



Hunan Huateng Pharmaceutical Co Ltd

One-stop CDMO to meet your needs for pharmaceutical molecules

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Hunan Huateng Pharmaceutical Co. Ltd.

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Hunan Huateng Pharmaceutical Co. Ltd.

Founded Date: August, 2013

Address: Headquarter - Building E1, Lugu Corporation Plaza, High-Tech Industrial Development Zone, Changsha City, Hunan Province, P.R.China

Manufacturing Site - Huacheng Rd, Tongguan Circular Economy Industrial Base, Wangcheng Economic Development Zone, Changsha City, Hunan Province, P.R.China

Business Segments: PEG derivatives and research chemical reagents; CDMO for pharmaceutical intermediates & APIs.

Employees: 400+ full time staff

Financial status: Complete Series A, Series B and Series C Funding



HISTORY

2013

Officially operated
in Changsha



2016

Launched First
R&D Center



2020

Factory was completed
and put into production



2021

Set up Biopharma PEG
in USA



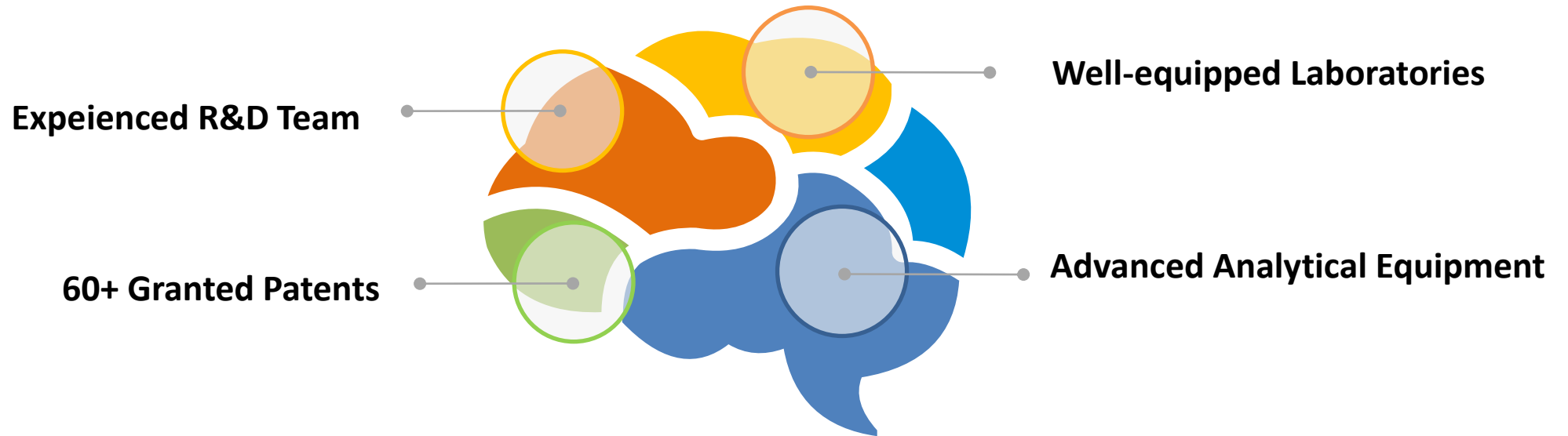
Biopharma PEG

Certification

- ISO 9001 issued;
- EXCIPACT GMP Certificate ;
- ISO14000, and OHSAS18000 certifications are under approval ;



2. Excellent R&D and Analytical Capability



Experienced R&D Team

Highly Experienced Team

400+ employee and 160+ highly experienced scientists and process engineers.



Drug Research Institute

R&D of chemical generics, long-acting targeted innovative drugs & biological drugs.



Industrial Technology Research Institute

R&D of PEGylated peptides and protein-based drugs, new class 1 target drugs, the Green manufacturing of specialty APIs.



Advanced Analytical Equipment



400 MHz NMR system



LC/MS



GC/MS



HPLC



Gel Chromatograph



Infrared analyzer

Analytical Equipment List

No	Name of Equipment	Quantity
1	KF Karl Fischer Moisture Analyzer	2
2	NMR	1
3	Coulomb Moisture Meter	1
4	Melting point apparatus	2
5	Polarimeter	2
6	GPC/RI	1
7	HPLC	6
8	HPLC/UV	7
9	HPLC/CAD	2
10	HPLC/ELSD	2
11	HPLC/GPC-IC	1
12	LC/MS	1
13	GC/FID	5
14	GC/MS	1
15	Moisture Meter	2
16	Fourier NIR Spectrometer	1
17	Colorimeter	1

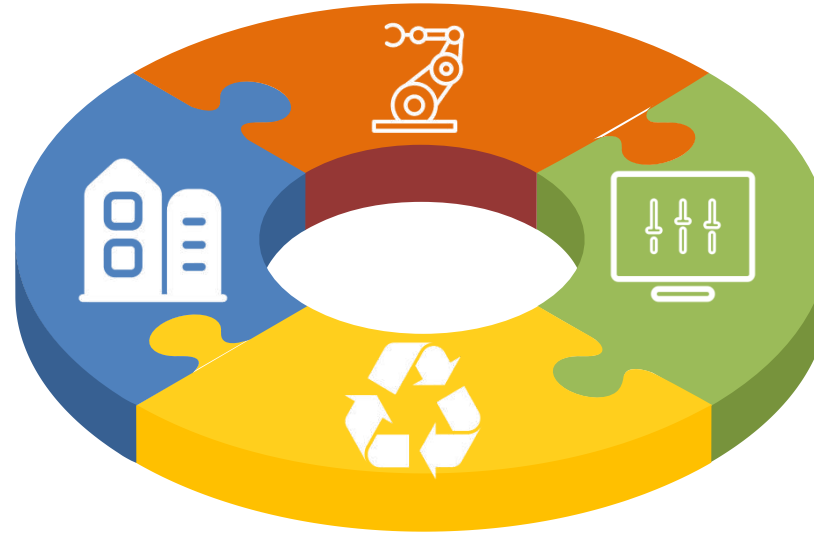
No	Name of Equipment	Quantity
1	UV-visible spectrophotometer	2
2	2.83L Dust particle counter	1
3	Conductivity meter	2
4	Planktonic bacteria collector	1
5	Vertical Sterilizer	1
6	Mildew incubator	2
7	Biochemical incubator	3
8	Biological safety cabinet	1
9	Microbial limit tester	2
10	Entotoxin Detector	1
11	Drug Stability Test Chamber	2
12	Electro-heating standing-temperature incubator	1
13	electronic balance/0.01g	6
14	electronic balance/0.001g	1
15	electronic balance/0.0001g	2
16	electronic balance/0.00001g	1
17	pH meter	2

60+ Granted Patents, 50+ Patents Under Application



3. Strong Production Capability

800+ Sets of Advanced Equipment



Perfect QA & QC Management System

Independent Manufacturing Site

Comprehensive EHS System



Manufacturing Site

Address: Tongguan Circular Economy Industrial Base, Wangcheng Economic Development Zone, Changsha, Hunan, P.R.China

Area: 34,000m² , putting into operation since August, 2020. Four production workshops with a total of 20,000m².

Capacity : lab scale to pilot plant to full-scale production of PEG Derivatives, APIs and intermediates and other chemical reagents.

Annual Output Value: RMB 1 billion.

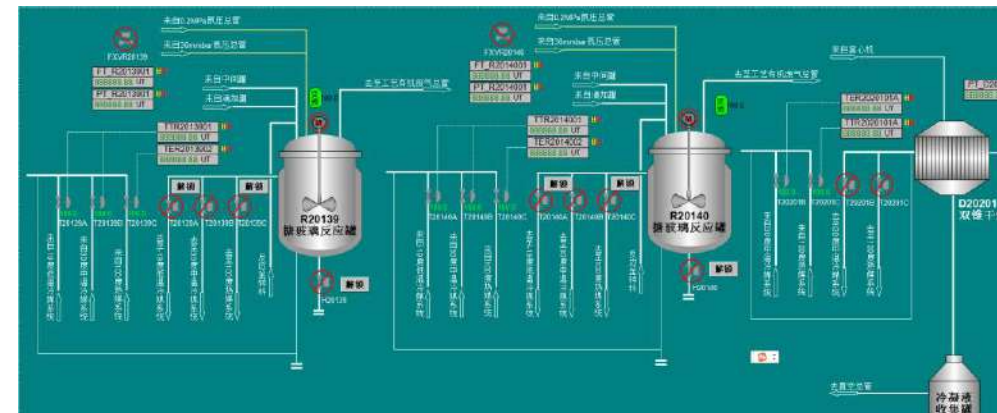
800+ Sets of Advanced Equipment



Intelligent Production System



System control center



Distributed Control System (DCS) main interface



DCS & SIS system equipment room



DCS & SIS control console



Safety Instrumented System (SIS) main interface

Equipment List

No	Name of Equipment	Capacity	Quantity
1	Hydrogenation Reactor	2000L	2
2	Amination Reactor	2000L	1
3	Liquid Nitrogen Low Temperature Reactor	2000L	4
4	Stainless Steel Reactor	1000L	1
5	Stainless Steel Reactor	2000L	2
6	Stainless Steel Reactor	3000L	1
7	Stainless Steel Reactor	5000L	12
8	Enamel Reactor	500L	2
9	Enamel Reactor	2000L	21
10	Enamel Reactor	3000L	31
11	Enamel Reactor	5000L	92
12	Pilot Plant Enamel Reactor	200L	2
13	Pilot Plant Enamel Reactor	300L	3
14	Pilot Plant Enamel Reactor	500L	4

Equipment List

No	Name of Equipment	Capacity	Quantity
1	Pilot Plant Stainless Steel Reactor	500L	1
2	Pilot Plant Enamel Reactor	1000L	4
3	Pilot Plant Stainless Steel Reactor	1000L	1
4	Pilot Plant Double Cone Vacuum Dryer	1000L	2
5	Pilot Plant Centrifuge	600	2
6	Enamel Rectifying Still	300L	2
7	Enamel Rectifying Tower	φ200*10000	2
8	Enamel Rectifying Still	5000L	4
9	Stainless Steel Rectifying Tower	φ400*10000	2
10	Enamel Rectifying Tower	φ400*10000	2
11	Enamel Rectifying Still	2000L	1
12	Enamel Rectifying Tower	φ400*10000	1
13	Stainless Steel Rectifying Still	3000L	1
14	Stainless Steel Rectifying Tower	φ400*10000	1

Equipment List

No	Name of Equipment	Capacity	Quantity
1	Double Cone Vacuum Dryer	2000L	12
2	Double Cone Vacuum Dryer	3000L	2
3	Top Discharge Centrifuge	800	1
4	Top Discharge Centrifuge	1250	2
5	Top Discharge Centrifuge	1250	1
6	Flat Plate Bottom Discharge Centrifuge	LGZ1250NF/303	6
7	Flat Plate Bottom Discharge Centrifuge	LGZ1249HF	4
8	Decanter Centrifuge	450	2
9	Decolorization Reactor	2000L	1
10	Decolorization Reactor	500L	1
11	Clean Room Crystallization Reactor	2000L	1
12	Clean Room Crystallization Reactor	500L	1
13	Clean Room Double Cone Vacuum Dryer	1000L	1
14	Clean Room Centrifuge	600	1

Equipment List

No	Name of Equipment	Capacity	Quantity
1	7°C Water Chiller	MCW1100	1
2	7°C Water Chiller	MCW7200	1
3	7°C Water Chiller	490Kw	1
4	7°C Water Chiller	720KW	1
5	-15°C Evaporative Water-Cooled Screw Chiller	980KW	3
6	Dual Stage Falling Film Evaporators	20m2 (φ400*3100)	3
7	Exhaust Gas Treatment Spray Tower	φ1200*5000	8
8	Cooling Tower	450m3/h	4
9	PM Inverter Screw Air Compressor	SL75	2
10	Power Frequency Screw Air Compressor	IRN75	1
11	Nitrogen Generator	BPN/TYN-300-99	2
12	RTO	15000m3/h	1
13	Wastewater Treatment	500m3/d	1

High Standard Warehouse Storage

- 2 Class A warehouses of 750m²
- 1 class C warehouse of 3600m²
- 12 storage tanks of 50m³
- Cold storage for PEG derivatives.
Our PEG derivatives are thoroughly dried and packaged under an inert atmosphere at or below -5° C.



EHS System

Huateng Pharma is dedicated to be an environment friendly manufacturer!

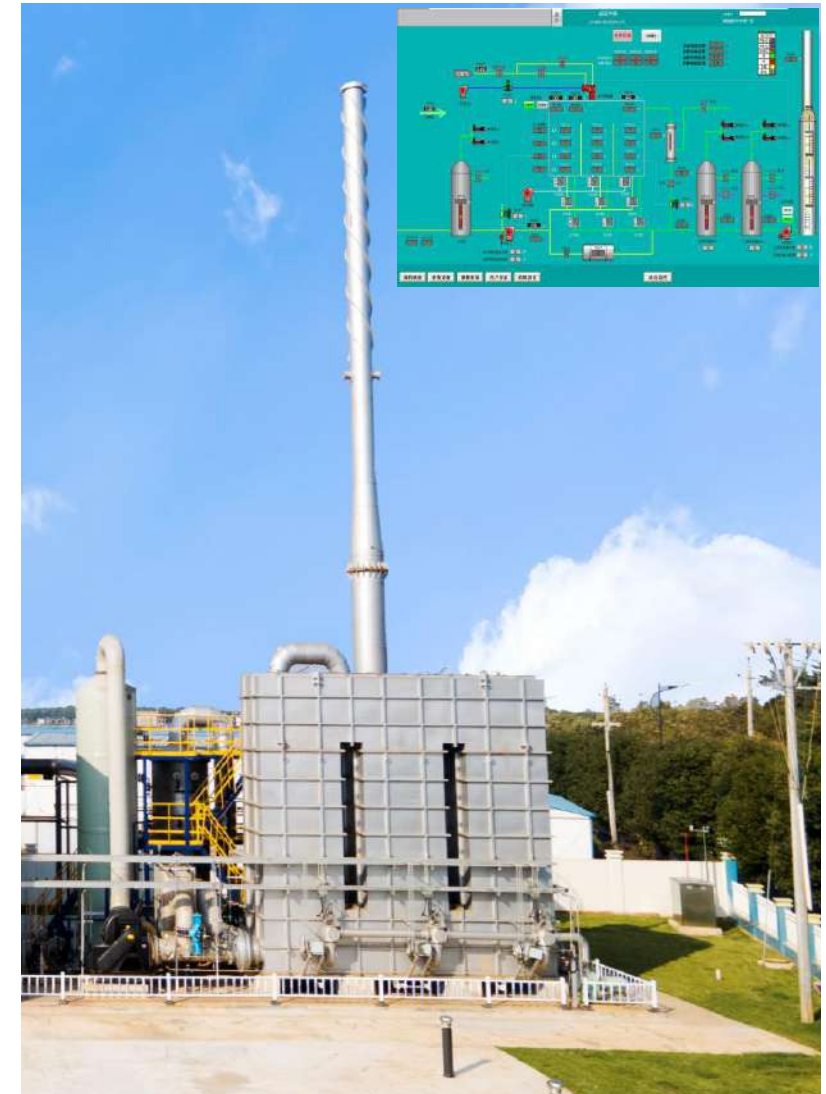
- Improve the development and upgrade of the production process by introducing high-tech means. Effectively improve the reaction efficiency in the production process, and reduce energy loss and waste emission from the source.
- Improve the operating skills of front-line workers through comprehensive training. Improve the technical level of energy management. Increase the investment in environmental protection equipment and facilities, and establish a sewage treatment station.
- Conduct daily environmental monitoring work to check and track the operation of environmental protection facilities, and strictly achieve the emission standards.



Wastewater Treatment - TIC Anaerobic Reactor

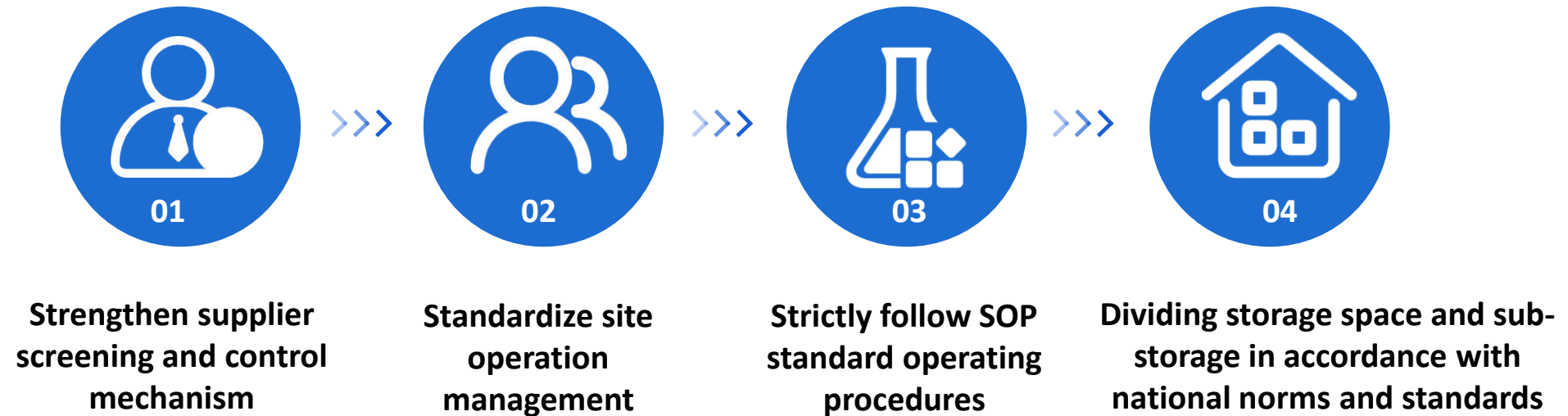


Acid Waste Gas Treatment - Falling Film Absorption + Alkali Absorption



Organic Waste Gas Treatment – RTO (Regenerative Thermal Oxidizer)

Perfect QA & QC Management System



4. Business Segments



PEG Derivatives



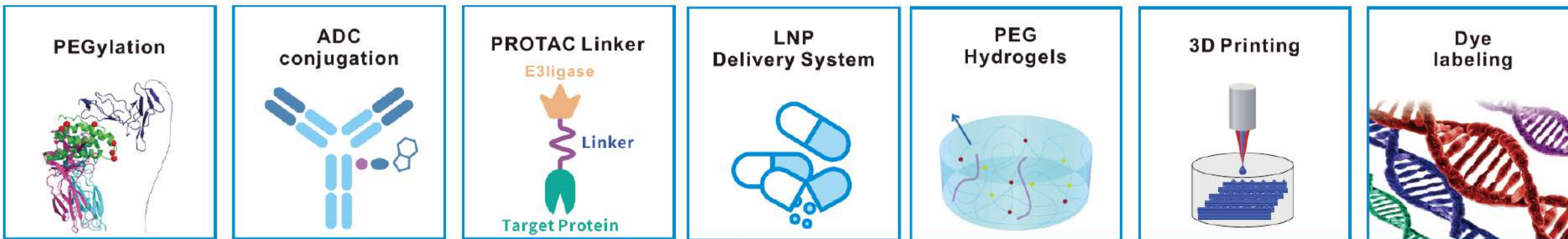
**Pharmaceutical
Intermediates**



Fine & Specialty Chemicals

PEG Derivatives

- 5000+ monodispersed and polydispersed PEG derivatives with molecular weights ranging from 200 to 4w.
- Multifunctional groups covers active esters, maleimides, sulfhydryl, amino, azide, phospholipids, fluorescein, etc.
- Intergrated production line and quality management system from PEGs raw materials production, trial production, pilot production and GMP commercial supplying.

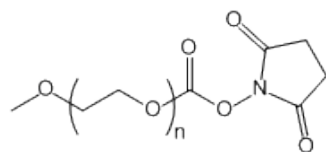


*PEGs have been shown to provide improved water solubility and biocompatibility in drugs and other applications. And PEG derivatives provide the ability to attach a variety of reactive functional groups to the terminal positions of these polymers has greatly increased their applications.

PEGylation

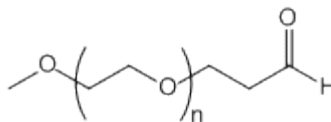
Significant pharmacological advantages of PEGylated peptides, proteins, and antibody fragments:

- 1) Improved drug solubility
- 2) reduced dosage frequency
- 3) potentially reduced toxicity
- 4) extended circulating life
- 5) increased drug stability
- 6) enhanced protection from proteolytic degradation



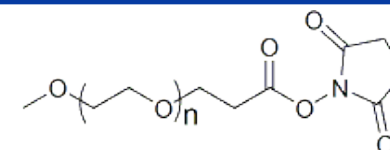
mPEG-SC

Side Chain of Anti-Diabetic Drug
 MW:1K,2K,3K;5K,10K;20K;30K



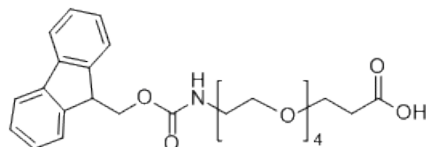
mPEG-pALD

Side Chain of Nervous System Drug
 MW:1K,2K,3K;5K,10K;20K;30K



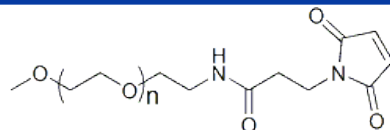
mPEG-Succinimidyl Propionate

Side Chain of Hematological System Drug
 MW:1K,2K,3K;5K,10K;20K;30K



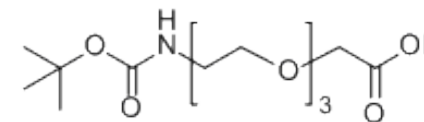
Fmoc-NH-PEG4-CH₂CH₂COOH

CAS No. : 557756-85-1



mPEG-Mal

Side Chain of Anti-Diabetic Drug
 MW:1K,2K,3K;5K,10K;20K;30K

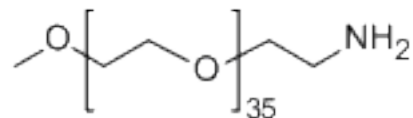


Boc-NH-PEG3-CH₂COOH

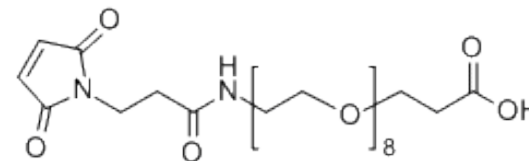
CAS No. : 462100-06-7

PEG Linker for ADC Drugs

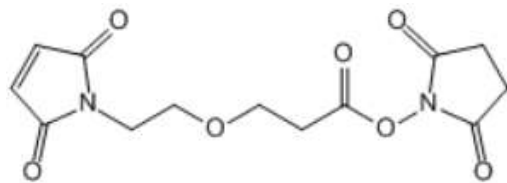
Water solubility, lack of toxicity; low immunogenicity and well-defined chain lengths and molecular weights are specific characteristics of PEG moieties relevant to ADC development.



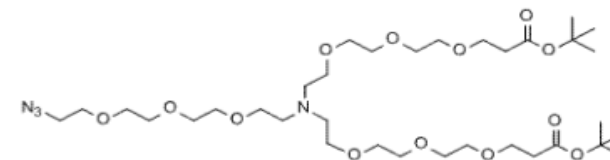
mPEG36-NH₂
CAS No : 32130-27-1



Mal-NH-PEG8-COOH
CAS No.: 1334177-86-4



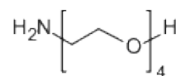
Mal-PEG1-NHS ester
CAS No. 1807518-72-4



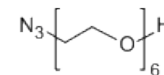
N-(Azido-PEG3)-N-bis(PEG3-t-butyl ester)
CAS No: 2055042-56-1

PEG Moiety for PROTAC Linker

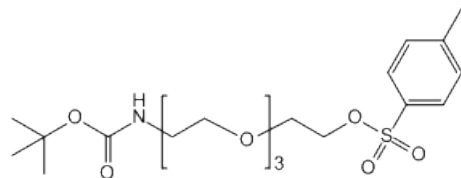
PROTAC linker is a crosslinker that connects two functional motifs of a PROTAC, a target protein binder and an E3 ligase recruiter.



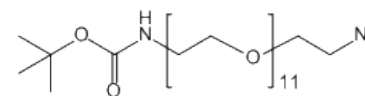
NH2-PEG4-OH
CAS No.: 86770-74-3



N3-PEG6-OH
CAS No: 86770-69-6



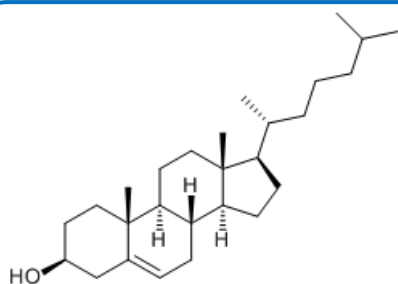
Boc-NH-PEG3-Tos
CAS No : 1246999-33-6



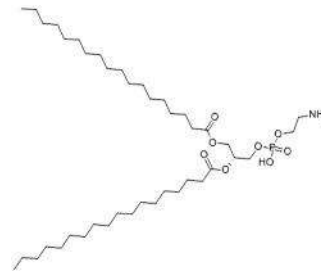
Boc-NH-PEG11-N3
CAS No.: 2395004-21-2

LNPs Delivery System Excipients

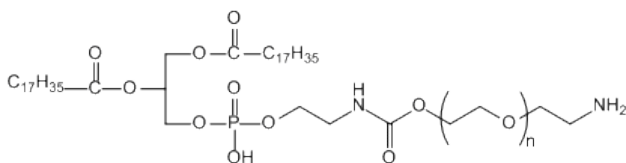
Lipid Nanoparticles (LNPs) are delivery systems commonly employed in the field of nucleic acid drugs. The LNP technology has been adopted for COVID-19 vaccine manufacture.

**Cholesterol (Plant-Derived)**

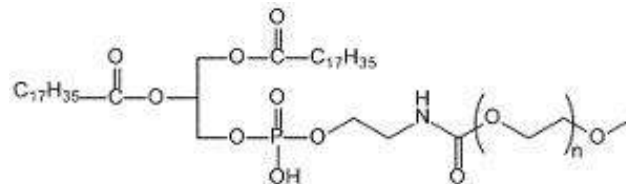
CAS NO.: 57-88-5

**DSPE**

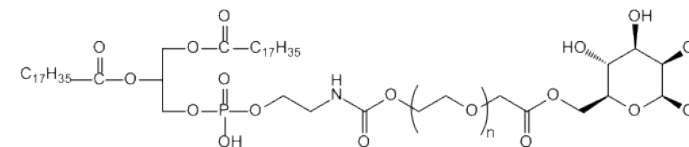
CAS NO.: 1069-79-0

**DSPE-PEG-NH2**

CAS NO.: 474922-26-4

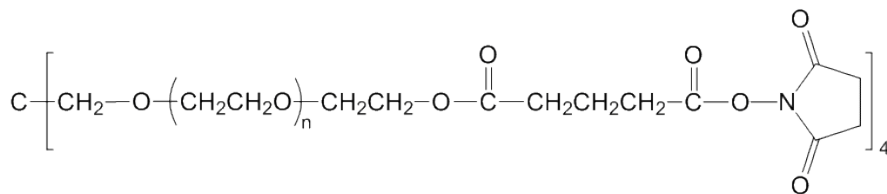
**mPEG-DSPE**

CAS NO.: 147867-65-0

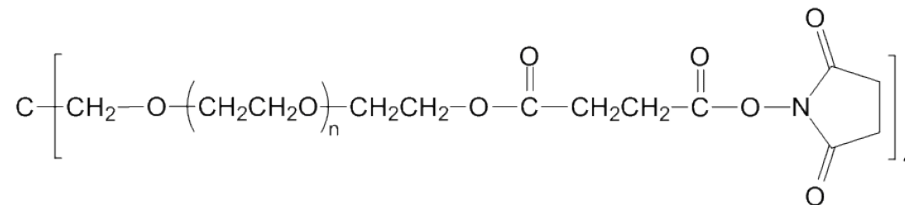
**DSPE-PEG-Mannose**

PEG Hydrogels for Medical Devices

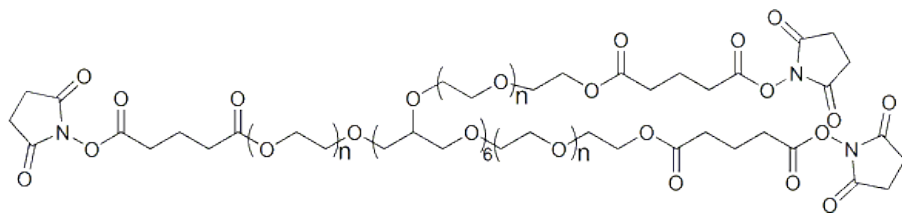
Multi-arm PEG derivatives are mostly employed in the formation of hydrogels for controlled release of therapeutics; for use in medical devices; regenerative medicine; and in various other applications, including cell culture, wound sealing, and wound healing.



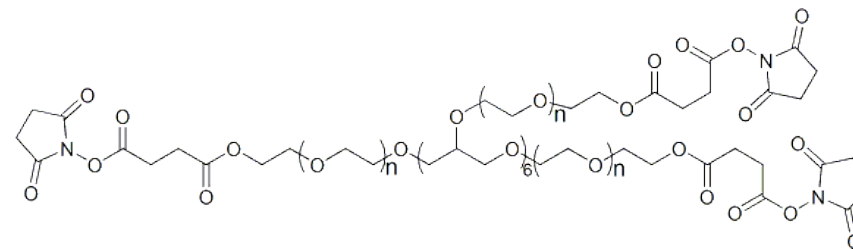
4-ArmPEG-SG



4-ArmPEG-SS



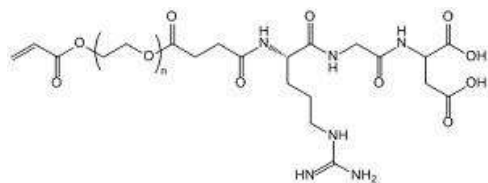
8-ArmPEG-SG



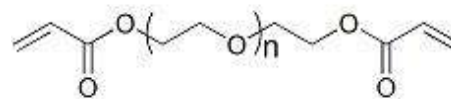
8-ArmPEG-SS

3D Printing

3D printing biomaterials require biocompatibility, porosity, biodegradability and good adhesion. PEG hydrogels meet these specifications, and in particular PEG acrylate (PEG-ACLT) derivatives are widely applied in hydrogel formation via photopolymerization.



AC-PEG-RGD



AC-PEG-AC

CAS NO.: 26570-48-9

Dye Labeling

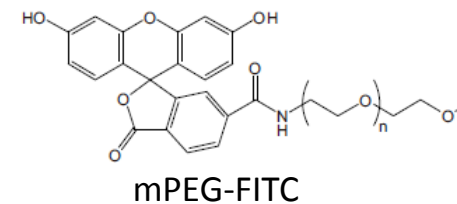
The PEG chains alter tissue biodistribution, allowing brighter liver metastases labeling and decreased accumulation in normal organs, particularly the liver.

Application:

- ① Cell Labeling
- ② Tissue Imaging
- ③ Tumor Identification

Fluorescein

Fluorescein labeling

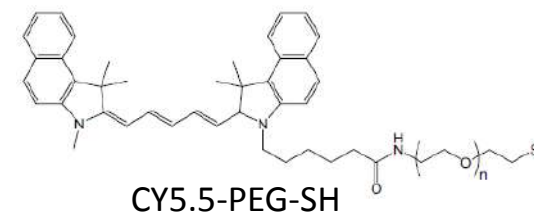


FITC-PEG-R

R=OH,SH,CHO,NH₂,NCO,N₃,Mal,Alkyne,AC,ACA,MA,Silane,GA,SA,GAA,SAA,AA,IA,EP,Mal,SC,SCM,SPA,SG,SS,GAS,SAS,CDI,NPC,OPSS,Ts,LA,Biotin,DSPE,DMPE,CLS etc

Cyanine

Cyanine Labeling

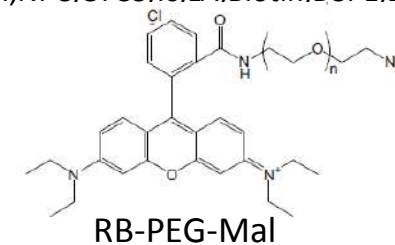


Cy-PEG-R

R=OH,SH,CHO,NH₂,NCO,N₃,Mal,Alkyne,AC,ACA,MA,Silane,GA,SA,GAA,SAA,AA,IA,EP,Mal,SC,SCM,SPA,SG,SS,GAS,SAS,CDI,NPC,OPSS,Ts,LA,Biotin,DSPE,DMPE,CLS etc

Rhodamine

Rhodamine labeling

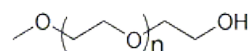


RB-PEG-R

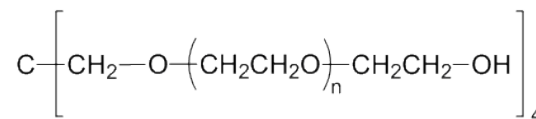
R=OH,SH,CHO,NH₂,NCO,N₃,Mal,Alkyne,AC,ACA,MA,Silane,GA,SA,GAA,SAA,AA,IA,EP,Mal,SC,SCM,SPA,SG,SS,GAS,SAS,CDI,NPC,OPSS,Ts,LA,Biotin,DSPE,DMPE,CLS etc

PEG Raw Materials

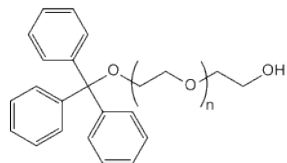
Huateng Pharma manufactures linear and multi-arm polyethylene glycol (PEG) raw materials with high purity and low polydispersity.

**mPEG-OH**

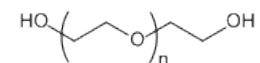
MW:1K,2K,5K,10K;20K

**4-ArmPEG-OH**

MW:2K,5K,10K;20K

**Trt-PEG-OH**

MW: 2K,5K

**OH-PEG-OH**

MW:400,1K,1.2K,6K,10K

Featured Monodisperse PEGs

- Ultra high purity, large in stock
- Great water solubility
- A broad selection of functional groups
- From lab to GMP commercial scale

CAS No.	Name
2395004-21-2	Boc-NH-PEG11-N3
1246999-33-6	Boc-NH-PEG3-Tos
756525-99-2	Mal-NH-PEG4-NHS
32130-27-1	mPEG36-NH2
1800414-71-4	N3-PEG11-NH2
1056024-94-2	N3-PEG3-COOH
1245718-89-1	N3-PEG3-SPA

CAS No.	Name
86770-69-6	N3-PEG6-OH
6338-55-2	NH2-PEG3-OH
86770-74-3	NH2-PEG4-OH
77544-68-4	OH-PEG3-Tos
77544-60-6	OH-PEG4-Tos
3386-18-3	OH-PEG9-OH
1818294-30-2	Trityl-PEG7-N3

Featured Polydispersed PEGs

- Ultra high purity, large in stock
- Great water solubility
- A broad selection of functional groups
- From lab to GMP commercial scale

Name	M.W.
Biotin-PEG-SH	1K,2K,3.4K,5K,10K,20K
Bn2-PEG-OH	1K,2K,3.4K,5K
DSPE-PEG-Mal	1K,2K,3.4K,5K,10K,20K
DSPE-PEG-Mannose	1K,2K,3.4K,5K,10K,20K
DSPE-PEG-NH ₂	1K,2K,3.4K,5K,10K,20K
HZ-PEG-HZ	1K,2K,3.4K,5K,10K,20K
mPEG-AA	1K,2K,5K,10K,20K
mPEG-DSPE	1K,2K,3.4K,4K,5K,10K,20K

Name	M.W.
mPEG-EPO	1K,2K,5K,10K,20K
mPEG-N ₃	1K,2K,3.4K,5K,10K,20K
mPEG-NH ₂	1K,2K,3K,3.4K,4K,5K,10K,20K
mPEG-NHS	1K,2K,3.4K,5K,10K,20K
mPEG-SH	1K,2K,5K,10K,20K
mPEG-SPA	1K,2K,3.4K,5K,10K,20K
OH-PEG-AA	1K,2K,5K,10K,20K
SH-PEG-NH ₂	1K,2K,3.4K,5K,10K,20K

Featured Multi-Arm PEGs

- Ultra high purity, large in stock
- Great water solubility
- A broad selection of functional groups
- From lab to GMP commercial scale

Name	M.W.
4-ArmPEG-AC	2K, 5K, 10K, 20K
4-ArmPEG-CHO	2K, 5K, 10K, 20K
4-ArmPEG-DBCO	2K, 5K, 10K, 20K
4-ArmPEG-Mal	2K, 5K, 10K, 20K
4-ArmPEG-NH ₂	2K, 5K, 10K, 20K
4-ArmPEG-SC	2K, 5K, 10K, 20K
4-ArmPEG-SH	2K, 5K, 10K, 20K

Name	M.W.
8-ArmPEG-alkyne	10K, 20K, 40K
8-ArmPEG-DBCO	20K, 40K
8-ArmPEG-EPO	10K, 20K, 40K
8-ArmPEG-Mal	10K, 20K, 40K
8-ArmPEG-N ₃	10K, 20K, 40K
8-ArmPEG-NH ₂	10K, 20K, 40K
8-ArmPEG-SH	10K, 20K, 40K



Pharmaceutical Intermediates

Huateng Pharma is able to provide the services of various kinds of API intermediates' process development and scale-up production with capacities varying from gram to kilograms and multi tons. We have specialized facilities for high-temperature and high-pressure reactions as well as low-temperature continuous-flow reactions, enabling us to produce a wide range of customer-oriented products with high cost performance.

Anti-Diabetic Drug Intermediates

Pharmaceutical Intermediates

No.	CAS No.	Product Name	End Use
1	898566-17-1	2-(4-Fluorophenyl)-5-[(5-iodo-2-methylphenyl)methyl]thiophene	Canagliflozin
2	1030825-20-7	2-(5-Bromo-2-Methylbenzyl)-5-(4-fluorophenyl)thiophene	
3	1103738-29-9	4-Iodo-1-chloro-2-(4-ethoxybenzyl)benzene	Dapagliflozin
4	461432-23-5	5-bromo-2-chloro-4'-ethoxydiphenylmethane	
5	915095-89-5	(3S)-3-[4-[(5-bromo-2-chlorophenyl)methyl]phenoxy]oxolane	Empagliflozin
6	915095-94-2	(S)-4-iodo-1-chloro-2-(4-tetrahydrofuran-3-ylloxy-benzyl)-benzene	
7	203787-91-1	Sodium 8-(2-hydroxybenzamido) octanoate	Semaglutide
8	1662688-20-1	Fmoc-L-Lys[Oct-(otBu)-Glu-(otBu)-AEEA-AEEA]-OH	
9	1118767-16-0	Octa(OtBu)-Glu(AEEA-AEEA-OH)-OtBu	
10	1143516-05-5	AEEA-AEEA	

Anti-Cancer Drug Intermediates

Pharmaceutical Intermediates

No.	CAS No.	Product Name	End Use
1	53617-35-9	4-Morpholino piperidine	Alectinib
2	1256584-73-2	2-(4-Ethyl-3-iodophenyl)-2-methylpropanoic acid	
3	247068-85-5	(2S)-2-Amino-4-methyl-1-[(2R)-2-methyloxiranyl]-1-pentanone trifluoroacetate	Carfilzomib
4	247068-82-2	Boc-L-leucine epoxyketone	
5	868539-96-2	Boc-HPh-Leu-Phe-OMe	
6	50890-83-0	1-Methylindazole-3-carboxylic acid	Granisetron
7	36082-50-5	5-Bromo-2,4-dichloropyrimidine	Palbociclib
8	733039-20-8	5-Bromo-2-chloro-N-cyclopentylpyrimidin-4-amine	
9	571188-59-5	1-Boc-4-(6-aminopyridin-3-yl)piperazine	

Cardiovascular Agent Intermediates

Pharmaceutical Intermediates

No.	CAS No.	Product Name	End Use
1	14064-10-9	Diethyl chloromalonate	Bosentan
2	365998-36-3	Edoxaban Impurity 47	Edoxaban
3	1210348-34-7	Ethanediamide impurity A	
4	505-66-8	Homopiperazine	Fasudil
5	27655-40-9	5-ISOQUINOLINESULFONIC ACID MONOHYDRATE	
6	156-83-2	2,4-Diamino-6-chloropyrimidine	Minoxidil
7	946-99-6	Methyl-3-(4-bromomethyl)cinnamate	Ozagrel
8	20511-20-0	Ethyl 4-methylcinnamate	
9	475085-57-5	MRE-269	Selexipag
10	42042-71-7	4-(propan-2-ylamino)butan-1-ol	

Other Intermediates

Pharmaceutical Intermediates

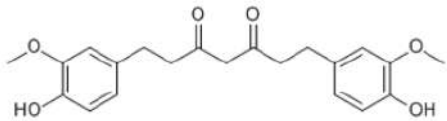
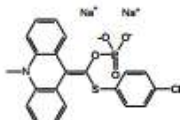
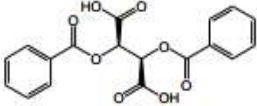
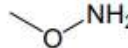
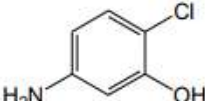
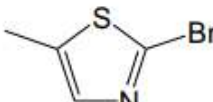
No.	CAS No.	Product Name	End Use
1	16490-02-1	4,6-Pyrimidine dicarboxylic acid	Brilacidin
2	1902955-29-6	methyl 5-(2,4-difluorophenyl)-4-methoxy-1H-pyrrole-3-carboxylate	Fexuprazan
3	111128-12-2	2-(4-Bromomethyl-phenyl)-propionic acid	Loxoprofen
4	492-37-5	DL-2-Phenylpropionic acid	
5	619-14-7	3-Hydroxy-4-nitrobenzoic acid	Tafamidis
6	2374-03-0	4-Amino-3-hydroxybenzoic acid	
7	1282518-60-8	1-Isopropyl-1H-pyrazole-5-boronic acid,pinacol ester	Voxelotor
8	881674-56-2	5-(2-Fluorophenyl)-1H-pyrrole-3-carbaldehyde	Vonoprazan
9	16133-25-8	pyridine-3-sulfonyl chloride	



”
Fine & Specialty Chemicals

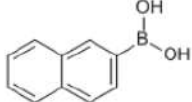
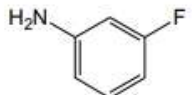
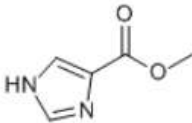
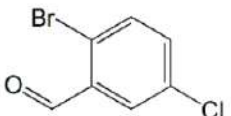
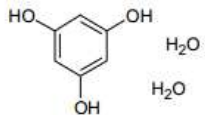
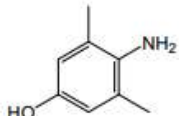
Fine & Specialty Chemicals

Fine Chemicals

No.	CAS No.	Product Name	Structure
1	36062-04-1	Tetrahydrocurcumin	
2	82257-09-8	APS-5	
3	2743-38-6	Dibenzoyl-L-tartaric acid	
4	593-56-6	O-Methylhydroxylamine hydrochloride	HCl 
5	6358-06-1	2-Chloro-5-aminophenol	
6	41731-23-1	2-Bromo-5-methylthiazole	

Fine & Specialty Chemicals

Fine Chemicals

No.	CAS No.	Product Name	Structure
1	32316-92-0	2-Naphthaleneboronic acid	
2	372-19-0	3-Fluoroaniline	
3	17325-26-7	Methyl 4-imidazolecarboxylate	
4	84459-33-6	2-Bromo-4-chlorobenzaldehyde	
5	6099-90-7	Phloroglucinol dihydrate	
6	3096-70-6	4-Amino-3,5-xyleneol	

5. Professional Services

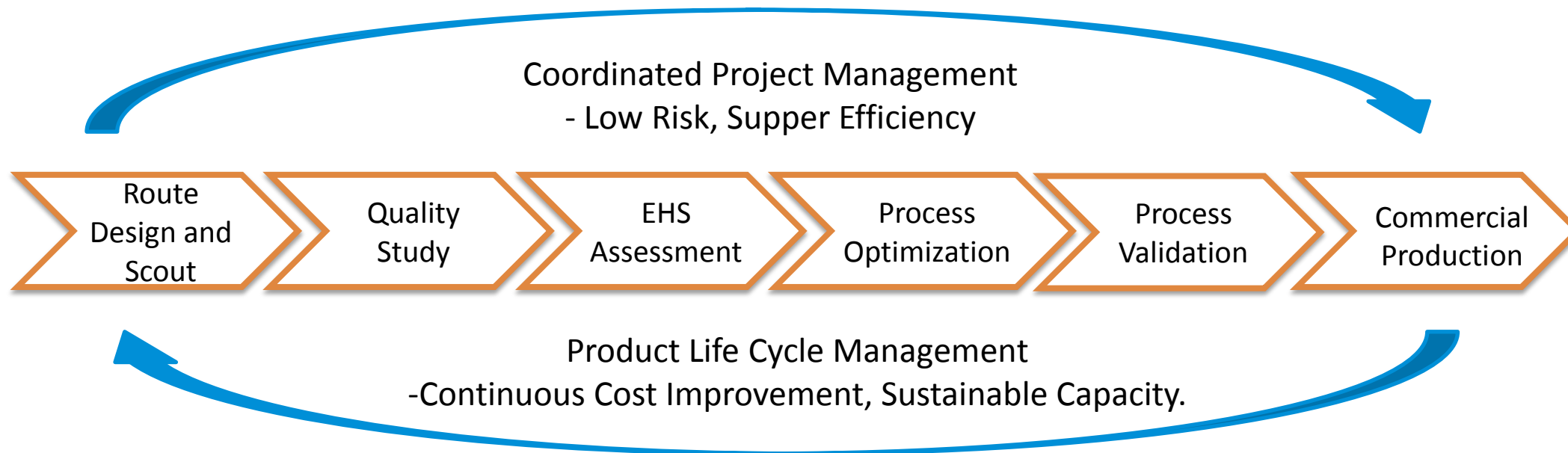


CDMO/CMO Services

In order to better serve customers, we have built a CDMO technology platform, equipped with professional R&D, production and QC teams, established a pilot and scale-up production workshop that meets GMP standards.

We are able to provide:

- Customized R&D and production of intermediates and other chemicals ranging from grams to tons
- Process optimization and rapid scale-up of intermediates and other chemicals of existing synthetic processes
- Development of a more environmentally safe production process



Custom Synthesis

Our Chemical Synthesis Capabilities

- (1) Various small molecule compounds
- (2) PEG derivatives with various functional group
- (3) Medicinal chemistry and drug discovery
- (4) Organometallic chemistry
- (5) Heterocyclic chemistry
- (6) Special reagents
- (7) Scale-up production
- (8) Academic exploration cooperation





Thank You!