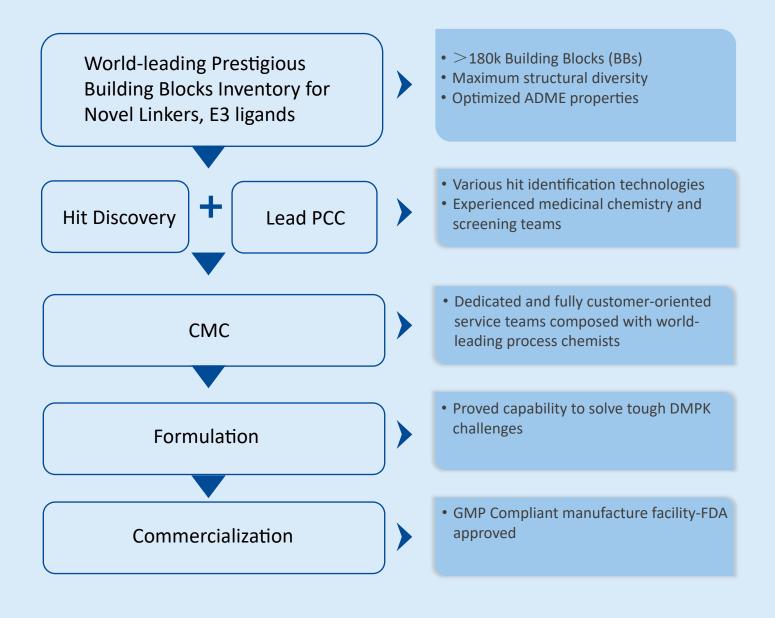
### **PROTAC Capability at PharmaBlock**

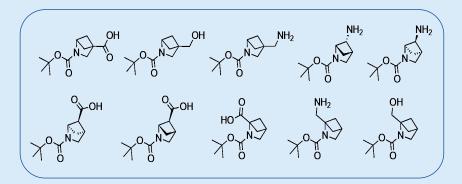
#### From hits to clinical candidates to commercial products



# **Building Blocks to Inspire and Accelerate PROTAC Discovery**

- Efficient linker for optimal degradation, selectivity, ADME properties
- PB's prestigious BB collections significantly enhance efficiency and success rate

### Unique Spiro, Bridge ring BB collections for accurate confirmation control and ADME optimization



BocNNH	O HN NH	MeO-\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	ON NH
F_NH	FNH	F	BocN
HNNNH	o NH	BocNNH	BocN

Exit Vector	Availability	
-СООН	> 200	
-ОН	> 200	
-NH2	> 200	
Alkyl	> 200	
Azide	> 100	
-X	> 100	
Azide	> 100	



### Wide Selection of CRBN and VHL Ligands

- 2500+ / 700+ of CRBN/VHL ligands designed, respectively
- One of the largest collections for novel PROTAC design and screening
- Grams to hundreds of kg scale in stock for most commonly used ligands

## **Enabling prompt material supply for early discovery and development**

### **Early Discovery to PCC Identification**

New Ligand PROTAC Identification

Hit to Lead



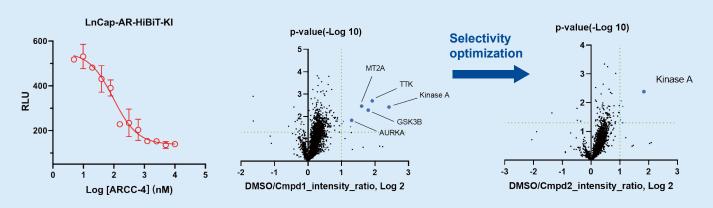
Lead Optimization

- DELT
- FBDD
- Rational Design

**Discovery Chemistry** 

- Medicinal Chemistry Expertise
- CADD/AI Support

## Supported by cascade of crucial screening and characterization assays



- Multiple-interface biophysical assays for binary and ternary binding elucidation
- High efficient cell based HiBiT-Nanoluciferase—96/384 well plate screening system supporting SAR studies
- Proteomics based degradation selectivity evaluation platform, critical to de-risk potential off-target degradation and toxicity

**One-stop Solutions for PROTACs** 

## Proved CMC Capability Supported by Dedicated Team

Problem solving capability for challenging PROTAC API: Injection

- 7 chiral centers, M.W. > 1000
- Solid state study showed no crystalline
- API produced as HCl salt in amorphous form
- Solvent residue issue
- High hygroscopicity, packing and storage difficulty
- Purification difficulty
- 50 g demo batch (5 months)
- 120 g GLP toxic batch (1 month)
- 500 g non-GMP batch (3 months)
- 700 g GMP batch (3 months)
- IND application approved by FDA, 2022.10
- 1.5 kg GMP batch (2023.02 started)

**Challenges** 

**Accomplishments** 

**One-stop Solutions for PROTACs** 

# Formulation Solutions Overcoming DMPK Challenges

Major Challenges for PROTAC APIs Physiochemical Characteristics
Beyond Rule of 5

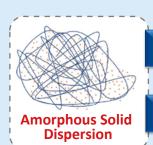
2 Transport and Absorption Limitations
Poor DMPK Properties

Poor Oral Exposure and Bioavailability

#### Formulation strategies







**Hot Melt Extrusion** 

**Spray Drying** 





- Polymers and additives
- Maximize the drug loading in ASDs
- Dry Granulation and Direct Compaction
- Excipients optimization