

Innovative chemistry for a better future

PharmaBlock

Innovative Chemistry Products and Services Provider for Small Molecule Drug R&D and Commercialization

May 2022

www.pharmablock.com
product.pharmablock.com

PharmaBlock

PharmaBlock Footprint

Started Operation
BB Design and Process R&D



2008.10

2012.5



Established PharmaBlock US
in California
BB Sales

IPO
(SZSE:300725)



2016.1

2017.11



Established PharmaBlock Shandong
Manufacturing Site of Intermediates

Established PharmaBlock Zhejiang
API Manufacturing Site



2017.12

2018.9



Pennsylvania, US
BB Sales & Process R&D

2000+
800+
100+
\$189M

Employees
Well-trained scientists
PhDs
Revenue (2021)



Nanjing Tianyi (under construction)
One-Stop CDMO Platform (API & DP)

2021.9

2022



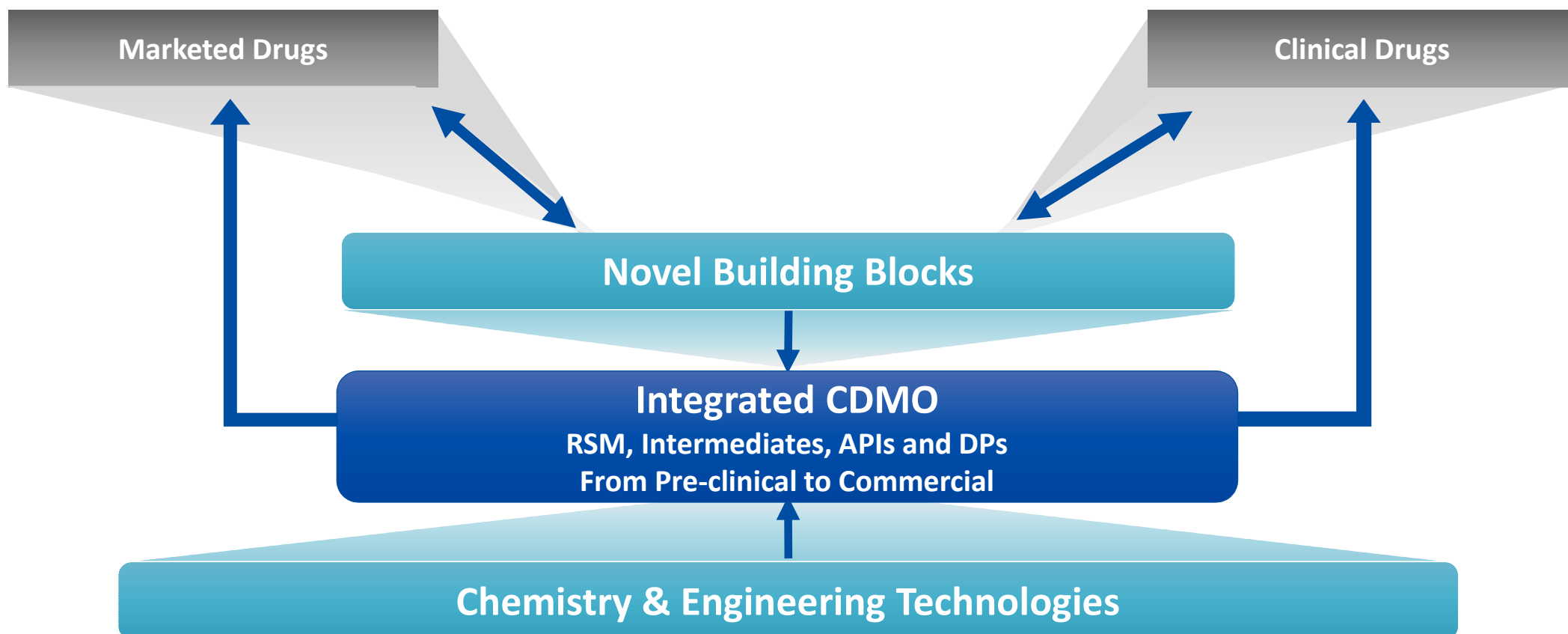
PharmaBlock Shandong
DP Manufacturing Site

*BB: Building Block

Business Strategy

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From the drugs, for the drugs



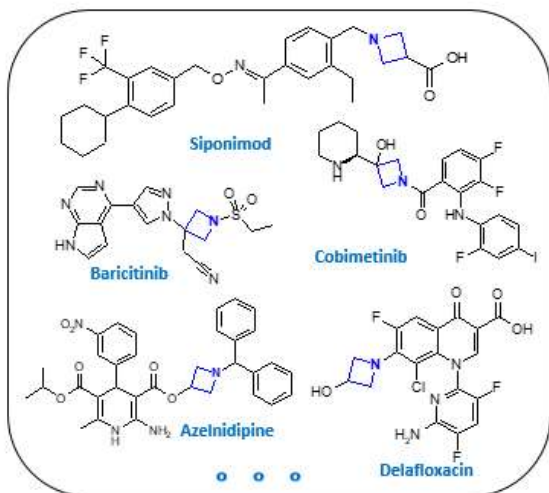
Building Blocks

From Building Blocks to RSM, Intermediate and APIs

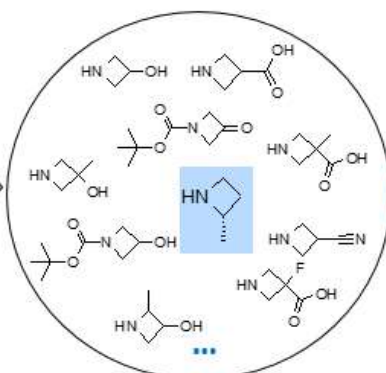
Marketed/Clinical
Drugs

Building Blocks

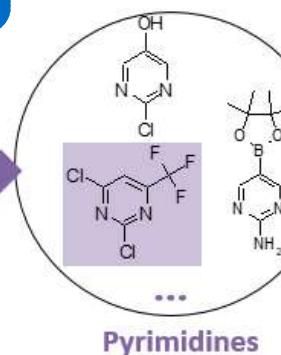
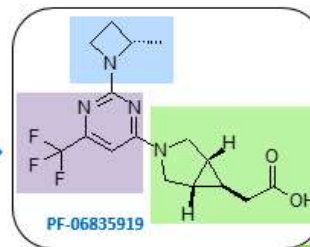
New Molecules for
Drug Discovery



Marketed/Clinical drugs containing
azetidines

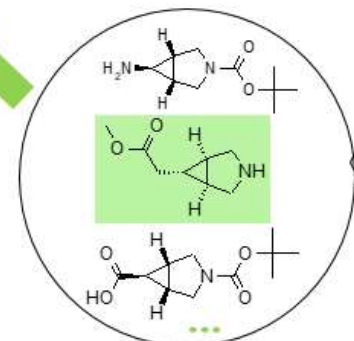


Azetidines



Pyrimidines

Marketed/
Clinical drugs
containing
pyrimidines



Azabicyclo[3.1.0]hexanes

Marketed/
Clinical Drugs
containing
azabicyclo[3.1.
0]hexanes

Building Blocks Enabled Drug Discovery Solutions

PharmaBlock

Novel & Diverse Building Blocks to Inspire Drug Discovery



- | | | |
|--|--|---|
| <input type="checkbox"/> Regular monitoring the latest research and patents | <input type="checkbox"/> Systematically develop chemistry expertise around core structures | <input type="checkbox"/> Scalable process available for potential bulk need |
| <input type="checkbox"/> Keep expanding the catalog, enhance novelty & diversity | <input type="checkbox"/> Keep up with the latest techs | <input type="checkbox"/> Better knowledge in product quality & safety property for sustainable supply |
| | <input type="checkbox"/> Tackle the most challenging chemistry problems | |

Global TOP 20 pharmaceutical companies

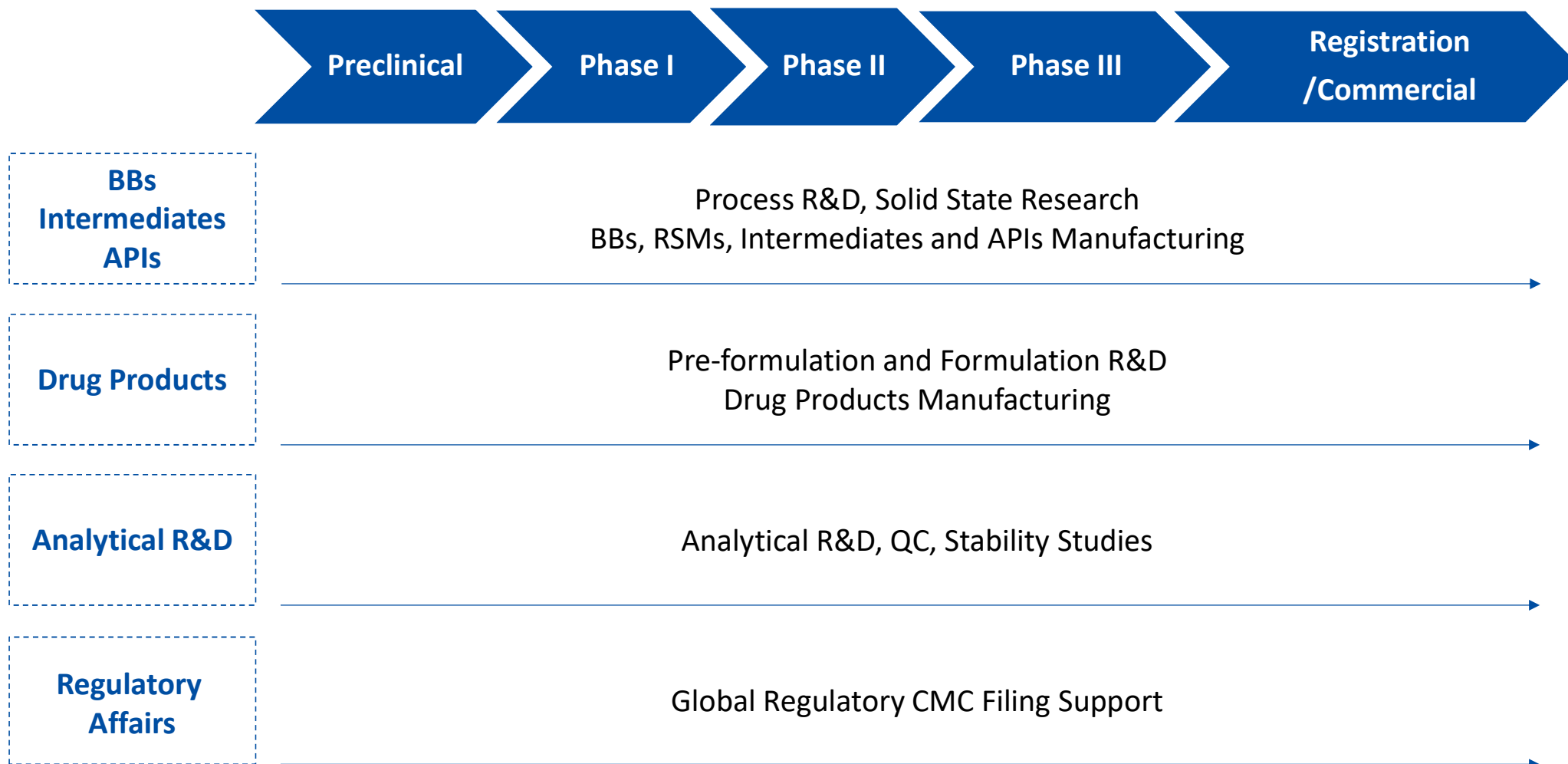
Global Collaboration

Hundreds of small to medium-sized biotech companies

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Fully Integrated CMC Platform

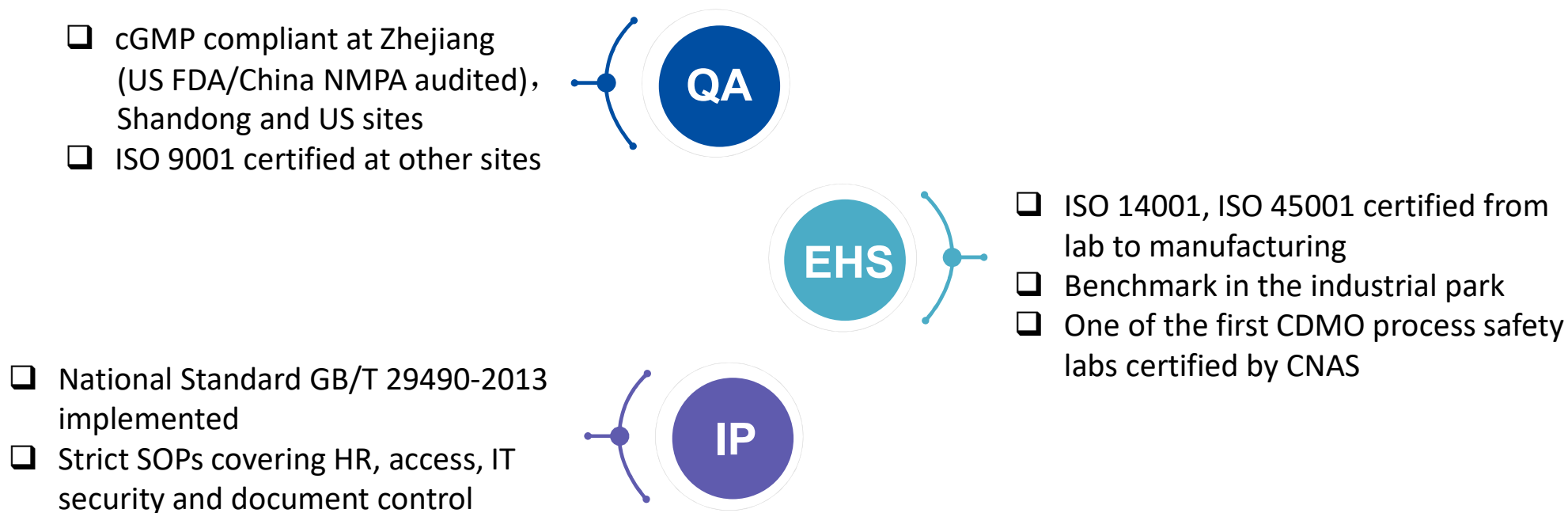
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Quality & EHS & IP- Our Top Priorities

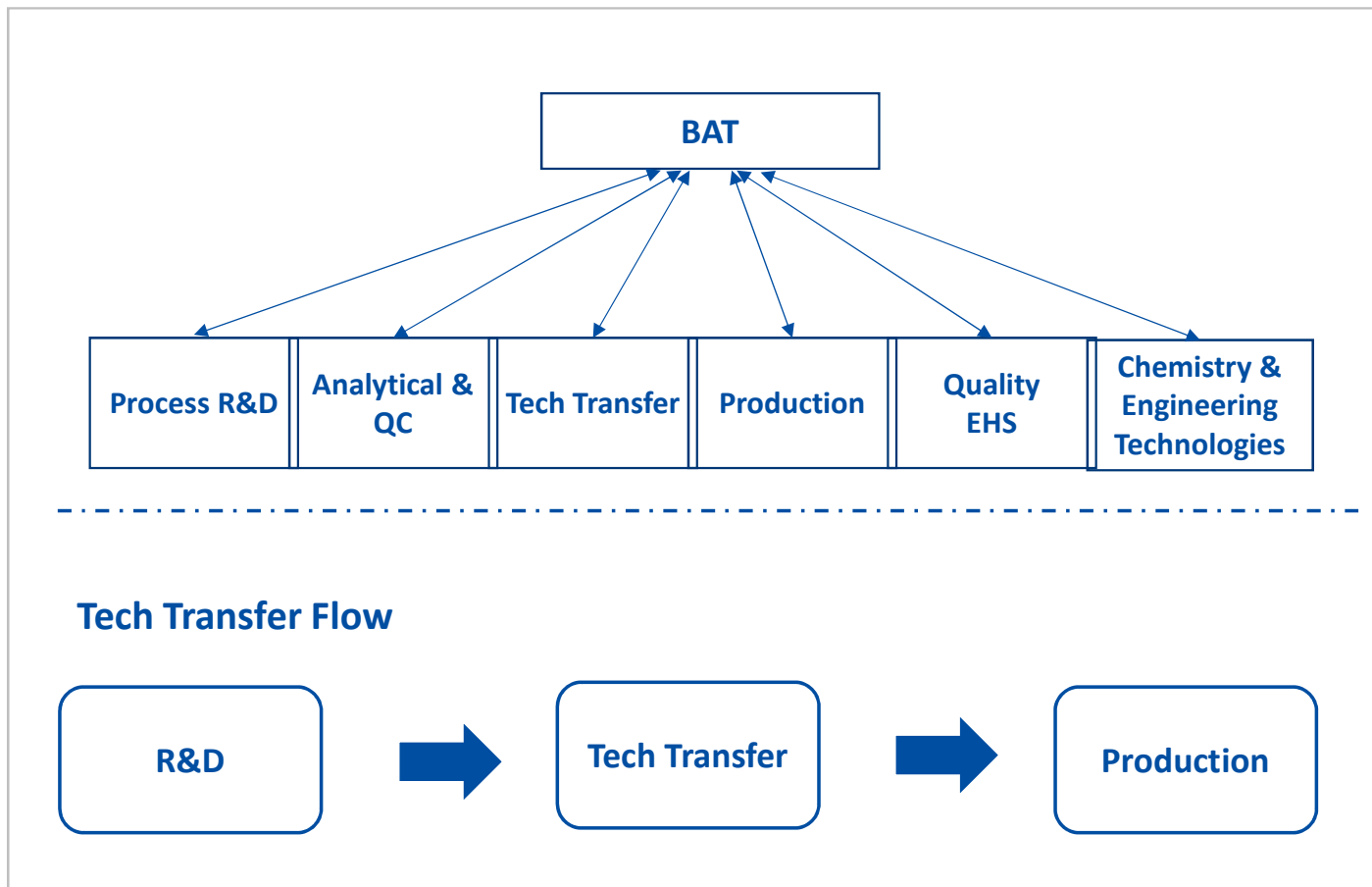
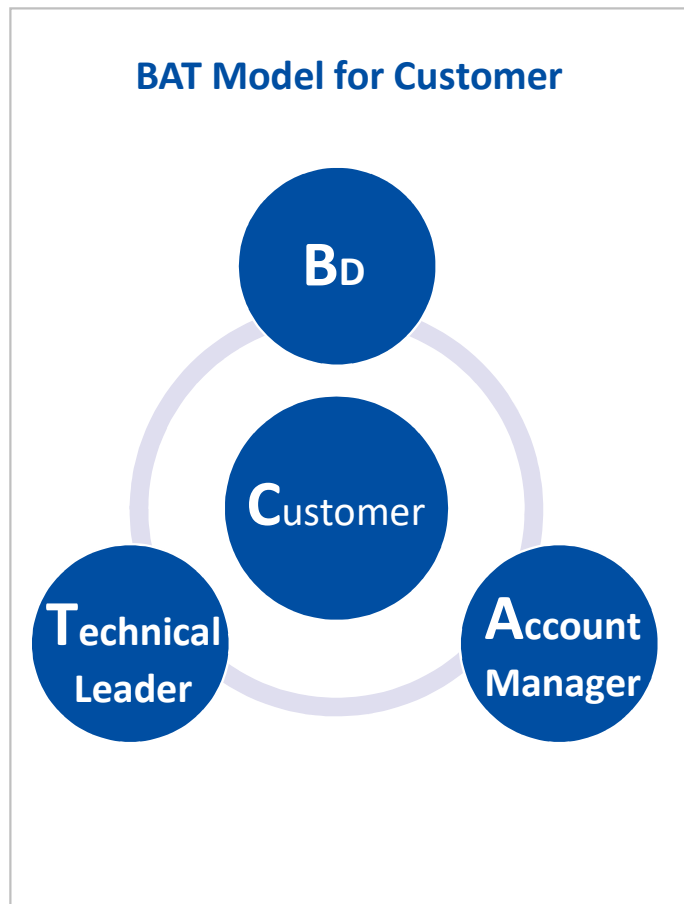
Complete Quality, EHS, IP manual and training system



Project Management-BAT Model for Customer

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Orchestrated efforts to advance your project at full speed



Strong Chemistry Experience

800+ scientists, **100+** PhDs, **400+** Masters

1500+ projects including **40+** APIs delivered in 2021

New Technologies

Flow chemistry

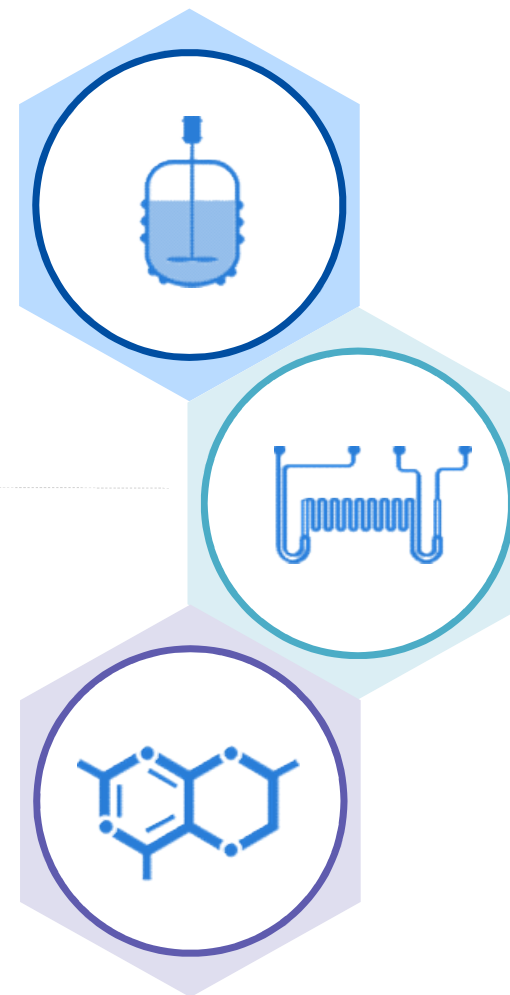
Micropacked bed hydrogenation

Biocatalysis; Heterogeneous catalysis

Building Blocks Accumulation

150,000+ BB profiles

5,000+ with scale up process



R&D Center-Nanjing Site

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Nanjing-1



New CDMO Process R&D Center, 679,000 ft² \ 1000+ hoods

Nanjing-2



CDMO Process R&D, 58,000 ft²



Nanjing-3



Building Block R&D for Drug Discovery, 38,000 ft²

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R&D Center-USA Site

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- ✓ Greater Philadelphia area (Hatfield, PA)
- ✓ 15,000 ft² of offices, labs and warehouse:
 - Offices (sales/customer service and project management)
 - Research labs and Kilo labs (6 labs; 11 fume hoods; 10-100 L reactors)
 - Warehouse – catalog compound inventory; distribution and shipping center
- ✓ ISO9001 certified; cGMP API Kilo-lab for clinical supply
- ✓ Engineering design meets high EHS standards
- ✓ Quality and EHS training system; 5S and EHS monthly inspection
- ✓ Capacity Expansion (West Chester, PA): 4 acre facility; 8 labs; 15 fume hoods of



Clean room



Inventory room



Chemistry lab
9' fume hoods (5X)



Analytical lab
LCMS & UPLC, HPLC, GC, KF, DSC, NMR



Kilo lab
8' walk in hoods (2X)

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Manufacturing: Zhejiang Site (Intermediates & APIs)

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Profile

- ~600 employees
- Production of APIs and intermediates
- Passed FDA GMP inspection with no Form 483 issued; Passed NMPA inspection
- Space: 33 acre; Located in a national-level chemical industry park
2 hr from Shanghai by driving and 1.5 hr from Nanjing by train

Current Capacity

- 4 workshops in use (1 with clean room); 141 reactors: 300-8,000 L; total reactor vol.: 350 m³
- 1 GMP Kilo-lab with clean room; 1 isolator for high potency API research
- Delivered >150 MTs of >100 of products from Phase I to commercial stage in past 3 yrs



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Manufacturing: Shandong Site (Intermediates & DPs)

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Profile

- Located in the Shandong Provincial Hi-tech Park
- Space: 18.5 acre
- Compliant with ISO9001 & high EHS standards for Intermediate; cGMP compliant for DP

Capacity (Intermediates)

- 2 workshops; 30 reactors: 200-3,000 L; total reactor vol.: 60 m³
- RSM supplier for NCE products
- Delivered 40+ MTs of > 60 products from Phase I to Commercial stage in past 4 yrs

Capacity (Drug Products)

- 1 workshop and QC labs; 3 workshops to be added
- Tablets and capsules production lines (from 5 kg to 100 kg, flexible for project change)
- Bottle and blister two packaging line



Blister packaging line



Bottle packaging line

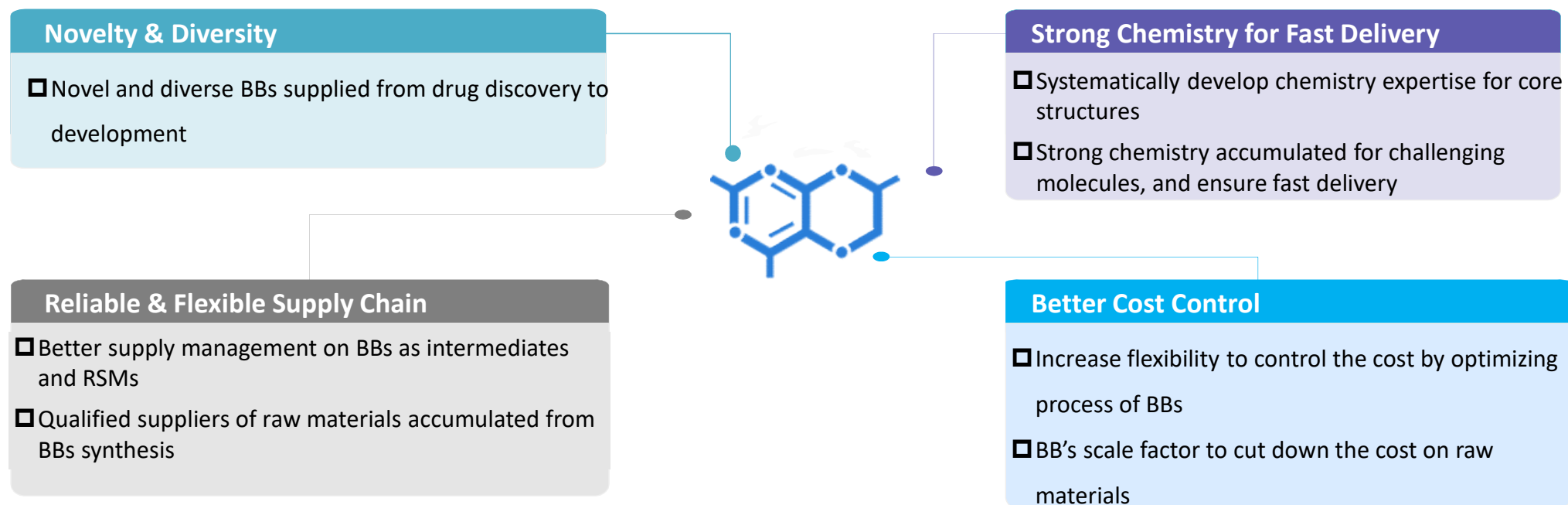


Tablets and capsules production lines

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Building Blocks Enhanced CDMO

For fast delivery, reliable & flexible supply chain, better cost control



Innovative Technologies Enhanced CDMO

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For efficient, green, and safe process and manufacturing

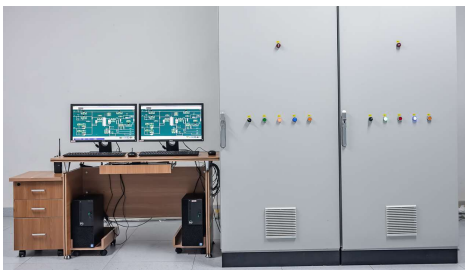
Flow Chemistry

210+ projects
30+ reaction types
kilo~hundred-kilo scale



Micropacked Bed Technology

300+ projects
kilo~MT scale
commercial and GMP projects



Catalysis

300+ heterogeneous catalysts
200+ biocatalysis projects
kilo~hundred-kilo scale



Solid State & Crystal Engr.

330+ projects



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THANK YOU FOR YOUR ATTENTION



Equality

Enterprising

Innovation

Cooperation

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