simulation, alchemical free energy (FEP/TI) calculation, etc.

AI-aided Hit Identification and Optimization

Use of DEL selection data and publically available data to explore more broader chemical space, find more hit series. Coupled with AI-based compound generation and CADD/AI-based evaluation, the process of hit identification and optimization can be accelerated.

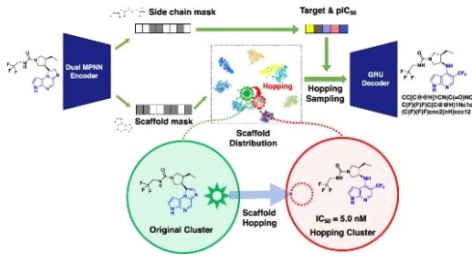
Al Compound Generation

Automated design of project-relevant chemical matters. Generation of populations of optimized molecules; Triage compounds by high-throughput virtual screening, docking and 3DCNN rescoring function.

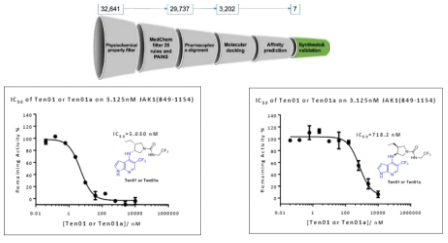
Property Prediction

In vitro ADME/T property prediction; CYP inhibition,hERG blocker; Solubllity, Permeabllty; Microsome stability, etc.

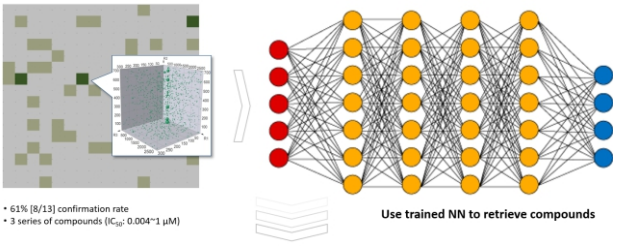
Compound Generation

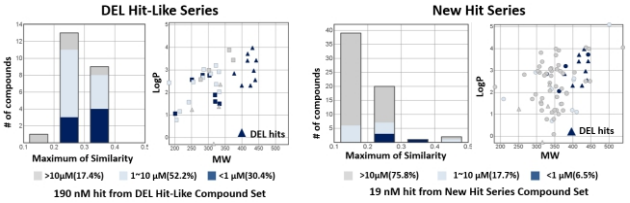


Compound Evaluation



Use DEL Screening Data to Train Neural Network





	# of Compds	# of Compds (<1 μM)	# of Compds (1~10 μM)	Confirmation Rate (<10 μM)
DEL Hit-Like Series	23	7	12	82.6%
New hit series	62	4	11	24.2%

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Integrated Drug Discovery Research

- Target Validation
- Biochemical/biophysical test
- Cellular function test

- MedChem (CADD, SBDD, AI/ML)
- Synthesis

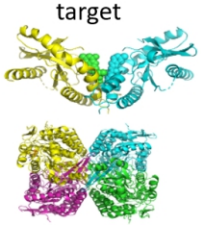
- ADME
- DMPK
- pharmacology
- Non-GLP toxicity

- DS
- DP

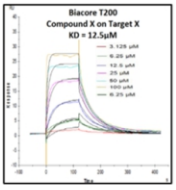
- QA
- Registration

- Clinical development

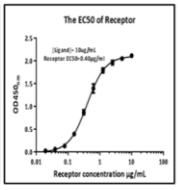
target



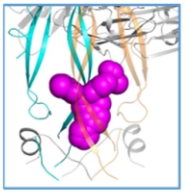
SPR

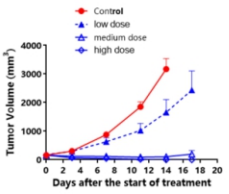


ELISA



SBDD

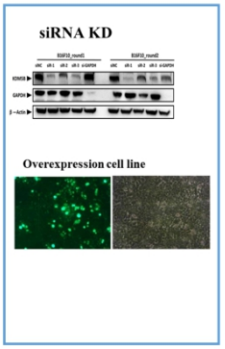




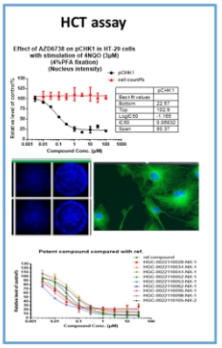
Cell Biology Platform

BSL-2 cell culture facility 200m²

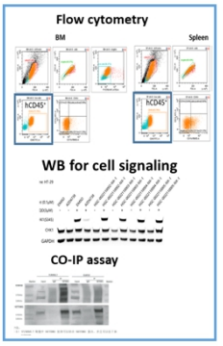
Target validation



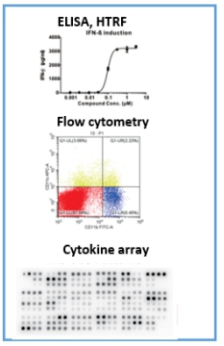
Compound screening



MOA study

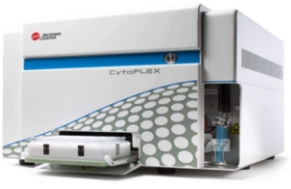


Biomarker



confocal microscopy

cytoflx flow cytometer



IN CELL Analyzer2200

fluorescence microscope IX71

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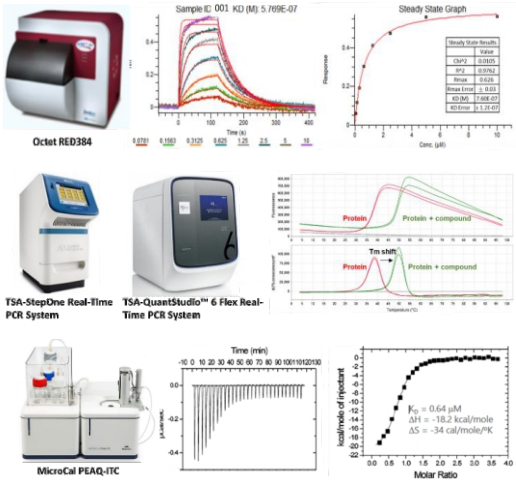
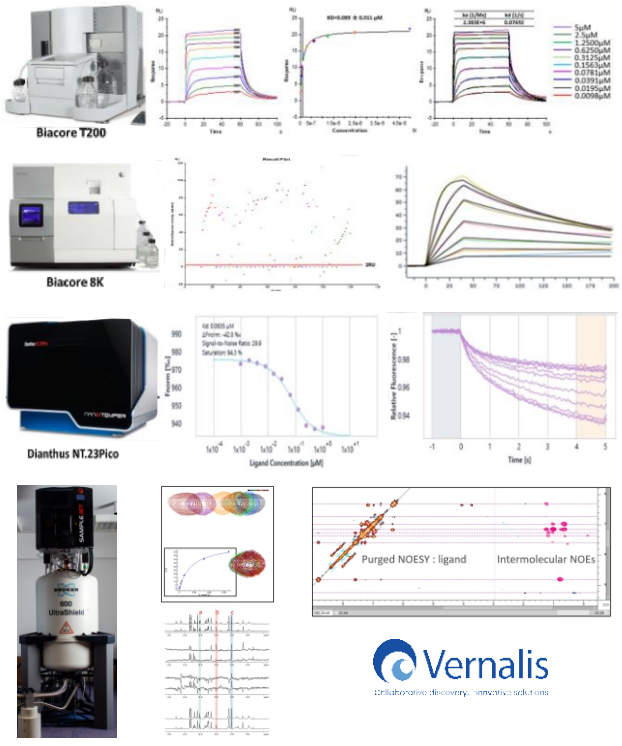
In Vitro Assay Capabilities

Biophysical assays

- Surface Plasmon Resonance (SPR)
- Biolayer Interferometry (BLI)
- Temperature Related Intensity Change (TRIC)
- Thermal Shift Assay (TSA)
- Differential Scanning Fluorimetry (DSF)
- Isothermal Titration Calorimetry (ITC)
- NMR (ligand- and protein-observed)





Biochemical assays

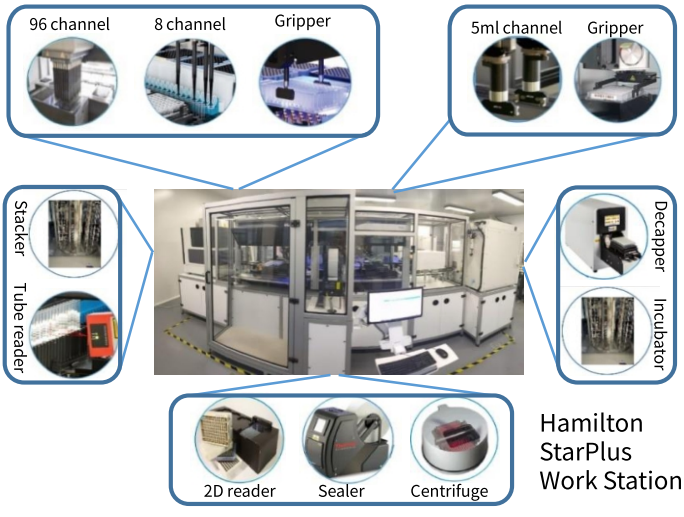
- Colorimetric assays (absorbance, etc.)
- Fluorometric assays (FP, FRET, FI, calcium flux, etc.)
- Luminescent assays (ELISA, Alpha-tech, BRET, Glo assay, etc.)
- Gel-based assays (pulldown, WB, etc.)

MTS/HTS screening

- Wide range of reagent transfer (1-1000 μL)
- Integrated with multiple modules for versatile functions
- Flexible applications on library reformatting, aliquoting and diluting
- Operating in 96, 384 and 1536-well formats

Echo 655 Liquid Handler

BMG PHERAstar FSX Microplate Reader and Stacker



Hamilton StarPlus Work Station

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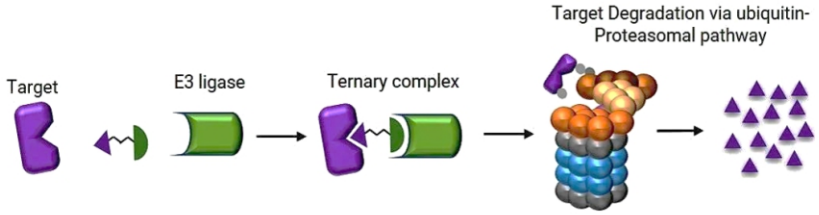
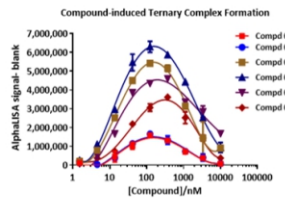
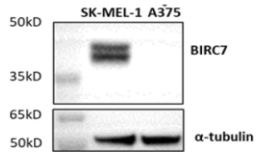
PROTAC Evaluation Platform



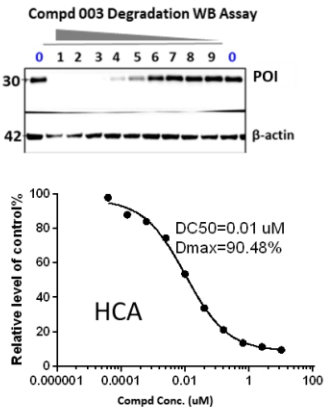
- **E3 Ternary complex Formation**



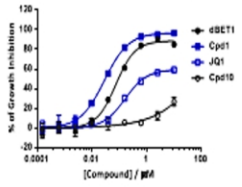
Target expression level



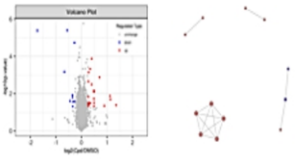
- **Targeted protein degradation**



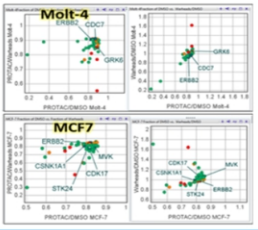
- **Phenotyping**



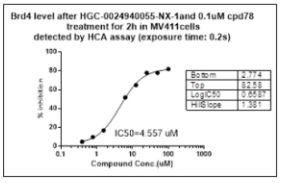
- **Off-target by proteomics**



- **Neo substrate identification**

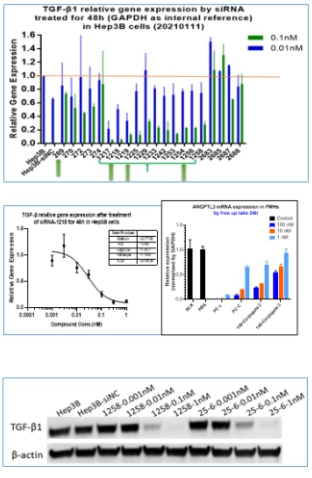


- **POI Engagement**



xRNA Evaluation Platform

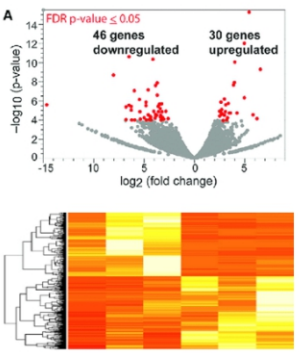
Target Knockdown



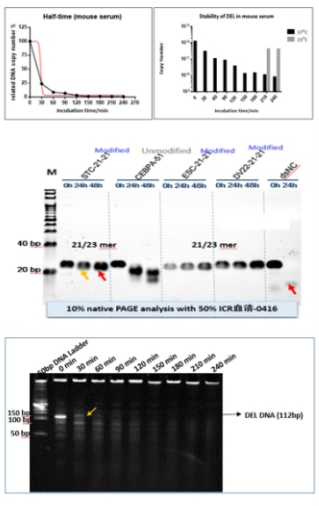
off-target analysis

5'-RACE PCR

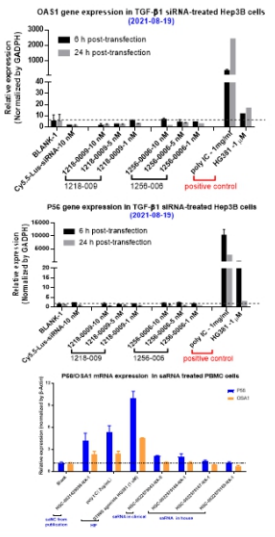
- **RNA-seq**



Stability/ADME



Immunogenicity



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Druggability Assessment Capabilities

In vivo DMPK

- General pharmacokinetics
- Cassette PK screening
- In vivo metabolites identification
- Quick excretion route screening
- Quick CYP induction analysis (M)
- Tissue distribution
- Excretion assay (R, Feces/urine)

PK/PD

- General PK-PD investigation
- PK-PD correlation analysis
- Common PD indices generation (WB, qPCR, FACS, ELISA, IHC, etc.)

Non-GLP Toxicity/Toxicokinetics

- Ames assay
- hERG inhibition
- Single/multiple dose toxicity study
- Toxicokinetics study
- Accumulative index estimation

In vitro ADME

- Microsomal Stability
- Plasma stability
- Blood stability
- Microsomal protein binding
- Plasma Protein Binding
- Tissue protein binding
- Blood to plasma ratio
- MDCK/Caco-2-based Permeability
- PAMPA BBB assay
- CPYs inhibition
- Time dependent CYP inhibition
- CPYs induction (PXR induction assay)
- Reactive metabolite screeningMetID in liver microsomes
- CPYs Phenotyping (Recombinant enzyme)
- CPYs Phenotyping (liver microsome)

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Analytical and Purification Capabilites

Anal-SFC

Prep-SFC

GC-MS&LCMS

ICP-MS

UPLC-MS

Karl Fischer Titrator

Prep-HPLC

Prep-HPLC

LC-MS/MS (TQS)

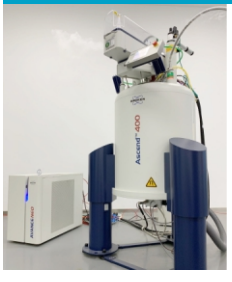
HPLC

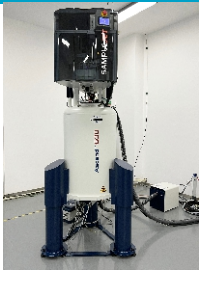
LC-MS

UPLC-MS

UPLC-MS (Q-TOF)

NMR





- Quality control and characterization for small molecules:HPLC、GCMS、LCMS、NMR
- Purification service from milligram scale to gram scale:Prep-HPLC
- Analytical method development and separation for chiral compounds:Anal-SFC、Prep-SFC
- Characterization for oligonucleotides and DELs:UPLC-MS
- ASMS screening:LC-HRMS (Q-TOF)
- Quantitative analysis:LC-MS/MS (TQS)
- Other analytical service, such as element analysis (ICP-MS) and water content determination (Karl Fischer Titrator)

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R&D PIPELINE

HitGen Small Molecule Pipeline

Disease Area	Project	Indication	Preclinical Study	Phase I Clinical Trial	Phase II Clinical Trial
Oncology	HG146: Class I/IIb selective HDAC inhibitor, capsule	Multiple myeloma			
		Solid tumor			
	HG030: 2nd generation NTRK/ROS1 inhibitor, tablet	Solid tumor		(Global ex. mainland China)	
	HG381: 2nd generation STING agonist, iv	Solid tumor			
	HG153: Menin-MLL, tablet	MLL-r or NPM1mu AML/ALL			
Inflammation	HGP3918: Small molecule inhibitor for IL-17AA/AF	Inflammation			

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