



# 2018

## Korea Innovative

# PHARMACEUTICAL

## Company



Ministry of Health  
and Welfare



# Potential of Pharmaceutical Industry in Korea

Aging populations and growing interest in health and welfare continue to drive up the demand for innovative drugs across the world. Globally, R&D spending in the pharmaceutical industry was higher than any other industry (pharmaceutical and bio ranked No. 1 with 150 billion dollars(2015)), indicating that the future industrial structure is shifting from IT to pharmaceutical business.

## Pharmaceutical Industry in Korea

In Korean, the value of drugs manufactured in Korea was KRW 18.8 trillion in 2016. The annual average growth rate for the past five years was 4.6 percent. In addition, the size of the pharmaceutical market was KRW 21.7 trillion in 2016.

Size and Market Trends in Pharmaceutical Industry in Korea (Unit: KRW Trillion)

Category	Production	Export	Import	Balance	Market size
2012	157,140	23,409	58,535	△35,126	192,266
2013	163,761	23,306	52,789	△29,483	193,244
2014	164,194	25,442	54,952	△29,510	193,704
2015	169,696	33,348	56,016	△22,668	192,364
2016	188,061	36,209	65,404	△29,195	217,256
YOY	10.8%	8.6%	16.8%	—	12.9%
CAGR('12~'16)	4.6%	11.5%	2.8%	-	3.1%

Note: 1) Pharmaceutical products include finished products, narcotic drugs, ultra narcotic, psychotropic substance and drug substance

2) Numbers in export and import categories are calculated in Korean won and converted US dollar by using annual average exchange rate at Bank of Korea

3) Market Size= Production-Export+Import

Source: Pharmaceutical Industry Statistics, Korea Pharmaceutical and Bio-Pharma Manufacturers Association

Facts & Survey Report, Korea Pharmaceutical Traders Association, Korea Health Industry Statistics System

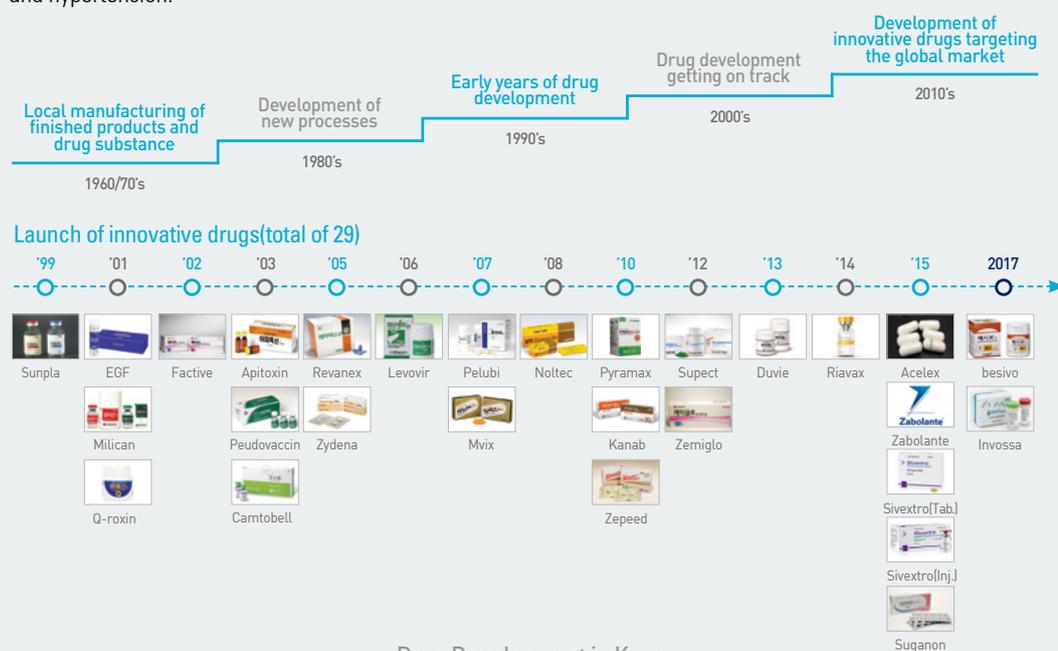
Based on its technological competitiveness and quality drugs, the pharmaceutical industry in Korea has taken a stride in strengthening its ability to develop innovative drugs in a short period of time, including R&D, clinical trials and drug manufacturing. Impressive growth made in the last few years suggests that Korea based pharmaceutical companies are ready to take a leap forward as global players.

## [R&D] Development of innovative medicines and strong pipelines across various therapeutic areas

The local pharmaceutical industry began manufacturing both finished products and drug substances in the 1960s, and developed new processes in the 1980s. Following the early phase of drug development in the late 1980s, Korean pharmaceutical industry began to develop innovative drugs in the 2000s. Since then, Korean pharmaceutical industry has been successfully developing one of the most innovative and incrementally modified drugs.

Since the introduction of the chemical compound patent system in 1987, the number of innovative drugs introduced in the country has also increased at a very fast pace. Korea has seen development of innovative

drugs across various therapeutic areas, from “Sunpla Injection,” a treatment for stomach cancer developed by SK Pharmaceuticals in 1999 to “Invossa” a treatment for osteoarthritis of the knee developed by Kolon Life Science in 2017. So far, Korean pharmaceutical companies have developed therapies in an array of areas including oncology, antibacterial, gastritis, respiratory infections, duodenal ulcer, diabetic foot ulcer, erectile dysfunction, hepatitis B and hypertension.



### [Clinical Trials] Clinical trials grew dramatically from both qualitative and quantitative perspectives

Already on a clear growth track with its high level of clinical trial capabilities and reliable data, Korea is emerging as a core clinical trial destination in the pharmaceutical market in Asia. Korea-based 22 major healthcare organizations, including Seoul National University Hospital, Samsung Seoul Medical Center and Asan Medical Center, have won global certifications for their clinical study environment helping the country to build a clinical infrastructure on a global level. With this advanced infrastructure, Korea ranked 6th in the world for global clinical trial protocol market share in 2017, moving two notches up from the 8th at the previous year. The number of domestic clinical trials came to 658 in 2017, up nearly 4.8% compared to 628 in 2016. Its share in global clinical trials also grew from 3.4% in 2016 to 3.5% in 2017.

The number of multinational regional clinical trials(MRCTs) conducted by multinational pharmaceutical companies in Korea has also increased sharply since the country introduced International Conference on Harmonization Good Clinical Practice(ICH GCP) in 2000. Especially, Pfizer formed a partnership with Korea as part of its global clinical program in 2008, selecting 4 of its 9 global Core Research Sites(CRSs) in Korea.

### [Manufacturing] High level of competitiveness and ability to generate rich pipelines of innovative drugs

Pharmaceutical companies in Korea have been working to ensure that their drug manufacturing facilities meet rigorous global standards. To reflect global trends, the guidelines on Good Manufacturing Practices(GMP) changed

from dosage forms to prior approval of individual items in 2008. As the guidelines shifted from management of dosage forms to that of individual items based on a step-by-step process through 2010, the quality assurance system for domestically manufactured drugs reached a global level.

In addition, Korea has the ability to conduct drug R&D for compounds and commercial technologies, including organic synthesis, agents and global clinical trials. This ability was gained through development of generics and incrementally modified drugs. Korea is also a leader in the pharmaceutical biological technology area. With fruitful results from R&D including development of the world's first stem cell therapy and xenotransplantation of pancreatic ducts, Korea is in an advantageous position to be a leader in promising future industries. The level of therapeutic technologies in cardiac surgery and management, and cervical cancer in Korea is the best among other OECD countries, according to OECD Health Data 2009.

Korea pharmaceutical industry is shifting its focus from the domestic market to the global market, and the world now pays attention to Korean pharmas as successful partners.

### Korean Pharmaceutical Market KRW 22 Trillion('16)

- ▶ 1.8% of the World Market(13th)
- ▶ Around 3.1% Average Annual Growth('12-'16)
- ▶ Only 25% MNC dominated (reimbursement price based, '12)
- ▶ 599 manufacturers(353 for finished drugs)

### New Drug Release Competency

- ▶ 29 New Drugs, 82 IMD products approved
- ▶ 2-3 New drugs coming out to the market every year

### Top Class Bio-Pharma Competency

- ▶ **High quality bio products** (1st stem cell therapy, 1<sup>st</sup> biosimilar approved, 21 biosimilar clinical trials undergoing)
- ▶ **Stem cell** (Clinical trials 2<sup>nd</sup>, Patent 4<sup>th</sup>, # of Researcher 5th, SCI Papers 8<sup>th</sup> in the world)
- ▶ **Stable supply of Vaccines**
  - Self supply for essential vaccines (self-reliance ratio of vaccines 46%, '16)
  - 5 premium vaccines in Clinical Trials (Phase 1, (PCV, HPV, Rotavirus, Herpes zoster, Cholera))

### National Pharmaceutical R&D Support

- ▶ Total government healthcare R&D : \$400M
- ▶ Total government pharm. R&D : \$250M
- ▶ Total MoHW pharm. R&D : \$130M

### Clinical Trial Capability

- ▶ Seoul, the capital of South Korea, ranks 1st for industry-sponsored clinical trials among all cities worldwide('17)
- ▶ Korea ranked 6th in the world for industry-sponsored clinical trials('17)

### World Class GMP & DDS Technology

- ▶ **cGMP & EU GMP standard facilities**
- ▶ **Innovative Drug Delivery Systems**
  - Film-type Viagra and patch-type Alzheimer's and Parkinson's drugs developed, etc

### High Growth in Export

- ▶ '12-'16, 10.7% CAGR for Drug Export
- US \$3,120M export('16)

### Globalization

- ▶ Joining PIC/S ('14) and ICH ('16)
- ▶ 23 WHO PQ products(vaccine) developed ('17)
- ▶ Joint worldwide marketing of K-pharma developed drugs with MNCs
  - Boryung's Kanarb<sup>®</sup> for hypertension (Fimasartan)
  - Celltrion's Remsima Inj. (Infliximab)
  - Hanmi's Amosartan<sup>®</sup> for hypertension and
  - Esomezol<sup>®</sup> for esophageal reflux disease
  - JW's 3 chamber IV solution

# Public-private Partnership for Development of Pharmaceutical Industry Contributing to Global Health

## Korea aspiring to transforming itself into one of the top seven pharmaceutical powerhouses

Korea has designated the pharmaceutical industry as one of the future growth engines. In order to foster the industry, the Korean government has been placing emphasis on enhancing growth potential through far-reaching policy measures, ranging from technology innovation to promoting market transparency, boosting global competitiveness of companies, and establishing infrastructure for sustainable development. Moreover, with knowledge and capacity mustered, the government, industry, medical society, and academic community are devoting themselves to make a leap forward into global markets.

Under the circumstance where the Korean population has been aging rapidly, the Korean government has keen interest in the pharmaceutical industry, which serves as a foundation for the quality of life of the public. The government introduced “Accreditation of Innovative Pharmaceutical Company” in 2012, and will reinforce its efforts to support the industry every year with a view to reinventing the nation into one of the top seven pharmaceutical titans.

## Introduction of Promotion and Support of Innovative Pharmaceutical Company

### What Company Can Be an Innovative Pharmaceutical Company?

Special Act on Pharmaceutical Industry Promotion and Support (enacted in March 2011) serves as the legal foundation to designate innovative pharmaceutical companies verified to possess high R&D capacity for new drug development and to be globally competitive. Those companies are expected to play a leading role in developing the domestic pharmaceutical industry into a future growth engine.

### Accreditation Process

The Accreditation Screening Committee conducted written and verbal evaluations on candidate pharmaceutical firms which met the requirements (Article 2 of the Enforcement Decree of the Special Act: investment volume over a certain level). In the evaluations, the committee assessed candidate companies based on specific requirements, such as R&D performance in the past, company's capacity, vision and investment plan, ethical business practice, etc. The results of the evaluations delivered by the screening committee were finalized after the review carried out by the Committee for Pharmaceutical Industry Promotion and Support, which is chaired by the Minister of Health and Welfare.

### Composition of Designated Innovative Pharmaceutical Companies

- General pharma firms [34]: 34 leading firms that have marked high scores in terms of R&D investment as well as researchers, manufacturing facilities, patent and license-out, and overseas market advancing plus ten SMEs that have built on expertise in specialized areas such as development of incrementally modified drugs
- Bio venture companies [8]: firms with relatively low sales but highly competitive technology and creative business models
- Multinational pharma firms [2]: one local company of an MNC considered outstanding in terms of R&D investment (in early clinical trials), local production performance, overseas market advancing, etc.

### List of Companies Certified as Innovative Pharmaceutical Companies [44]

(April, 2018)

Category	Name of Company
General pharma firms [34]	Boryung Pharm, Bukwang Pharm, Celltrion, Chong Kun Dang Pharm, CJ HealthCare, Dae Hwa Pharm, Daewon Pharm, Daewoong Pharm, Dong-A ST, Dong Wha Pharm, GC Pharm, HanAll BioPharm, Handok, Hanlim Pharm, Hanmi Pharm, Huons, Hyundai Pharm, IL-Yang Pharm, Isu Abxis, JW Pharm, Kolma Korea, Korea United Pharm, Kuhnle Pharm, LG Chem, Pharma Research Products, Pharmicell, Samjin Pharm, Samyang BioPharm, Shin Poong Pharm, SK Chemicals, ST Pharm, Taejoon Pharm, Yuhan, Yungjin Pharm
Bio venture companies [8]	BC World Pharm, Bioneer, Corestem, CrystalGenomics, Genexine, Medytox, ViroMed, Tego Science
Multinational pharma firms [2]	Korea Otsuka Pharm, Sanofi-Aventis Korea

Towards Global Standard R&D for Healthcare Products  
**BCWORLD PHARM. CO., LTD.**



BCWORLD PHARM is a technology-driven pharmaceutical company in Korea whose expertise in formulation and process development enables it to provide quality generics as well as value-added novel formulation products.

BCWORLD PHARM strives to establish its position as a pioneer in developing value-added pharmaceuticals through cutting-edge formulation technology including immediate/controlled release as well as fast-dissolving DDS, combined formulation, gastro-retentive system and depot formulation by way of proactive investments in R&D and strategic alliances.

Recently BCWORLD PHARM not only has been certified as Korea Innovative Pharmaceutical Company (KIPC) by Korea Ministry of Health & Welfare but also designated as Advanced Technology Center (ATC) by Korea Ministry of Knowledge Economy.



## Main Products

### Therapeutic Class Products

Category	Products
Antibiotics (Carbapenem)	Mepem Inj., Cilacin Inj. etc.
Anti-Infectives	Merogel Gel, BC Itraconazol Tab., etc.
Hyperlipidemia	Starova Tab., BC Atorvastatin Tab. etc.
Anti-Osteoporosis Agents	Pamiron Inj., Risidro Tab.
Anti-Hypertensives	Ibertain Tab., Ibertain Duo Tab., Duomax Tab. etc.
GI Agents	Mucopid Tab., BC Ranitidine Inj. etc.
Narcotics	Tibare Inj., BC Morphine Sulfate Inj., BC Fentanyl Inj. etc.

## R&D Pipeline

### Category Item Indications Stage

- GRS BCWP\_C003 Hyperlipidemia Phase I
- Microsphere BCWP\_D001 Anti-cancer Preclinical
- Microsphere BCWP\_D003 Anti-cancer Phase I
- Microsphere BCWP\_D009 Schizophrenia Phase I
- Nano-suspension BCWP\_D010 Schizophrenia Formulation
- Liposome BCWP\_Y001 Anti-cancer Formulation
- Liposome BCWP\_Y002 Anti-fungal Preclinical

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· Company BCWORLD PHARM. CO., LTD.  
 · CEO Steve H. Hong  
 · Specialty · DDS-oriented Pharmaceutical Company  
 · Therapeutic categories such as pain, anesthesiology, neurology, and musculoskeletal diseases  
 · Location 78 Gaepo-ro 22gil Gangnam-gu, Seoul, Korea  
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## Bioneer, an innovative biotech company since 1992

### RNAi Therapeutics Innovator:

Established in 1992 based on proprietary oligonucleotide synthesis and PCR technology, Bioneer is the first biotechnology company of Korea. The company has developed single-molecular RNAi nanoparticle, SAMiRNA™, which transforms miRNA/siRNA into novel therapeutics. In line with its root in molecular technologies, the company has also developed instruments enabling high-throughput oligo syntheses, fully-automated real time qPCR assays, and automatic protein syntheses. Leveraging these unique capabilities, Bioneer is well positioned to develop the next generation therapeutics and molecular diagnostics that can serve as uniquely- and fully-integrated drug discovery and development platform. By capitalizing on these foundational technologies developed over the past 10 years, Bioneer is leading the innovative RNAi drugs and molecular diagnostics development.

### Bioneer's siRNA Drug Development Program using SAMiRNA™ Technology

SAMiRNA (Self-Assembled-Micelle-inhibitory-RNA) is a nontoxic RNAi nanomedicine, which allows efficient delivery of siRNA/miRNA to target tissues. SAMiRNA is a SCE (Single Chemical Entity) manufactured using the solid phase synthesizer, which greatly simplifies the manufacturing and QC processes compared to other RNAi drug candidates. SAMiRNA overcomes major challenges that current oligonucleotide-based therapeutics face, such as insufficient delivery and adverse effects. The advantages of SAMiRNA include its flexibility to incorporate siRNA/miRNA sequences against any disease targets. Pre-clinical research data suggest that SAMiRNA would be the most unique and singularly effective RNAi prodrug system developed to date. The company is now moving forward with the human proof-of-concept.

Vertically integrated processes within Bioneer's siRNA/miRNA Drug Development Program provide a total solution for SAMiRNA therapeutics discovery and development, from high-throughput SAMiRNA™ synthesis, HT RT-qPCR screening and preclinical tests to IND filing. With its world's-best RNAi core technologies and infrastructure, Bioneer is the ideal partner for pharmaceutical and biotechnology companies currently developing RNAi therapeutics, or seeking to enter the RNAi therapeutics space. Bioneer's research and technical support teams ensure top-quality products and services to meet unique needs of partners.

### R&D Pipeline

Bioneer is currently developing SAMiRNA-based drugs in various fields of indications, which include IPF, Keloids, immuno-oncology, cancers, skin whitening and alopecia. Some pipelines have been licensed out to the biggest pharmaceutical company in Korea, and the progresses of the early stage research are being made in the other area, internally with our research resources.

Programs	Discovery	Development	Preclinical	Clinical Trials		
				Phase I	Phase II	Phase III
L/O to Yuhan Corp.						
Keloids (SAMiRNA)	██████████	██████████	██████████			
Solid Cancer (SAMiRNA)	██████████	██████████	██████████			
R&D COLLABORATION PROGRAM						
Immuno-Oncology Yuhan Corp.	██████████					
BIONEER PROGRAMS						
IPF (SAMiRNA)	██████████	██████████	██████████			Supported by Korea Drug Development Fund
Solid Cancer (SAMiRNA)	██████████					
Lung Cancer(miRNAs)	██████████					Supported by Ministry of Health and Welfare Fund grant
Skin whitening	██████████					
Alopecia	██████████					

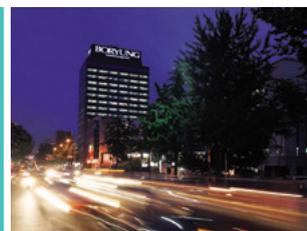
### GPScreen™, a genome-wide drug target identification technology

GPScreen™ is an innovative drug target identification technology using world's unique *S. pombe* genome-wide knockout library. This technology provides the drug targets in the genome levels and can be applicable to almost all the areas of drug discovery such as drug target identification, drug toxicity evaluation for drug prioritization, drug repositioning & repurposing and natural drug target discovery.

#### CONTACT US

SAMiRNA™  
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• Company BIONEER CORPORATION  
• CEO Han-Oh Park, Ph.D.  
• Specialty Molecular Diagnostic, Genomic New Drug, Genomic Science  
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Boryung Pharmaceutical company (here after Boryung), since founded in 1963, has been trying its best to contribute to the health and well-being of humanity with corporate mission to 'realize mutual health and co-prosperity based on human centered values'.

Boryung has invested continually on research and development and made continuous efforts to produce high-quality products in the specialty areas such as cardiovascular, antineoplastic and antibiotics drugs. As a result, our products such as Gelfos M, Yongkaksan, Astrix and Megace have become the best selling products and Boryung has emerged as the most familiar and trusted brand in Korea.

## Products

### Kanarb Family

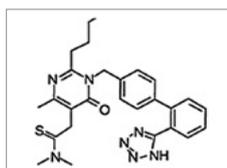
- Kanarb® (Fimasartan) • Kanarb Plus® (Fimasartan + HCTZ)
- Dukarb® (Fimasartan + Amlodipine) • Tuvero® (Fimasartan + Rosuvastatin)

Boryung has developed Kanarb® by our proprietary technology. After its launch in March 2011, Kanarb recorded 10 million USD sales in the same year, and 42.4 million USD in 2016, making it the No. 1 ARB in Korea. After launching Kanarb Plus (HCTZ combination drug) in 2013, the Kanarb lineup has extended to other drugs starting from the Amlodipine combination drug, Dukarb launched in August 2016 and a hyperlipidemia combination drug (Tuvero) is also launched in December 2016. Until now, Boryung has successfully licensed-out Kanarb Family with 13 Latin countries, Russia, China, 13 Southeast Asian countries and 10 African countries.

### Kanarb combination drugs

Boryung is developing Kanarb combination drugs for more severe patients who are suffering from hypertension, hyperlipidemia, heart failure and diabetic mellitus.

For BR1006 and BR1008, Phase III clinical trial is now on progress and it will be launched in 2020. And for BR1009 and BR1010, Phase I clinical trial is on progress and it will be launched in 2021 and 2022.



Molecular Structure



60mg fimasartan



120mg fimasartan

## R&D Pipeline

Category	Indication	Product	RS	PC	PI	PII	PIII	RG	Launch
NCE	Lymphoma	BR2002		○					
	Type 2 Diabetes	BR3001	○						
IMD	Hypertension	Dukarb							○
	Hypertension Dyslipidemia	Tuvero							○
	Hypertension Dyslipidemia	BR1006					○		
	Hypertension Dyslipidemia	BR1008					○		
	Hypertension Diabetes	BR1009			○				
	Hypertension	BR1010			○				
	Alzheimer's disease	BR4002			○				
Biologics	Vaccine	BR8002					○		
	Vaccine	BR8003					○		

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To Contribute to Society through Supplying Value-added New Products to Help Patients Suffering from disease

## Bukwang Pharmaceutical Co., Ltd.



**Bukwang Pharmaceutical Co., Ltd. is one of the innovative pharmaceutical companies in Korea and was founded in 1960 with dedication to development and commercialization of novel, outstanding medicines.**

Bukwang has successfully achieved remarkable growth for over fifty years. Bukwang achieved US\$141 million as of financial year 2017.

Bukwang developed Levovir® cap.(clevidine) as the 4th new drug for hepatitis B in the world and licensed out to countries in Asia.

Bukwang is developing innovative new drug candidates in partnership with pharmaceutical and bio-venture companies in Korea and abroad. Bukwang is carrying out multinational clinical trial for an anti-diabetes compound together with Melior Pharmaceuticals in the US, and co-developing a targeted anti-cancer drug with LSK BioPartners in the US. Also, Bukwang licensed in a novel candidate for movement disorder in Parkinson's disease patients from Contera Pharma in Denmark, which Bukwang acquired in 2014.

Bukwang is planning to continue investment in R&D in order to sustain new drug development with the aim of improving global health.

### Products

#### Levovir® cap.(clevidine) : an innovative new drug for chronic hepatitis B virus

Levovir was developed by Bukwang and it is the 4th drug developed for HBV infection worldwide, and the 11th new drug in Korea. It is potent in suppression of hepatitis B virus and it has excellent safety and tolerability profiles..

#### Dexid® tab.(R-thioctic acid tromethamine) : a new drug for diabetic neuropathy

Dexid was developed by Bukwang and it is a new drug for diabetic neuropathy. It only contains R-thioctic acid which exerts better antioxidant effect than S-thioctic acid.



Levovir

### R&D Pipeline

#### MLR-1023: insulin sensitizer in type 2 diabetes

- Lowering blood glucose level by activating Lyn kinase
- Phase 2b clinical trial currently ongoing in US and Korea, under US FDA and Korea FDA IND

#### JM-010: candidate for levodopa-induced dyskinesia in Parkinson's disease patients

- Controlling neurotransmitter release from the presynaptic neurons
- Completed phase 2a proof-of-concept clinical trial in South Africa
- Phase 2b global study is under preparation

#### Apatinib mesylate: targeted anti-cancer agent

- A small-molecule targeted anti-cancer therapy which selectively inhibits VEGFR-2, known to be involved in angiogenesis of tumor cells
- Phase 3 clinical trial to validate efficacy as 3rd line gastric cancer treatment is ongoing

#### SOL-804 : new formulation anti-cancer drug agent

- A special formulation applying Lymphatic Targeting Technology
- Phase 1 study is planned

#### JM-012: candidate for morning akinesia in Parkinson's disease patients

- A special formulation under development to control absorption of L-dopa



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Based in Incheon, Republic of Korea, Celltrion, Inc. is a global biopharmaceutical leader with strong research and development (R&D) capabilities in biosimilar monoclonal antibodies (mAbs) and novel drugs for various therapeutic areas, including oncology and autoimmune diseases. Celltrion previously received FDA and EMA approval for Remsima which is the world's first biosimilar mAb to receive approval from a regulatory agency in a developed country. Celltrion's R&D expertise, coupled with a passion for patient well-being, is a unique set of capabilities that allowed the Company to enter into this highly challenging space.

Celltrion focuses on promoting the health and welfare of patients in need of innovative biopharmaceutical products through world-class manufacturing and research facilities, developing state-of-the-art technologies, and establishing quality systems.

## Products & Pipeline

Biosimilar infliximab, also known as its brand name Remsima and Inflectra (CT-P13), is a biosimilar monoclonal antibody developed to be comparable to an already approved biological medicine (also known as the reference product). The reference product for biosimilar infliximab is Remsima (infliximab), which is an anti-inflammatory medicine for the treatment of inflammatory conditions including Crohn's Disease, paediatric Crohn's Disease, ulcerative colitis, paediatric ulcerative colitis, rheumatoid arthritis, ankylosing spondylitis, psoriatic psoriasis and plaque psoriasis.

Following successful development of mAb biosimilars Remsima, Truxima and Herzuma, Celltrion is actively developing other biosimilars in various fields such as biosimilars for Humira and Avastin, both of which are global blockbuster biologics. Moreover, Celltrion is developing new biologics such as biobetters based on Antibody-Drug Conjugate (ADC) technology, which overcomes limitations of existing antibody therapeutics.



Remsima



Truxima



Herzuma

Product	Target (INN)	Indication	Current Status
Remsima	Infliximab	Rheumatoid arthritis, Adult Crohn's disease, Paediatric Crohn's disease, Ulcerative colitis, Paediatric ulcerative colitis, Ankylosing spondylitis, Psoriatic arthritis, Psoriasis	- Approved by MFDS in 2012 - Approved by EMA in 2013 - Approved by FDA in 2016 - Approved in more than 80 countries around the globe.
Truxima	Rituximab	Non-hodgkin's Lymphoma, Chronic lymphocytic leukaemia, Rheumatoid arthritis, Granulomatosis with polyangiitis and microscopic polyangiitis	- Approved by MFDS in 2016 - Approved by EMA in 2017 - Filed in FDA (2017)
Herzuma	Trastuzumab	Early breast cancer, Metastatic breast cancer, Metastatic gastric cancer	- Approved by MFDS in 2014 - Approved by EMA in 2018 - Filed in FDA (2017)

Project	INN	Major Indication
Antibody Biosimilars	Remsima SC	Rheumatoid Arthritis
	CT-P17	Rheumatoid Arthritis
	CT-P16	Large Intestine Cancer
	CT-P15	Colorectal Cancer
	CT-P14	Respiratory Diseases
	CT-P05	Rheumatoid Arthritis
Project	Major Indication	
Antibody Biologics	CT-P27	Influenza virus infection
	CT-P26	Breast Cancer (ADC)
	CT-P25	Influenza
	CT-P24	Hepatitis B Virus
	CT-P19	Rabies

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BINT Medicine R&D Corporation for Terminal Illnesses  
(BINT: Bio-Info-Nano Technology)

# Chong Kun Dang Pharmaceutical Corp.



Chong Kun Dang Pharmaceutical Corp. (CKD) was established in 1941 with a goal of supplying the best quality medicines and is dedicating its efforts to develop novel therapeutics for improving human health and quality of life.

## Products

In 1968, CKD received US FDA approval for Chloramphenicol, Chloramphenicol palmitate and sterile Chloramphenicol sodium succinate. It was the first commemorative US FDA approval for raw materials in the history of Korean pharmaceutical industry. In addition, CKD has received US FDA approvals for other raw materials such as Oxytetracycline hydrochloride, Tetracycline, Rifampicin, Demeclocycline and etc. Remarkably, CKD is one of the first Korean pharmaceutical companies to establish Research Center in early 1970's to accelerate the development of novel technologies and therapeutics.

Through a long history of its own R&D, CKD has successfully launched pharmaceutical drugs such as Lipilou (anti-hyperlipidemic agent), Dilatrend (hypertension), and Tacrobell (immunosuppressant), in different therapeutic areas. In addition, CKD has been developing biological products since 2008. The first biological product, darbepoetin-alfa biosimilar is currently in NDA review stage. Investing over 11.2% of its revenue (as of 2017) in research and development, CKD has successfully launched two novel therapeutics, Camtobell for anti-cancer and Duvie for type 2 diabetes, and various IMDs and fixed dose combinations such as Telminuvo, Cantabel and Dilatrend SR. Especially, CKD is currently exploring global market opportunities through potential business partnership.



Lipilou tab., anti-hyperlipidemic agent



Camtobell inj., anti-cancer agent



Duvie® Tab. anti-diabetic agent

## Global R&D

CKD has launched several clinical programs in USA, Europe and Korea to accelerate the development of novel NCE drug candidates. A phase 1, first-in human clinical trial of CKD-506, has been completed in Europe and a multinational, phase 2 study in adult rheumatoid arthritis patients will start in 2018. CKD-506 is an orally available and highly selective HDAC 6 inhibitor which is targeting treatment for various inflammatory disease including autoimmune diseases.

CKD-504, a blood-brain barrier (BBB) penetrating HDAC 6 inhibitor targeting treatment for neurodegenerative diseases (Huntington's disease and Alzheimer's disease) by improving neuronal function is in the phase 1 trials in USA and Korea.

## R&D Pipeline

Therapeutic area	Project	Indication	NC	PhI	PhII	PhIII	A
CV & Metabolic	CKD-508	Dyslipidemia	○				
	CKD-509	Oncology	○				
Oncology	CKD-516	Colon cancer		○			
	CKD-581	Multiple myeloma		○			
	CKD-702	Solid cancer	○				
	CKD-12101	Neutropenia	○				
	CKD-841	Cancer		○			
Immunology	CKD-506	Auto-immune			○		
CNS	CKD-971*	SLE, Dermatomyositis			○		
	CKD-504	Neurodegenerative disease		○			
Others	CKD-11101	Anemia				○	
	CKD-943*	Pain, Uremic, Pruritus				○	
	CKD-351	Glaucoma			○		
	CKD-333	Hypertension/Dyslipidemia				○	
	CKD-701	Age-related Macular Degeneration	○				
	CKD-495	Gastric disorder			○		
	CKD-497	Expectorant			○		

\* CKD-943 is an in-licensed product from Cara Therapeutics Inc.

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• President & CEO Young-Joo Kim  
• Specialty R&D of new medicine and incrementally modified drug (IMD)  
• Location 8, Chungjeong-ro, Seodaemun-gu, Seoul, Korea  
• Homepage [www.ckdpharm.com](http://www.ckdpharm.com)

# Big leap to global pharmaceutical company CJ HealthCare Corp.



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## Heal the World, Better Life CJ HealthCare

CJ Healthcare more than 30 years of experience pharmaceutical company, aims to the global company through active R&D investment and open innovation. CJ HealthCare is developing new drugs indicated for treatment of digestive or inflammatory diseases and cancers, based on its own distinguished R&D capabilities. At the same time, it is also sparing no effort to conduct constant R&D activities for the 2nd-generation EPOs and vaccines, and is developing cutting edge incrementally modified drugs (IMDs) and combinations with a focus on chronic diseases including circulatory and endocrine disorders.

## Products

Product	Details
Epokine Inj. (rh-EPO)	Epokine® was developed 1st in Korea and 3rd in the world. Epokine® is safe and effective in treating anemia of hemodialysis patients with end-stage renal disease
Leukokine Inj. (rh- G-CSF)	Chemotherapy in advanced cancer patients and in acute Leukemia patients can cause the Neutropenia. Leukokine® can help to support their natural defenses during strong chemotherapy
Vancorin Inj. (Vancomycin)	Vancorin® is the best choice for MRSA & MRSE.
Tapocin Inj. (Teicoplanin)	Tapocin® has excellent antibacterial effects on MRSA, MRSE and Enterococcus.
Moveloxin I.V. solution bag (Moxifloxacin)	As a fourth-generation synthetic fluoroquinolone antibacterial agent, Moveloxin® I.V. solution bag is convenient to use for doctors and nurses in hospitals.
Cinezolid I.V. solution bag (Linezolid)	As the treatment of vancomycin-resistant Enterococcus faecium infections, Cinezolid® I.V. solution bag is convenient to use for doctors and nurses in hospitals.
Calmtop Inj. (Irinotecan)	Calmtop® Inj. is an injectable drug used for the treatment of colorectal cancer.
Pemta Inj. (Pemetrexed)	PEMTA® Inj. is a chemotherapy RTU(ready-to-use) injectable drug for the treatment of pleural esothelioma and non-small cell lung cancer.
OmapOne Lipid Inj. bag (Fish/MCT/Soybean/Olive oil)	OmapOne® Lipid is parenteral nutrition IV solution bag for supplying energy, essential fatty acids and omega-3 fatty acids to patients.
OmapOne Peripheral Inj. bag (Lipid, Amino acid, Glucose)	OmapOne® Peripheral is total parenteral nutrition (TPN) IV solution 3 chamber bag for supplying Lipid, Amino acid and Glucose to patients.
CONDITION (Hangover relief drink)	CONDITION® has been launched in 1992 creating a new market of hangover relief drink in Korea.
HongSamJin Gold (Red Ginseng drink)	HongSamJin Gold® is an outstanding energy drink produced with 6-year red ginseng.
HutGaeSoo (Thirst - quenching tea drink)	HutGaeSoo® contains the goodness of Hovenia dulcis with its function of liver protection.

## Global Business

- China - CONDITION®, HONGSAMJIN®
- Japan - Cefozopran, Cefotiam, Cefmenoxime, Banan® (Cefpodoxime) tab. & dry syrup, CONDITION®
- Southeast Asia - EPO, G-CSF, Vancomycin Inj., Teicoplanin Inj., Ciprofloxacin Inj., Moxifloxacin Inj., Irinotecan, Linezolid Inj., Entecavir tab., Ceftriaxone Inj., Ceftazidime Inj., CONDITION®, HONGSAMJIN GOLD®
- The Middle East, Africa and CIS - EPO, G-CSF, Vancomycin Inj., Levofloxacin Inj., Ciprofloxacin Inj., Ceftriaxone Inj., Cefotaxime Inj.
- Latin America - EPO, G-CSF, Vancomycin Inj., Teicoplanin Inj

## R&D Pipeline

	Pipeline	Description		DS	PC	Clinical Trial			NDA	MKT	Partnering availability
		Molecule	Target Indication			PI	PII	PIII			
NCE	CJ-12420	Tegoprazan	Gastric Acid-Related Disorders	█	█						Southeast Asia
	CJ-14199	Small molecule	IBS-C, NASH	█	█						Worldwide
	CJ-15314	Small molecule	Rheumatoid Arthritis	█	█						Worldwide
IMD	CJ-30045	Pemetrexed solution	Cancer	█	█						Worldwide
	CJ-30056	Atorvastatin, Metformin	Type 2 Diabetes / Hyperlipidemia	█	█						Worldwide
	CJ-30059	Candesartan, Amlodipine	Hypertension	█	█						Worldwide
	CJ-30060	Valsartan, Amlodipine, Rosuvastatin	Hypertension/ Hyperlipidemia	█	█						Worldwide
	CJ-30061	Valsartan, Amlodipine, Atorvastatin	Hypertension/ Hyperlipidemia	█	█						Worldwide
Biologicals	CJ-40001	Darbepoetin alfa biosimilar	Renal Anemia	█	█						Worldwide
	CJ-40010	Vaccine	Prevention of Hand, Foot & Mouth Disease	█	█						Worldwide
	CJ-40012	Ranibizumab biosimilar	Macular Degeneration	█	█						Worldwide

DS: Discovery, PC: Preclinical Studies, MKT: Market, IMD: Incrementally Modified Drug

· Company CJ HealthCare corporation  
· CEO Seok Hee Kang, Sang Hyun Yoon  
· Specialty Business ETC (CVs, Antibiotics, IV Solution, Oncology, Endocrinology, Nephrology&Urology, Gastro Intestinal, Musculo skeletal, Respiratory, Others) & Health functional products  
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**CORESTEM** is a bio-pharmaceutical company specializing in research and development of personalized stem cell therapies for incurable disease. We developed the world's first stem cell therapeutic product for ALS (Amyotrophic Lateral Sclerosis), name of NEURONATA-R®, received the permission of medicines by Korea's Ministry of Food and Drug Safety in July 2014 and began commercialized medication to patients in February 2015. CORESTEM leads the market in meeting patient expectations beyond national, ethical and economic limitations through ongoing research into incurable diseases.

Corestem's research and development is focused on advancing preferred stem cell treatments for intractable diseases, driving scientific advancement, and expanding patient care offerings. Corestem is an integrated innovation engine, combining unparalleled scientific expertise, creativity, and mastery of state-of the art technology, ushering in a new era of tailored medical products with a suite of new 2nd generation curative stem cell therapies and treatments

### Products

NEURONATA-R® inj is an autologous bone marrow-derived mesenchymal stem cell therapeutic product for amyotrophic lateral sclerosis. MSCs are capable of differentiating into various types of cells that constitute the human body. They also secrete neuro-trophic factors and anti-inflammatory cytokines. NEURONATA-R® inj has an effect on alleviating deteriorating physical through anti-inflammatory and immune modulatory effects, inhibition of motor neuron death, and prolongation of motor neuron in ALS patients.



NEURONATA-R®

### R&D Pipeline

Therapeutic area	Indication	Basic Research	Preclinical	IND	Clinical	NDA	Remarks
Neurological Diseases	ALS (Auto)	NEURONATA-R®					• Market (2015.01) NCT01363401
	Anoxic brain injury (Auto)	NEURONATA-R®					• IIT (ongoing) : NCT02210624
	MSA (Auto)	CS10BR05®					• IND approval (2016.06) • Phase I : NCT03265444
	ALS (Allo)	HYNRCS-Allo-ALS-02					• IIT (ongoing) : NCT01758510 NCT03214146
Autoimmune Diseases	Lupus (Allo)	CS20AT04					• IND approval (2015.5) • Phase I : NCT03174587
Musculoskeletal Disorders	OA/cartilage defect	CS30MS02					• Partnership

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Commercial Stage Biopharma Company with a Robust Pipeline and Proven Track Record in R&D and Commercialization of Novel Drugs

# CrystalGenomics, Inc.



CrystalGenomics, Inc. is a commercial stage biopharmaceutical company dedicated to the R&D and commercialization of novel pharmaceuticals to address significant unmet medical needs in the therapeutic area of infectious disease, oncology and inflammatory diseases. The Company is headquartered in Korea and has a subsidiary in the U.S. for the management of multi-national clinical studies, and it is publicly traded on the KOSDAQ exchange.

CrystalGenomics is developing several drug candidates for various therapeutic areas and has an approved product. Acelex (polmaxcoxib) is a next generation NSAID for osteoarthritis which has been approved by the MFDS of Korea in 2015. The second therapeutic program is CG400549, a first-in-class antibiotic for MRSA and other serious staph infections which had successfully completed a phase 2a study in the U.S. The third therapeutic program is CG200745, an epigenetic anti-cancer therapeutic with two ongoing clinical studies: phase 2 pancreatic cancer study and phase 1b Myelodysplastic syndromes (MDS) study. In addition to the aforementioned programs, CrystalGenomics has several other therapeutic programs in its R&D pipeline.

## Product

### · Acelex (Polmaxcoxib, Next Generation NSAID for Osteoarthritis)

**DRUG TARGET:** Dual Cyclooxygenase-2 and Carbonic Anhydrase Inhibitor    **INDICATION:** Osteoarthritis  
**STATUS:** Approved in Korea (2015)

- Acelex (polmaxcoxib) is a novel NSAID with a unique mode of action, approved for the relief of signs and symptoms of osteoarthritis. Acelex was launched in 2015 and is being sold by Dong-A ST and Daewoong Pharmaceutical Co., Ltd, CrystalGenomics' commercial partner for Korea. In 2016, CrystalGenomics had signed a supply agreement with TR-Pharm of Turkey where TR-Pharm would be responsible for sales and marketing of Acelex in 19 countries covering Turkey and the MENA region. Currently, Acelex is the second biggest selling COX-2 inhibitor in Korea

## R&D Pipeline

### · CG400549 (First-in-Class Fab I Inhibitor for MRSA)

**DRUG TARGET:** CG400549 (First-in-Class Fab I Inhibitor for MRSA)  
**INDICATION:** ABSSSI and other serious infections associated with *Staph aureus*  
**STATUS:** Phase 2a completed (USA)

- CG400549 is a novel antibacterial drug candidate that inhibits enoyl-[acyl-carrier-protein] (ACP) reductase (fabI), an essential enzyme in fatty acid synthesis. Since fatty acids are an ingredient of bacterial cell walls, its synthesis is critical for the survival of bacteria

### · CG200745 (Best-in-Class HDAC Inhibitor for Solid and Liquid Tumors)

**DRUG TARGET:** HDAC inhibitor  
**INDICATION:** Various Solid Tumors and Hematologic Cancers (Pancreatic Cancer, MDS, AML, etc.)  
**STATUS:** Phase 2 clinical trial ongoing for pancreatic cancer and Phase 1b clinical trial ongoing for MDS

- CG200745 is an epigenetic agent that deactivates HDAC, an enzyme that catalyzes the histone deacetylation. Based on a series of anti-cancer efficacy tests using various cancer cell lines and xenograft animal models, CG200745 showed superior profile when compared to other compounds in the same class of drugs.

### · CG026806 (First-in-Class dual BTK-FLT3 inhibitor for AML, MCL & CLL)

**DRUG TARGET:** Dual BTK-FLT3 inhibitor    **INDICATION:** AML, MCL & CLL    **DEVELOPMENT STATUS:** Preclinical  
**PARTNERING STATUS:** Out-licensed to Aptose Biosciences (NASDAQ: APTO) in a licensing deal worth potentially up to \$303 million (June 2016); CrystalGenomics retained Korea and China rights

- CG '806 is a once daily, oral, first-in-class FLT3/BTK inhibitor. This small molecule demonstrates potent inhibition of mutant forms of FLT3 (including internal tandem duplication, or ITD, and mutations of the receptor tyrosine kinase domain), eliminates AML tumors in the absence of toxicity in murine xenograft models, and represents a potential first-in-class therapeutic for patients with FLT3-driven AML. Likewise, CG'806 demonstrates potent, non-covalent inhibition of the Cys481Ser mutant of the BTK enzyme, suggesting the agent may be developed for CLL and MCL patients that are resistant/refractory/intolerant to covalent BTK inhibitors



Acelex

No.	Area	Indication	Discovery	Preclinical	Ph I	Ph II	Ph III
1	Infectious Disease	MRSA	██████████	██████████	██████████	██████████	
2	Cancer	Pancreatic cancer	██████████	██████████	██████████	██████████	
3	Cancer	MDS	██████████	██████████	██████████		
4	Cancer	AML	██████████	██████████	██████████		
5	Pain	Anti-inflammatory Pain	██████████	██████████	██████████		
6	Cancer	AML, MCL, CLL	██████████	██████████			
7	Inflammation	IBD	██████████				

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 -----

Healthful WORLD, Dynamic DAEHWA!

# DAE HWA PHARMACEUTICAL CO., LTD



Liporaxel Solution



Kebanon plaster



Loxona Cataplasma



Resnalín patch



Rivamensa Patch



Baratis ODF



Top-Roll soft cap.



Amalian Filler

DAE HWA has developed all kinds of medicines ranging from peptic ulcer medicines to preventive and assistant treatments including a cancer, adult related disease, etc.

DAEHWA Pharmaceutical Co., Ltd. was established in the spirit of "serving society through pharmaceutical business and contributing to build more human-centered life". We have thriving ever since to improve national health. Since its foundation in 1984, DAEHWA has been seeking new paths for its business development with a consistent progress-oriented core-target. DAEHWA is constantly seeking unique and creative solutions to improve the patients' quality of life and to develop the Korean pharmaceutical industry thanks to its global effort.

With its own platform technologies, DAEHWA produces APIs and finished products.

Cephamefyl is ranked 3rd in the oral cephalosporin antibiotic market. Flospan is ranked 1st in the antispasmodic market. As the biggest and unique CMO Company for transdermal drug delivery system (TDDS) product in Korea, DAEHWA is equipped with a highly qualified, sterile and flawless system. DAEHWA possesses the world's best TDDS technology and has developed a new TDDS Platform that has minimized its side effects.

DAEHWA is investing more than 10% of its sales into R&D and focuses most of its company resources into the development of QoL products.

DAEHWA currently exports more than 60 products to 20 countries around the world. DAEHWA runs a representative office in Vietnam, and took over a German company for the manufacture and distribution of medical device. Consequently, DAEHWA has grown from a middle-sized Korean company into a global company specialized in pharmaceuticals.

DH-LASED technology, DAEHWA's formulation platform technology, created the first oral Paclitaxel anticancer drug in the world. Liporaxel Solution is the result of DAEHWA's 17 year-study, and achieved astonishing results proving its efficacy, safety and convenience. Liporaxel Solution will launch domestically in 2018; application result for US FDA (IND type) is in process.

With Liporaxel Solution, DAEHWA has changed the market paradigm from Injection to Oral administration.

DH-HERBAL Technology is a specialized technology for elderly people. Daehwa's new natural product DHP1401 for dementia, has high efficiency for memory improvement and the protection of brain cells. Also, thanks to its safety, we are gradually approaching the results we have dreamed.

Besides, efforts are put into the development of blood-pressure improving health functional food and to prepare the best optimized products for elderly people. DAEHWA's oral disintegration film (ODF) is easily administered without water, which facilitates the drug administration to children and elders who suffer from dysphagia.

Moreover, through its DH-BIO Technology platform technology, DAEHWA secures various meaningful clinical data for Lou Gehrig disease among others, and strengthens the basis of overseas expansion for new drugs.

By taking over Redoxbio Inc. and a German cosmetics & medical device manufacturing/distribution company, DAEHWA has stepped into the new area of the cosmetic surgery market. We expect that these new area would contribute to sales growth by expanding our business into the cosmetics manufacturing, specialized in antioxidants and in developing biomedicines and compounds.

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· Specialty	Medicinal products, Cosmetics
· Location	(Seoul Office) 2145 DaeHwa Bldg., Nambusunhwan-ro, Seocho-gu, Korea (Manufacturing site) 495, Hanu-ro, Hoengseong-eup, Hoengseong-gu, Gangwon-do, Korea
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Reliable Partner for Human Health  
**Daewon Pharmaceutical Co., Ltd.**



Pelubi / Pelubi CR Tab.



Codaewon Forte Syrup



Renamezin Cap.



Eswonamp Tab.



Oramin Soft Cap.

**Daewon Pharm is one of the representative pharmaceutical companies in Korea based on manufacturing excellency and R&D capability**

Daewon Pharm is a specialized company that has been producing therapeutic agents from its foundation with its founding idea, "based on our customer's belief and trust, be a companion that protects the healthy human life." Daewon possesses numbers of new chemical and incrementally modified drug pipelines to improve human life quality further.

Based on one of the highest level of R&D capability on formulation research, modification technology, and clinical trial capability in Korea, Daewon has built the Core Platform technology and applying it to many new product developments. Daewon also possesses strong competitive edge in the development of modification drugs that reduces frequency of drug use and side effects

Daewon Pharm is specialized in manufacturing technology of liquid syrup and suspensions, using state-of-the-art manufacturing facilities. R&D platforms and liquefied manufacturing facility operation are Daewon's core competencies. By utilizing it to other various medicines, Daewon is taking big step toward becoming one of the global syrup market leaders.

**Products**

**Pelubi® Tab. / Pelubi® CR Tab.**

Pelubi® Tab and Pelubi® CR Tab are NSAID-class anti-inflammatory analgesics that were created by Daewon. The 12th new drug in Korea, Pelubi® Tab and Pelubi® CR Tab, have excellent anti-inflammatory effects while minimized gastrointestinal side-effects. It has been recognized for its excellence with the Korea New Drug Development Award in 2009 and 2016.

**Codaewon® Forte Syrup**

Codaewon® Forte Syrup, the main product of Daewon Pharm, is an antitussive/expectorant combined with four different main ingredients including Dihydrocodeine. It has greatly improved convenience by applying the disposable stick pouch package for the first time in Korea, which greatly improves dosage convenience.

**R&D Pipeline**

Category	Code	Type	RS	PC	P1	P2	P3	RG
NCE	DW-4301	Hyperlipidemia			○			
IMD	DW-1502	Neuropathic pain					○	
IMD	DW-1601	Acute bronchitis					○	
IMD	DW-1702	Gastric ulcer			○			
IMD	DW-1501	Hypertension					○	
IMD	DW-1503	Hypertension	○					
IMD	DW-1710	Arthritis	○					

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Pharmaceutical Company with the No.1 Sales of Prescription Drugs in Korea  
**Daewoong Pharmaceutical Co., Ltd.**



## Daewoong Pharmaceutical is the Pharmaceutical Company with No. 2 sales of prescription drugs in the Korean market.

Established in 1945 in South Korea, Daewoong Pharmaceutical offers high-quality and innovative pharmaceutical products and is one of the top market leaders in Korea.

For over 60 years, Daewoong Pharmaceutical has been providing better health for people through its total dedication to healthcare. Daewoong has built strong core competency for new drug development to meet diverse medical needs and enhance human life.

Building on our core strength, Daewoong Pharmaceutical has involved in becoming a global healthcare group by operating our foreign branches in SE Asia and by collaborating with global partners. We have an inspiring mission to become a top 50 global healthcare company which contributes to improving the quality of life for people worldwide.

**The reinforcement of the R&D capacities through the establishment of R&D centers in China, India and Indonesia.**

Daewoong Lifescience Research Institute has been focused on developing new chemical entities, biologics, incrementally modified drugs and high-value added APIs. Daewoong has also been studying to find solutions for the unmet therapeutic needs of neuropathic pain disease, Alzheimer's disease as well as other innovative programs like anticancer gene therapy. Daewoong is operating several overseas offices in China, Vietnam, Indonesia, Thailand, Philippines, USA, Japan and India has R&D centers in China, India and Indonesia.

### R&D Pipeline

#### New Chemical Entities

Code	type	indication	Development Status						
			R	Pre	PI	PII	PIII	M	
DWP14012	APA(Reversibles)	Anti-ulcer / BIC							
DWP16001	SGLT2 inhibitor	Diabetes / BIC							
DWN12088	PRS inhibitor	Anti-fibrotic disease / FIC							
DWJ208	Ion channel blocker	Neuropathic pain, Cancer pain							
DWJ212	Dual target inhibitor	Autoimmune disease (RA) / FIC							
DWJ213	Dual target inhibitor	Autoimmune disease (RA) / FIC							

#### Biologics

Brand	MOA	Description	Development Status						
			R	Pre	PI	PII	PIII	M	
Nabota*	Botulinum Toxin	Glabella Lines (US/EU)							
Novosis	BMP-2	Biomedical device for spinal fusion							
Regenerative Medicine	Stem Cell	Atopic dermatitis							
		Crohn's disease							
		Rheumatoid arthritis							
		Osteoarthritis							
		Dementia/Alzheimer's disease							
Bio-better	Insulin	Type 1 and 2 Diabetes							
Growth factors	EGF	Ointment for regeneration of dorsal soft tissue							
	EGF	Epidermolysis Bullosa							
	EGF	Chronic Obstructive Pulmonary Disease(COPD)							
HL036*	Anti TNF Alpha	Dry eye syndrome							
HL186*, HL187*	Undisclosed	Immuno-oncology							

#### Value-added Generics & Generics

Brand	Description	Development Status				
		R	Pre	BE	ANDA	M*
Meropenem	Carbapem dedicated facility, Patented process					
Olostar	Olmesartan + Rosuvastatin FDC					
Ursodiol	Ursodeoxycholic acid 250, 500mg tablets					
Propafenone	Sustained released formulation					
Aprepitant	Generic of Emend, New nano technology					
Leuprolide	Leuprolide depot(suspension method, Gelatin included)					
Goserelin acetate	Powder for suspension (polymeric microspheres), 1M SC injection, 505(b)(2)					
Paliperidone Palmitate	Suspension (nanoparticles), 1M IM injection, 505(b)(2)					
Aripiprazole monohydrate	Powder for suspension (lyophilised aripiprazole monohydrate powders), 1M IM injection, 505(b)(2)					
Lanreotide acetate	Supersaturated solution containing lanreotide acetate nanotubes, 1M SC injection					
Donepezil Patch	Weekly patch, 505(b)(2)					

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 · Head Office 12, Bongeunsa-ro 114-gil, Gangnam-gu, Seoul, Korea  
 · Homepage www.daewoong.com

An R&D-driven company that has been leading the healthcare industry in Korea for over 80 years.

**Dong-A ST**



## Dong-A ST envisions a future where it will be a respectable world-class pharmaceutical company through its innovative drugs.

Dong-A ST focuses on Prescription drug, such as domestically developed new drugs like Stillen®, Zydena®, and Motilitone®, medical devices, diagnosis and overseas business.

With its optimized research infrastructures such as its world-class, sophisticated research center completed in 2011, as well as its excellent researchers, Dong-A ST is furthering its efforts to develop global new drugs. Also, with the backing of these infrastructures, Dong-A ST vows to positively explore overseas markets, to expand its overseas exports, and to establish itself as a global pharmaceutical company, operating beyond the domestic market.



Stillen



Motilitone



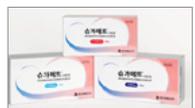
Sivextro



Zydena



Suganon



Sugamet XR

## Major R&D Pipeline

Code Name (Brand name)	Indication	Description	Development Stage	Licensing Availability
<b>New Chemical Entity</b>				
DA-7218 (Sivextro®)	Infection (ABSSSI, Acute Bacterial Skin and Skin Structure Infections)	Oxazolidinone class antibiotic	Launched (USA, EU, etc.)	Not available
DA-7218	Pneumonia (HABP/VABP)		Ph III (Global)	
DA-1229 (Suganon®/ Sugamet® XR)	Type 2 diabetes	DPP(Dipeptidyl Peptidase)-4 inhibitor	Launched (Korea)	Available for some territories
DA-6886	Irritable bowel syndrome-constipation	5-HT(Hydroxytryptamine) 4 agonist	Ph I completed (Korea)	Available
DA-8010	Overactive bladder	M3 receptor antagonist	Ph 1 completed (EU)	Available
DA-1241	Type 2 diabetes	GPR119 agonist	Ph 1a completed (USA)	Available
<b>Botanical Drug</b>				
DA-9701 (Motilitone®)	Functional dyspepsia	Botanical (Herbal extract)	Launched (Korea), Ph II completed (USA)	Available
DA-9801	Diabetic neuropathy	Botanical (Herbal extract)	Ph II completed (USA)	Not Available
DA-9805	Parkinson disease	Botanical (Herbal extract)	Ph II (USA)	Available
DA-9803	Alzheimer disease	Botanical (Herbal extract)	Preclinical completed (Korea)	Not Available
<b>Biopharmaceutical Products</b>				
DA-3801 (Gonadopin®)	COH (Controlled Ovarian Hyper-stimulation) in ART Ovulation induction in anovulatory women	Recombinant FSH (Recombinant Follicle Stimulating Hormone)	Launched (Korea)	Available
DA-3031 (Dulastin®)	Neutropenia	PEG-G-CSF (Pegylated Granulocyte-Colony-Stimulating Factor)	Launched (Korea)	Available
DA-3880	Anemia	Darbepoetin α Biosimilar	Ph I completed (EU)	Available for some territories
DMB-3111	Breast Cancer	Trastuzumab Biosimilar	Ph 1 completed (Japan)	Available except EU, CIS/Russia, LATAM, Japan
DA-3131	Age-related macular degeneration	New anti-VEGF mAb	Preclinical completed (Korea)	Available
DMB-3115	Psoriasis	Ustekinumab Biosimilar	Preclinical	Available except Japan

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Established as the first Korean pharmaceutical company in 1897, Dong Wha has always remained committed to bringing happiness to customers and employees with its management focusing on happiness of people.

Whal Myung Su is the first western medicine in Korea invented by Min Byung-ho, a bureaucracy of Chosun dynasty, in order to popularize the secret of herb medicine available only in the palace in 1897 when Chosun transferred to the Korean Empire.

Founded in 1973, Dong Wha Pharmaceuticals Research Institute has developed a number of original drugs including Gas Whal Myung Su, Fucidin ointment and Pancold. It is now in a transition period towards more advanced R&D, focusing on developing new drugs at state-of-the-art research facility which was newly built in 2010

The new plant(built in 2009) located in the Chungju Industrial Complex has a total area of 82,500m<sup>2</sup> and total floor space of 52,800m<sup>2</sup>, including one basement level and four stories high. In addition, it has in place an array of equipment and systems to satisfy Current Good Manufacturing Practice (cGMP) Regulations of US F. D. A. With the state-of-the-art automated production system at the plant, Dong Wha can now compete shoulder to shoulder with major global pharmaceutical companies.



Zabolante®

## Products

### Zabolante® Tablet (New Quinolone Antibiotic: Zabofloxacin D-aspartate Hydrate)

- Indication : Acute Exacerbation of Chronic Obstructive Pulmonary Disease
- Best-in-class activity against *S. pneumoniae* and *H. influenza* compared to existing quinolone antibacterial agents.
- Rapid symptom relief compared to Moxifloxacin
- Good safety profile: No serious adverse events, no QT prolongation, no phototoxicity, no rash, no dysglycemia
- Launched in Korea in 2016
- Signed 'Distribution and License Agreement' with Novosci Healthcare (12 MENA regions) in Jan. 17th, 2017.
- Signed 'Distribution and License Agreement' with SJ IBPharm (China region) in March. 31th, 2017.

## R&D Pipeline

Project	Status	Indication	Remark
Zabofloxacin(DW224) Quinolones Antibiotics	Launched in Korea	Acute Exacerbations of Chronic Obstructive Pulmonary Disease	Signed Agreement in MENA and China
Zabofloxacin(DW224) Quinolones Antibiotics	Clinical preparation	Community acquired pneumonia	
DW1018	Phase I	breast cancer	
DW2005	Phase I preparation	irritable bladder syndrome	
DW2007	Phase II	ulcerative colitis	
DW2008	Phase I preparation	asthma	

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## A leading global R&D institute conducting research of plasma-derivatives, vaccines, recombinant proteins and therapeutic antibodies.

Green Cross Corp.(GCC) has pioneered in the field of biopharmaceuticals, such as vaccines, plasma-derivatives, diagnostics, recombinant proteins and therapeutic antibodies. GCC has been well known for the R&D and commercialization of 'Hepavax B', a world's biggest selling hepatitis B vaccine, 'Hantavax', a world's first epidemic hemorrhagic fever vaccine, and 'Suduvax', a world's second chicken pox vaccine. A complete flu pipeline includes seasonal flu vaccine, H1N1 vaccine, avian flu vaccine and etc. GCC is also pursuing opportunities in rare diseases developing therapies for Hunter syndrome (Hunterase). In 2016, GCC earned \$1,041 million in revenue recording it as 2nd largest Korean pharmaceutical company.

### Products

#### Plasma Fractions & Recombinants

Starting from the nation's first Albumin production in 1971, Green Cross currently manufactures more than 12 plasma fractions including immunoglobulin, anti-hemophilic factors, and anti-thrombin factor. Recent innovations include 'rhFVIII (GreenGene F)', a 3rd Generation of recombinant Factor VIII for hemophilia A treatment.

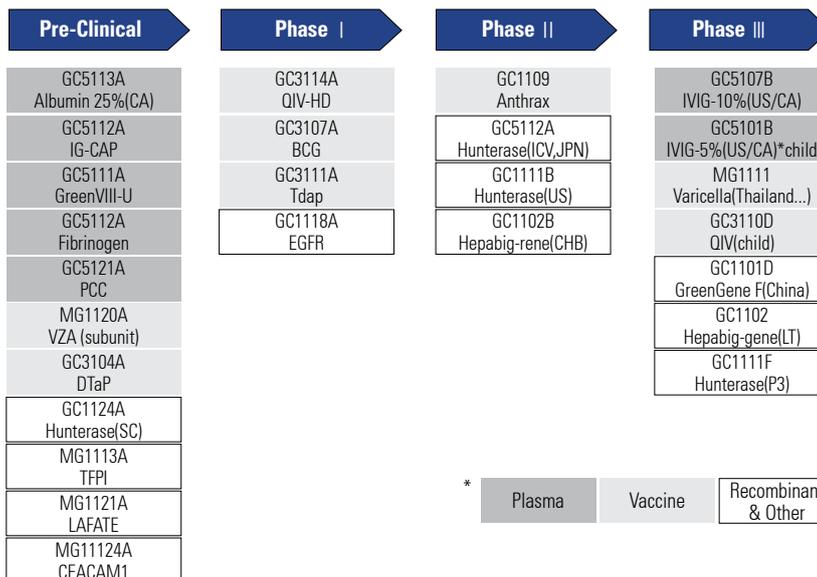
#### Vaccines

We succeeded to develop the world's third Hepatitis B vaccine in 1983, the world's first epidemic hemorrhagic fever vaccine in 1988. The quadrivalent inactivated influenza vaccine, GCFLU Quadrivalent was approved for use in Korea in 2015, WHO PQ(pre-qualification) for single-dose vial was approved in December 2016, and received approval for multi-dose vial in April 2017.

#### ETC & OTC Medicines

Green Cross has provided a broad range of ethical medicines in the field of cardiovascular disease, metabolic disease including diabetes, hypertensive disease. Along with patches (one of our core OTC products), we also have provided OTC products in respiratory, dermatology and immunology.

### R&D Pipeline



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Genexine Inc. (KOSDAQ, 095700) is a clinical stage biotechnology company focused on the development and commercialization of innovative immunotherapeutics and next generation novel long-acting biologics. Our goal is to bring medicines that will transform patient's lives.

### Platform Technology

**1) hyFc Technology – Long-acting Fc-based Technology:** hyFc is derived from hybridization of non-cytosolic immunoglobulin Fc portions of IgD and IgG4 without site-directed mutagenesis. This hybridization combination gives flexible hinge that minimizes the loss of bioactivity of drug candidate and prevents adverse immunogenicity and cleavage by enzymes. hyFc thus has broad applicability, less side-effects and superior long-acting characteristics to the drug candidates.

**2) DNA-based Immunotherapy & Vaccine Technology:** Therapeutic vaccine is prepared by introducing antigen gene and dendritic cell targeting gene into high-efficiency expression vector. When administered, it induces antigen-specific immune response and activates HPV specific T-cells. The killer CD8+ T cells then eliminates HPV-infected expressing cells.

### Focused Areas: Two therapeutic areas with our proprietary drugs for multi-billion dollar market

#### 1) Bio New Drug:

- Long-acting Interleukin-7 as not only the first-in-class lymphopenia treatment, but also a breakthrough cancer immunotherapeutics
- HPV DNA immunotherapy targeting Human Papilloma Virus (HPV) induced pre-cancer and cancers (cervical and head & neck cancer) via CD8+ T cells based DNA therapeutic vaccine

#### 2) Bio Better Drug:

- Long-acting human growth hormone as Best-in-Class (weekly and twice-monthly) treatment in Adult and Pediatric patients with Growth Hormone Deficiency (GHD).
- Three more ongoing pipelines on Anemia, Neutropenia and Diabetes.

### R&D Pipelines

Category	Compound	Primary Indication	Stage of Development
HyLeukin	IL-7-hyFc	Solid Tumor	Phase 1b/2a
		Glioblastoma	Phase 1b/2a
		Triple Negative Breast Cancer with Checkpoint Inhibitor	Non-Clinical
Papitrol-188	Papitrol-188	High-Grade Squamous Intraepithelial	Phase 2
		Cervical Cancer with Checkpoint Inhibitor	Phase 1b/2
HyTropin (GX-H9)	Long-Acting hGH	Adult Growth Hormone Deficiency	Phase 2
		Pediatric Growth Hormone Deficiency	Phase 2
HyPoietin (GX-E2)	Long-Acting EPO	Anemia	Phase 3 IND Approval
HyGrastim (GX-G3)	Long-Acting G-CSF	Neutropenia	Phase 2
HyGlutide (GX-G6)	Long-Acting GLP-1	Diabetes	Phase 1

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Innovative Medicines to Improve the Quality of Human Life

HanAll BioPharma Co. Ltd.



HanAll BioPharma is a R&D-oriented pharmaceutical company, currently listed on the Korean Stock Exchange (KOSPI)

### R&D Pipeline

Product	Information
HL036	<p>HL036 is TNF-alpha receptor fragment for the treatment of local inflammatory diseases caused by TNF-alpha such as uveitis, dry eyes, and AMD. Current systemic anti-TNF drugs' limitations include small volume of distribution and adverse drug events due to high dosage. Therefore, by utilizing fragment, HanAll's TNF receptor fragment will have greater volume of distribution when administered topically compared to currently marketed anti-TNF-alpha products having larger molecular size. Furthermore, via protein engineering, HL036 will have greater affinity to allow smaller doses and increase the efficacy. It is anticipated that higher concentrations of HL036 will be found in targeted ocular areas when administered topically, preventing systemic ADEs. HanAll has selected dry eye as the first indication and undergone the POC clinical trial study with HL036 ophthalmic solution.</p> <p>*US Phase II Stage (Nov. 2017)</p>
HL161	<p>HanAll is currently developing fully human monoclonal antibodies targeting the Fc Neonatal Receptor (FcRn) for the treatment of autoimmune diseases caused by IgG autoantibodies. FcRn plays an essential role in IgG homeostasis by regulating a salvage pathway that prevents lysosomal degradation of IgG, thus contributing to a long half-life in the circulation. While FcRn-mediated half-life extension is beneficial for IgG antibody responses against pathogens, it also prolongs the serum half-life of IgG autoantibodies and thus promotes tissue damage in autoimmune diseases. Hence, HL161 will reduce overall concentration of IgG by blocking FcRn, leading to reduced levels of pathogenic IgG</p> <p>*AU Phase I Stage (Nov. 2017)</p>
HL009	<p>HL009, adenosylcobalamin liposomal gel, has three different potential mechanisms of actions for the treatment of atopic dermatitis. HL009 can bind to nitric oxide (NO) which causes dermatitis; also it can inhibit inducible nitric oxide synthase (iNOS) to further reduce NO levels. From an immunology perspective, HL009 can activate T regulatory cells which excrete IL-10 and TGF-beta suppressing immune response. Adenosylcobalamin has low permeability through skin due to its large molecular size and relatively high hydrophilicity. Thus, HanAll has formulated adenosylcobalamin topical product utilizing liposomal formulation technology. Benefits of liposomal formulation technology include improved stability, enhanced skin penetration due to increased lipophilicity, and reduced skin irritation by using lipids with proven safety.</p> <p>*KR Phase II (complete) / US Phase II (complete) (Nov. 2017)</p>
HL040	<p>HL040, a fixed dose combination product, is composed of atorvastatin and losartan for the treatment of hyperlipidemia and hypertension. HanAll finished the phase I study, and currently conducting phase III trial in Korea and phase I study in US.</p> <p>*KR Phase III (complete) / US Phase I (complete) (Nov. 2017)</p>

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The Health Innovator  
**HANDOK Inc.**



Pharmaceutical

**HANDOK (CEO & Chairman Young-Jin Kim), a leading innovation-driven pharmaceutical/health-care company in Korea, develops, manufactures and distributes healthcare solutions to improve the health and quality of human life.**

Handok has a core business focus in diabetes, cardiovascular, muscular skeletal, psychoneurotic disease, human vaccines, medical devices, diagnostics and consumer health. Handok, founded in 1954, grew as a joint venture with Hoechst/Aventis/Sanofi from 1964 to 2012. Handok has also established strategic collaborations in several areas with multiple multinational pharmaceutical companies. For more information, please visit [www.handok.co.kr](http://www.handok.co.kr).



Tenelia M

**Main Products**

**Tenelia M(Teneligliptin + Metformin HCl)**

- provides powerful blood glucose control with high target HbA1c achievement rate
- minimized the pill size by applying DRM Technology (Dual Release Micro-coating Technology)
- improves medication adherence rate with once-daily use



Amaryl M

**Amaryl M(Glimepiride + Metformin HCl)**

- The first fixed dose combination of glimepiride and metformin HCl in Korea
- provides glycemic control with favorable safety profile
- registered 57countries and exported to 9countries



Amaryl Mex

**Amaryl Mex(Glimepiride + Metformin HCl)**

- The first patented sustained-release fixed dose combination of glimepiride and metformin HCl in the world (Winner of Korea New Drug Award, 2009)
- applied by DRM technology (Dual Release Micro-coating Technology)
- registered by 19countries and exported to 5 countries



Ketotop Plaster

**Ketotop Plaster (Ketoprofen)**

- No. 1 sales\* plaster for osteoarthritis and muscular pain in Korea
- Patent in 10 countries and Launched in 4 countries
- \*Data on file : Based on IMS data, 1996-2017



Ulgeum Theracurmin

**Ulgeum Theracurmin**

- Innovative and best way to consume Theracurmin, Curcumin made as small particles to be soluble and absorbed 28times better into body

**R&D Pipeline**

TA	Project	Indication	Category	Development Stage					Remarks
				Discovery	Preclinical	Phase I	Phase II	Phase III	
Orphan	HL2356	Growth Hormone Deficiency	Biologics	[Progress bar showing Phase II completion]					Genexine partnered
Oncology	HL5101	Cancer	Chemical	[Progress bar showing Phase I completion]					CMG Pharm. Partnered
Ophthalmic	HL3501	Glaucoma	Chemical	[Progress bar showing Preclinical completion]					
Diabetes / Metabolism	HL1550	Diabetes+ hyperlipidemia	IMD*	[Progress bar showing Phase I completion]					
CV	DENEX	Resistant Hypertension	Medical device	[Progress bar showing Phase I completion]					

\*IMD : Incrementally Modified Drug

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Thinking of the Human Health and the Future  
HANLIM PHARM. CO., LTD.



With the corporate mission of protecting the precious human life from various forms of diseases, HANLIM has consistently endeavored to improve the health standards of people, and we have grown to become one of the leading companies in Korea.

In 1993, the future-oriented GMP factory was completed together with the founding of the central research center. As a part of the long-term investment scheme of the company, we continue to make a great investment in accumulating advanced technologies and reorganizing manufacturing facilities lately to enhance the health of mankind as a leading pharmaceutical company.

## Products



T-SPORIN EYE DROPS

### [1] T-SPORIN EYE DROPS : Agent for dry eye (Cyclosporin 0.5mg)

- Increase tear production
- Minimize droplet size by Nano-emulation
- Reduced eye irritation



NASAFLEX NASAL SPRAY

### [2] NASAFLEX NASAL SPRAY : Anti-allergic rhinitis agent

(Mometasone furoate 0.5mg, Azelastine HCl 1.4 mg)

- Perennial allergic rhinitis



RISENEX PLUS TAB

### [3] RISENEX PLUS TAB : Anti-osteoporosis agent including Vitamin D

(Sodium Risedronate 35mg, Cholecalciferol 5,600IU)

- Treatment and prevention of postmenopausal osteoporosis
- Treatment of osteoporosis in men



DAGES CAP

### [4] DAGES CAP. : Digestives (Pepsin 25mg, Papain 50mg, Diastase 15mg, Cellulase 15mg, Pancreatin 50mg, Pancrelipase 13mg, UDCA 25mg)

- Insufficiency of gastric, enteric and pancreatic secretion
- Anorexia, meteorism, flatulence, steatorrhea, fermentative, dyspepsia with intestinal irregularity
- Dyspepsia in cholecystomized patient
- Superalimentation during convalescence and fattening diets
- Insufficiency of biliary secretion
- Cholelithiasis, cholecystitis, cholangitis, jaundice

## R&D Pipeline

Category	Products	Indication	Development stage
Incrementally modified drugs	HL-LMN	Surgery area marker	Phase II
	HL151	Allergic rhinitis, pruritus	NDA
	HL-PIF	Mixed - hyperlipidemia	Phase III
New drugs	HL217	AMD	Phase I
	HL237	Rheumatoid arthritis	Phase I
	HL301	Acute bronchitis	Phase III

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# R&D Driven Pioneer for Innovation in Life Sciences Hanmi Pharmaceutical. Co., Ltd.



Pharmaceutical

Established in 1973, Hanmi Pharmaceutical is the No.1 pharmaceutical company in Korea in terms of R&D spending and new drug development achievements.

Hanmi Pharm. Co., Ltd. is based in Korea, and has a strong focus in new drug R&D, specifically in 3 major fields: 1) Biologics: LAPSCOVERY platform applied long-acting peptides. Key therapeutic areas are diabetes and obesity; 2) PENTAMBODY platform applied bispecific antibody pipelines. Key targeting areas are targeted immuno-oncology and autoimmune disease; and 3) NCE: Mainly oncology and auto-immune disease targeted pipelines. Hanmi Pharm also has strong fixed-dose combination programs for approved drugs. In addition, the company also works closely with global partners in various co-development and collaboration projects. Hanmi continues to expand its drug discovery and development efforts through its "Open Innovation Strategy" of teaming with potential partners for innovative solutions.



Esomezol Cap.



Amosartan Tab



Rosuzet



Duted

## R&D Pipeline

Pre-Clinical		Phase 1	Phase 2	Phase 3
<b>SANOFI</b> LAPS Insulin Combo HM14220 Diabetes	<b>FLT3 Inhibitor</b> HM43239 AML	<b>LAPSTriple Agonist</b> HM15211 Obesity, NASH	<b>JANSEN</b> LAPS GLP/GCG HM12525A Diabetes/Obesity	<b>SANOFI</b> LAPS Exd4 Analog Epeglenatide Diabetes/Obesity
<b>LAPS Glucagon Analog</b> HM15136 Congenital Hyperinsulinism	<b>FGFR4 Inhibitor</b> HM81442 HCC	<b>LAPS Insulin/Insulin Analog</b> HM12460A/HM12470 Diabetes	<b>SPECTRUM</b> Pan-HER Inhibitor Positininib Solid tumor	<b>SPECTRUM</b> Rolontis™ Eflapegrastim Neutropenia
<b>LAPS ASB</b> HM15450 Mucopolysaccharidosis	<b>LSD1 Inhibitor</b> HM97211 SCLC	<b>GENENTEC</b> Pan-RAF Inhibitor HM95573 Solid tumor	<b>ELI LILLY</b> BTK Inhibitor HM71224 Autoimmune diseases	<b>ATHENEX</b> Oraxol™* Paclitaxel+HM30181A Breast cancer
<b>LAPS GLP-2 Analog</b> HM15910 Short Bowel Syndrome	<b>INNOVENT</b> <sup>B</sup> PD-1/TAA1 Solid tumor Targeted Immuno-oncology	<b>ATHENEX</b> Oratecan™ Irinotecan+HM30181A Solid tumor	<b>ALLEGRO</b> Luminate® Integrin inhibitor DME	
<b>AJOU Univ</b> GBM Stem Cell Therapy HM21001 Glioblastoma	<b>PD-1/TAA2</b> <sup>B</sup> Solid tumor Targeted Immuno-oncology	<b>ATHENEX</b> Src/Tubulin KX2-391 Solid tumor	<b>LAPShGH</b> Epegsomatropin GH deficiency	
	<b>PD-1/TAA3</b> <sup>B</sup> Solid tumor Targeted Immuno-oncology			

- Diabetes/Obesity
- Cancer
- Rare Diseases
- Autoimmune Diseases
- Others
- B Beijing Hanmi

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Hutox Inj.



Clacier Eye Drop



MEDICAINE Inj.

Huons, started as Kwang Myung Pharmaceutical Company in 1965, has grown to an outstanding global company, producing original and effective essential medicines and medical products, through continuous improvement and innovation over 50 years.

Huons is one of the fastest growing company manufacturing quality finished pharmaceutical product since 1965 and possess cGMP standard of manufacturing site. Products are fully under control by strict quality system from global authorities including JAPAN and USA. For the last 60 years, we have continuously improved the business performances and it is keep ongoing. For more information, please visit our website [www.huons.com](http://www.huons.com) or you can directly reach us by "CONTACT US" information

## Main Products

Product name	Composition	Dosage Form	Remark
Medicaïne Inj.	Lidocaine HCl, Epinephrine Bitartrate	Cartridge Ampoule	Dental Anesthesia (PMDA approved)
Lidocaine Inj. 1%	Lidocaine HCl	Ampoule	US FDA approved
Clacier Eye Drop	Cyclosporine	BFS (0.8mL)	Eye drop for dry eye
Hutox Inj. 100 Units	Botulinum Toxin	Vial	
Humia Inj.	Hyaluronic Acid	Prefilled Syringe	

## R&D Pipeline

Category	Composition	Indication	Remark
NCE	HU017	Inflammatory bowel disease	Discovery
	HU035	Atopic dermatitis	Discovery
IMD	HU039	Sensorineural hearing loss	Discovery
	HU047	Antithrombotic	Discovery
	HUG182	Anticoagulant	Phase I
	HU007	Dry eye syndrome	Phase III
Biologics	HU024	Dry eye syndrome	Pre-Clinical

## Global business

- Exclusive Distribution Agreement with Novartis (former Alcon) for Kynex and Clacier eye drop
- Exclusive Distribution Agreement with Spectra, USA for Lidocaine Injection & Sodium Chloride Injection
- Exclusive Distribution Agreement with Nipro, Japan for Lidocaine Ctg.
- Co-promotion with Kabi, Germany (Korean Branch) for Fresofol MCT Injection
- Exclusive Distribution Agreement with Biosyn, Germany for Selenase

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The Company Which Has Dream of Healthy Society  
**Hyundai Pharm Co.,Ltd**



We, Hyundai Pharm. with corporate philosophy in "Contribute to public health promotion" which embodies humanistic philosophy in improving public health and quality of life and CEO's philosophy focused in transparent enterprise spirit, implements organization's vision and value and actively handle fast changing business are in order to have a new leap forward in 21st century.

## Main Products

Product (Ingredient/Formulation)	Use	Exporting Countries	Remarks
1. Minoxyl - 3%, 5% solution - 3% Gel (Minoxidil)	Main pattern baldness	Vietnam, Bangladesh, Myanmar, Japan	Launched
2. Hyundai Moolpas-F Solution (Methyl salicylate, dl-camphor, etc)	Antiinflammatory analgesic	USA, Hong Kong, Mongolia	Launched
3. Bumooly-S Solution (Diphenhydramine HCl, Dibucaine HCl, etc)	Eczema, dermatitis, erosion, miliaria, rhus dermatitis, pruritus, pemio, insect bite, hives	USA	Launched
4. Uremin Tablet (Desmopressin Acetate)	Nocturnal Enuresis		Launched
5. Tamirin SR Tablet (Galantamine HCl)	Alzheimer's disease		Launched
6. Mirtapin Tablet (Mirtazapine)	Treatment of episodes of major depression	Hong Kong	Launched
7. Mirap ER tablet (Pramipexole HCl)	Parkinson's disease		Launched
8. Hypezil Tablet (Donepezil HCl)	Alzheimer's disease		Launched
9. Varosc Tablet (Amlodipine besylate)	Hypertension, coronary artery disease	Vietnam, Cambodia	Launched
10. Olapin Tablet (Olanzapine)	Treatment of schizophrenia, bipolar disorder	Hong Kong	Launched
11. Minopecia Tablet (Finasteride)	Male pattern hair loss	Japan	Launched
12. Dimantin Tablet (Memantine HCl)	Alzheimer's disease		Launched
13. Surfolase Capsule	Acute & chronic Bronchitis		Launched
14. Levotuss Syrup, Tablet	Cough: Acute & chronic bronchitis		Launched

## R&D Pipeline

Code	Use	Stage of Development
HDNO-1605	Type 2 Diabetes	Under FIH study (Europe)
HDDO-1601	Antitussive/Expectorant	MA Approval
HDDO-1602	Antitussive	Under Phase 3
BPDO-1602	Anticonvulsants	Under preparation of phase I
BPDO-1603	Senile disease	Under phase I
HDDO-1604	Senile disease	Under non-clinical study
HDDO-1609	Diabetes & Hypertension	Under non-clinical study
HDDO-1614	Postmenopausal Osteoporosis	Under non-clinical study

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Respect Humanity, Promote Human's Health,  
Improve Welfare

IL-YANG PHARMACEUTICAL CO., LTD.



**Respect humanity, promote human's health, and improve welfare through continuous research and development of advanced pharmaceutical products.**

IL-YANG PHARM. CO., LTD., has been exerting its intended efforts in manufacturing superior pharmaceutical products for the past 70 years. Since its first supply of pharmaceutical products in Korea in 1946, IL-YANG has been advancing into a top-ranking pharmaceutical company in the world with developments in the areas of Urology, Gastroenterology, Oncology, Vaccine, Virology, and Biopharmaceutical. IL-YANG established its own vaccine plant in April 2011 with the production capacity of 60mil doses per year. IL-YANG has been exporting a variety of pharmaceuticals to approximately 30 countries including USA and Europe. IL-YANG established two joint ventures in China, YANGZHOU IL-YANG PHARM. CO., LTD., and TONGHUA IL-YANG HEALTH PRODUCTS CO., LTD., for manufacturing and distribution of finished pharmaceuticals in China. Since their establishment, the sales and business are expanding exponentially. In Sept. 2014, YANGZHOU IL-YANG had completion ceremony for newly built GMP plant which is compliance to EU-GMP standard.

**Products**

**1. Supect (API: Radotinib)**

- 1) 18<sup>th</sup> New Drug developed in Korea (4<sup>th</sup> in the world, 1st in Asia)
- 2) 2<sup>nd</sup> generation BCR-ABL1 tyrosine kinase inhibitor(TKI) for the treatment of Philadelphia chromosome positive(Ph(+))CML
- 3) Indication: Ph(+) chronic myeloid leukemia (CML) in chronic phase (CP)
- 4) 1<sup>st</sup> line therapy for newly diagnosed CML-CP has been approved in Korea by MFDS and has been launched on 1<sup>st</sup> FEB, 2016.
- 5) Key features
  - Low frequency serious adverse events
  - High, fast and deep response
  - High overall survival rate



Supect

**2. Noltec (API: Ilaprazole)**

- 1) 14<sup>th</sup> New Drug developed in Korea
- 2) 1Noltec is a Proton Pump Inhibitor (PPI) that controls the secretion of gastric acid for the treatment of GU, DU, GERD/EE, *H. Pylori* and NERD
- 3) Expert Opinion: "Ilaprazole, developed to overcome the limitations of currently available PPI's"
- 4) Key features
  - Superior effect on Severe GERD/EE patients
  - Low reoccurrence
  - Reduces symptoms of night time heartburn
  - Low DDI



Noltec

**3. Anti-Viral agent**

IY7640 has been announced at American Society for Virology on 22 July, 2012 that it is 20~30 times potent than Tamiflu

**R&D Pipeline**

Compound	Application	Country	Pre	Ph I	Ph II	Ph III	NDA	Marketed
Ilaprazole	GU / DU	Korea, China						
	GERD / EE	Korea						
	NERD	USA						
	<i>H. pylori</i> eradication	Korea						
Radotinib	2nd line CML-CP	Korea						
	1st line CML-CP	Korea						
	1st line CML-CP	China				Ongoing		
Virology	Antiviral agent IY7640	Korea	Ongoing					
	Respiratory Syncytial Virus agent IY1001	Korea	Ongoing					
	Seasonal Flu vaccine	Korea						
	Flu Quadrivalent Vaccine	Korea						
	Flu Quadrivalent Vaccine(Child)	Korea				Ongoing		
	Avian Flu Vaccine (H7N9)	Korea		Ongoing				

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• Specialty Urology, GI, Dermatology, Oncology, Vaccine, Biopharmaceutical  
• Location 110, Hagal-ro, Giheung-gu, Yongin-si, Gyeonggi-do, Korea  
• Homepage www.ilyang.co.kr



ISU Abxis is a Korean leading biopharmaceutical company which succeeded in development on the first therapeutic antibody in Korea. ISU Abxis provides the world-class products to MENA and Latin America and continues to expand its business portfolio by collaboration with the US and EU based pharmaceutical companies.

Since 2001, ISU Abxis has established its own biotherapeutics development platform and technologies and product pipeline with a desire of being an axis of all therapeutic antibody industry as its name stands for (ABXIS = AntiBody + aXIS). Beginning with the successful development and market launch of ISU Abxis's first therapeutic antibody in 2006, ISU Abxis has led Korean biopharmaceutical industry as specialized in biosimilars and novel drugs. In 2012 and 2014, ISU Abxis has launched two rare disease treatments for Gaucher disease and Fabry disease. ISU Abxis has accumulated the world-class manufacturing and QC/QA management through the full development and manufacturing experiences in the globally harmonized compliance. ISU Abxis's marketed three products, supplied to around 30 countries including Turkey, Mexico, Iran and Kazakhstan, are available as the only alternatives against the original products in the world. Furthermore, ISU Abxis operates the mammalian production dedicated cGMP facility as obtained the GMP certificates from Turkey, Mexico, Kazakhstan, Colombia and a number of major countries in Latin America and Middle East. ISU Abxis's excellent expertise in biotechnology is capable of providing global and local potential partner with (1) the higher productivity at CMO level (2-5g/L), (2) development management system enabling the first-in-human IND from the cell line development within 24 months, and (3) higher biosimilarity to its original product. ISU Abxis also has excellence in screening, optimization, and non-clinical and clinical development of novel monoclonal antibody and recombinant protein drugs. Besides the internal development activities, ISU Abxis strives to import and provide orphan drugs for Korean patients suffering from the lack of treatment options. ISU Abxis will expand its advanced technology based business for difficult-to-treat and rare diseases both domestically and worldwide.



Abcertin®



Fabagal®



Clotinab®

## Products

### Abcertin® (Imiglucerase)

- Indication: Enzyme Replacement Therapy (ERT) for Gaucher Disease (GD)
- The first treatment for GD developed in Korea and the world's second Imiglucerase
- Launched in 2012 in Korea and exported to Mexico, Iran, and etc.
- Preparing to enter the Europe and US markets

### Fabagal® (Agalsidase beta)

- Indication: Enzyme Replacement Therapy (ERT) for Fabry Disease (FD)
- The first treatment for FD developed in Korea and the world's second Agalsidase beta
- Launched in 2014 in Korea and global phase III clinical trial will be initiated
- Preparing to enter the Europe and US markets

### Clotinab® (Abciximab)

- Indication: Adjunct to Percutaneous Coronary Intervention (PCI)
- The first therapeutic antibody developed in Korea and the world's second Abciximab
- Launched in Korea in 2006 and exported to twelve countries including Turkey, Colombia, and etc

## R&D Pipeline

Category	Product	Indication	Development Status				
			Discovery	Non-clinical	Phase I	Phase II	Phase III
Orphan Drug	Abcertin®	Gaucher Disease	[Progress bar]				
	Fabagal®	Fabry Disease	[Progress bar]				
	Clotinab®	Anti-thrombotic	[Progress bar]				
Biosimilar	ISU305	Paroxysmal Nocturnal Hemoglobinuria	[Progress bar]				
	ISU106	Cancer Immunotherapy	[Progress bar]				
Novel Drug	ISU104	Cancer (Solid Tumor)	[Progress bar]				
	ISU304	Hemophilia B	[Progress bar]				

## CONTACT US

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· CEO Sang Beom Kim, Seok Joo Lee  
· Specialty Biological pharmaceuticals development based on the technology platform for biologics and animal cell culture  
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JW Group provides pharmaceuticals vital for maintaining the lives of patients such as anticancer drugs and antibiotics, and has developed into a leading pharmaceutical company and global manufacturer of I.V. Solutions.

For 70 years ever since its foundation in 1945, JW Pharmaceutical focuses on healthcare, ETC, OTC, diagnostics and medical equipment. Based on new technologies and services for healthy lives of human beings, JW Pharmaceutical has built up strong sales network across the country and superior pipelines in I.V. solutions, antibiotics, oncology, cardiology, endocrinology, rheumatology, and gout

## Major Export Products

Type	Product Group
Finished Product	<ol style="list-style-type: none"> <li>1. Carbapenem Antibiotics</li> <li>2. Amino Acid Solutions</li> <li>3. General I.V. Solutions &amp; Other Sterile Solutions</li> <li>4. Antimicrobial &amp; Antifungal Agents</li> <li>5. Gastrointestinal Agents</li> <li>6. Topical</li> <li>7. Multivitamins</li> <li>8. Agents for Antibiotics</li> <li>9. Miscellaneous</li> </ol>
API (Active Pharmaceutical Ingredient)	<ol style="list-style-type: none"> <li>1. Carbapenem Antibiotics: Imipenem/Cilastatin, Meropenem</li> <li>2. Anti-fungals: Ketoconazole, Itraconazole, Fluconazole</li> <li>3. Chiral Products for Custom Synthesis &amp; Specialty Amino Acid</li> <li>4. Miscellaneous</li> </ol>

## R&D Pipeline

JW is focusing on developing Small Molecules as well as Biologics in the area of oncology and endocrinology by employing its novel platforms.

Category	Product	Indication	Pre-Clinical	Clinical Trials			NDA	MKT
				P1	P2	P3		
Small Molecule	CWP291	Acute Myeloid Leukemia	██████████					
		Multiple Myeloma	██████████					
		Stomach cancer	██████████					
	URC102	Gout	██████████					
	JW1601	Atopic Dermatitis	██████████					
	CWL080061	Histography	██████████					
	GuardMet®	Diabetes	██████████					
	Livalo-E	Dyslipidemia	██████████					
Biologics	tenofovir IMD	HBV	██████████					
			██████████					
	CreaVax HCC®	HepatoCellular Carcinoma	██████████					
	CreaVax BC®	Brain Cancer	██████████					

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• President Jae-Kwang Chun, Young-Sub Shin  
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• Location 2477 Nambusunhwan-ro, Seocho-gu, Seoul, Korea  
• Homepage www.jw-pharma.co.kr

# Creating the Value of Health and Beauty Kolmar Korea Co., Ltd.



## Leading Korean Pharmaceuticals CMO company including Cosmetics and Functional Health Foods.

Since founded in 1990 as a joint venture company with Nihon(Japan) Kolmar, Kolmar has grown to the biggest Korean Pharmaceutical contract manufacturer.

Kolmar Korea has provided customized contract manufacturing service with customers who want to outsource their pharmaceutical products, cosmetics and healthcare foods to be more competitive and to develop new formulations feasible in the market.

### Kolmar's CMO Service on Pharmaceutical Business

All integrated services from the pharmaceutical development to analytical service and clinical Trial service do distribution channel could be collaborated with Kolmar as it provides fast formulation development, scale up manufacturing, strict quality control and just-in-time delivery.

### R&D

Kolmar Korea reinvests more than 6% of net sales into its research and development, grafting 100 years' worth of R&D know-how into research and development, and leading the latest trend by developing worldclass pharmaceuticals, health functional foods and cosmetics. Kolmar Korea has been approved not only in domestic market but in international market for its great and predominant technology.

### Global Kolmar

Kolmar Korea has its roots in the world-wide Kolmar Group. The Kolmar Group based on Kolmar Americas Inc., which is the parent organization of Kolmar Group and was established in Milwaukee, Wisconsin, in 1921, has the world-wide network including Kolmar Japan, Korea, and China, showing off the vast scale in the world. In the global network of Kolmar equipped with 100-year-old R&D know-how, the continuous information exchanges are carried out through the regular symposium and academic activities by affiliated research group members, so that latest data concerning marketing may be shared as well as technologies. Also Kolmar Korea takes the initiative in the development history of world-wide pharmaceutical and cosmetic history.

### Products

Total outsourcing service , Korea Kolmar is equipped with the development and production specialized system for pharmaceutical product, quasi-drug and others for the first time in Korea to implement total outsourcing service.

- Ointment cream and external liquid dosage forms : Strengthening of specialization through the researches for improvement
- Internal liquid dosage forms : Available for commercialization following the customer demand with the facilities for syrups and others
- Internal solid dosage forms : Development of agents for tablets and capsules including the powder agents
- Steril product : Eye drops, Infusion and Injection
- Quasi-drug : Agency for production of no-pharmaceutical product in various types in toothpaste, mouth wash, cleansing agent and others

### R&D Pipeline

Category	Candidate	Indication	Development stage
New Herbal Drug	KKM 162	Ulcerative Colitis	Non-clinical
	KKM-163	Asthma	Non-clinical
Incrementally Modified Drug	KKM-152	Antithrombotics	Non-clinical
	KKM-153	Antithrombotics	Non-clinical
	KKM-154	Antiallergics	Phase I
	KKM-164	Antidots	Phase I
	KKM-165	Antithrombotics	Non-clinical
	KKM-171	Osteoporosis	Phase I
	KKM-174	Diabetes mellitus	Non-clinical

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• Specialty Pharmaceuticals/Cosmetics/Health Functional Foods  
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• Homepage <http://www.kolmarpharm.co.kr>



Established in 1982, Korea Otsuka Pharmaceutical is a Japanese joint corporation that has supplied various excellent and innovative pharmaceutical products, including Abilify®, Pletaal®, Mucosta® and Samsca®, Busulfex®, Delytba®, AbilifyMaintena®. The company has faithfully performed its mission of becoming ‘A company contributing to the healthy life of Korean’ by not only selling pharmaceutical products, but also engaging in R&D, manufacturing and export

Hyangnam Plant of Korea Otsuka Pharmaceutical commenced construction in 1989, acquired KGMP (Korea Good Manufacturing Practice) in 1990 and BGMP (Bulk Good Manufacturing Practice) in 1999, and in 2000 received FDA’s bulk drug substance manufacturing facility inspection and acquired cGMP certification. The plant has continued to invest in equipment, introducing advanced equipment and processes, and has operated world-class quality control systems to handle the end-to-end process, from ingredient synthesis to the finished product, expanding its role as a production base of Otsuka Pharmaceutical.



Abilify®



Abilify Maintena®



Pletaal®



Mucosta®

## Export

Operating large-scale production facilities in Korea as a multi-national pharmaceutical company, Korea Otsuka Pharmaceutical has not only supplied products domestically, but also secured global quality competitiveness and contributed to the national economy, starting with re-export to its Japanese parent company in 1991 and expanded to Asian countries, including Taiwan, Malaysia, Vietnam and Indonesia. Additionally, through acquiring the EU GMP in 2014, it has even expanded to EU. Recognized for its achievements, Korea Otsuka Pharmaceutical has become the first multi-national pharmaceutical company to win the 10 Million Dollar Export Tower in 1998, the 20 Million Dollar Export Tower in 2009 and the 30 Million Dollar Export Tower in 2015.

### Export to 33 countries [12 Asian countries]

Japan, Taiwan, Malaysia, Vietnam, Indonesia, China, Cambodia, Thailand, Philippines, Hong Kong, Macao, Myanmar

### [21 European countries]

Greece, Norway, Denmark, Germany, Romania, Bulgaria, Sweden, Switzerland, Spain, Slovakia, Slovenia, Iceland, Ireland, U.K., Austria, Czech, Portugal, France, Finland

## R&D

Korea Otsuka Pharmaceutical has engaged in Korea-China-Japan collaborative clinical R&D activities, leading the improvement of clinical research and expansion of the market of Korea, and expediting the introduction of excellent new drugs to Korea.

Through such efforts, the company signed an investment MOU with the Ministry of Health and Welfare (Phase 1: 2009 - 2013, about \$900 million / Phase 2: 2014 - 2018, about \$800 million) and has invested in domestic R&D to support research of disease treatment while contributing to revitalizing the pharmaceutical industry by expanding its production facilities. As a result, the company succeeded in developing new indications (Abilify®: Tourette’s indications) and a new formulation (Pletaal SR cap®) through independent clinical trials in Korea and released them domestically for the first time in the world. The Korean approval and clinical data has been utilized by many foreign authorities, including the US FDA and other countries as authorization data, which has consequently promoted the company’s exports.

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 · Specialty The manufacture, sale, import and export of pharmaceutical products  
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 · Homepage www.otsuka.co.kr  
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KUP is a Global Pharmaceutical Company All around the World

**Korea United Pharm. Inc.**



Kalomin® Tab. Tab.



Clanza®CR Tab.



Clavixin®Duo Cap.



Cilostan®CR Tab.



Gastiin®CR Tab.

## Company Profile

- Establishment Date : Dec. 3, 1987
- Business Activities : Manufacture, Marketing & Sales of Pharmaceuticals and Other Healthcare Products
- Number of registered products : about 302 items
- Investment in R&D : 10.26% of net sales (2017)
- Growth Rate from 2016 to 2017 : 11.4%
- Number of employees : 833 (Dec. 31, 2017)
- Sales : \$179M (2017)
- Incrementally Modified Drug : Clanza®CR, Clavixin®Duo Cap, Cilostan®CR, Kalomin®Tab, Losasc®Tab5/50, Losasc®Tab5/100, Gastiin®CR, Levotics®CR, UNIGRIL®CR Tab.

**KUP is export-oriented company.** UP is aiming to be not only a local leader but also global leading company by offering wide range of generics as well as differentiated products, incrementally modified drugs. KUP has broad and well balanced portfolio of 302 products and exports 416 different items to 32 countries through global marketing, and overseas manufacturing facilities in USA, Vietnam, and has business alliances with oversea companies. Especially, KUP established manufacturing facility in Alabama, US for manufacturing and distributing drugs and health functional foods in 2003. This facility have allowed KUP to expand markets in US, Japan, and Europe with know-hows of FDA regulatory processes.

**KUP invested in Research&Development.** KUP invested about 10.26% of net sales and 10.7% of total employees in R&D continuously. KUP is successful developing innovative drugs and commercializing them. As a result, KUP has launched several IMDs including Clanza®CR Tab., Clavixin®Duo Cap., Cilostan®CR Tab., Kalomin®Tab., Losasc®Tab5/50, Losasc®Tab5/100, Gastiin®CR Tab, Levotics®CR, UNIGRIL®CR Tab. In addition, KUP has well balanced R&D portfolio including differentiated products of anti-neoplastic, Anti-hypertensive, and Antithrombotic Drugs.

**KUP has been acknowledged at home and abroad.** KUP was nominated as Forbes' 'Asia's 200 Best Under A Billion' over two consecutive years. KUP is one and only pharmaceutical company in Korea nominated by the Forbes magazine as one of the 'Asia's 200 Best Under A Billion' over two consecutive years (2009-2010). KUP was awarded the Best Drug Research Award in Korea for Cilostan®CR Tab in 2015.

## Main Products (IMD Products)

Product (Ingredient/Formulation)	Remark
1. Clanza®CR Tab. (Aceclofenac 200mg/ Controlled Release Formulation)	· Indication : Pain caused by rheumatism (Antiinflammatory Analgesic drug) · Improved dosing regimen from b.i.d. to q.d. · Less side effects of gastrointestinal
2. Cilostan®CR Tab. (Cilostazol 200mg / Controlled Release Formulation)	· Indication : Ischemic symptoms, Thrombosis (Antithrombotic drugs) · Improved dosing regimen from b.i.d. to q.d. · Reduced side effects of headache & tachycardia
3. Clavixin®Duo Cap. (Clopidogrel 75mg and Aspirin 100mg / Fixed Dose Combination)	· Indication : Acute coronary syndrome (Antithrombotic drugs) · Improved patient compliance
4. Kalomin® Tab. (Pelargonium Sidaoides(as dry extract) 20mg / New Dosage Formulation)	· Indication : Upper respiratory tract infection (Antitussive) · Improved patient compliance for adults
5. Losasc® Tab5/50, 5/100 (Amlodipine 5mg and Losartan 50mg/Amlodipine 5mg and Losartan 100mg Dual Layer Anti-Oxidant)	· Indication : Hypertension (Anti-hypertensive drugs) · CCB+ARB in ONE tablet · Patent protected unique formulation
6. Gastiin®CR Tab (Mosapride 15mg/ Controlled Release Formulation)	· Indication : Gastrointestinal symptoms associated with functional dyspepsia(brash, nausea, vomiting) · Improved dosing regimen from t.i.d. to q.d.
7. Levotics®CR Tab. ( Levodropropizine 90mg/ Controlled Release Formulation)	· Indication : Cough suppressant · Improved dosing regimen from t.i.d. to b.i.d.
8. UNIGRIL®CR Tab. ( Sarpogrelate HCl 300mg/ Controlled Release Formulation)	· Indication : Antithrombotic drugs · Improved dosing regimen from t.i.d. to b.i.d.

## R&D Pipeline(IMD Pipeline)

Compound Name	Code	Use	Stage of Developmen
SERETEROL® ACTIVAIR® 250, 500 Fluticasone propionate Salmeterol xinafoate 250/72.5, 500/72.5ug	UI009 UI010	Asthma, COPD (Chronic Obstructive Pulmonary Disease)	

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 · CEO : Duk-Young Kang  
 · Research Focus : Drug delivery system - Novel Controlled Release Formulation - Novel Fixed Dose Combination  
 · Location : 25-23, Nojanggongdan-Gil, Jeondong-Myeon, Sejong, Korea  
 · Homepage : <http://www.kup.co.kr>

Global pharmaceutical company committed in providing better quality of life for people.

**Kuhnil Pharm., Co., Ltd.**



## Kuhnil Pharm continues to strive to become an unique research-focused global company through development of innovative global biopharmaceuticals, DDS pharmaceuticals, and combination drug products in an effort to improve quality of life in patients.

Kuhnil has developed a fixed dose combination of Omega-3 and Rosuvastatin which was launched in South Korea on 1st of November, 2017 with the brand name ROSUMEGA.

ROSUMEGA, as the new fixed dose combination of Omega-3 and Rosuvastatin have successfully demonstrating its superiority against Rosuvastatin monotherapy in South Korea in control of combined dyslipidemia patient. The merit of ROSUMEGA is that in not only provides clinical benefit but also improves medication convenience.

Kuhnil has developed an IMD (Incrementally Modified Drug) of Exjade, dispersible tablet developed by Novartis. Comparing to the original Novartis Exjade, Kuhnil's deferasirox generic provides economical efficiency by developing higher dosage than the original drug and better patient compliance as powder type with improvement to dissolving rate compared to dispersible tablet.

In 2014, Kuhnil received sales approval of 'Circadin' which is the world's only insomnia treatment with the ingredient of melatonin to the Ministry of Food and Drug Safety, and continue to expand sales.

Kuhnil Pharm is a medium-sized, fully-integrated Korean pharmaceutical company that engages in the research and development, manufacture, and sale of pharmaceuticals products with strengths for the therapeutic areas of cardiovascular, musculoskeletal, gastrointestinal, respiratory, infection and neurology.

The company is also specialized in research and development in the areas of advanced DDS and drug formulation and combination drug development. Especially, The competitiveness of kuhnil is multi-layer capsule coating technology.

In addition, Kuhnil has two subsidiaries; Penmix Ltd., which is a CMO specialized in penicillin products and general injectable, and Ohsong Pharm, which is specialized in international trade and business consulting of finished drug products and APIs.



## Products

Kuhnil Pharm possesses pharmaceutical products in a wide selection of therapeutic areas including antibiotics, circulatory, gastrointestinal, anti-inflammatory, CNS, respiratory, and endocrinology.

	Product	Content	Major Export Country
Cardio Vascular	Omacor Cap	Omega-3-acid ethyl esters	
	Rosumega Cap	Omega-3-acid ethyl esters Rosuvastatin	
Hypnotics	Experid Pow	Deferasirox	
	Circadin Tab	Melatonin	
Respiratory	Pulmican Respule	Budesonide micronized	
	Formerol Dry syr. Formoterol fumarate	Formerol Dry syr. Formoterol fumarate	
Muscle relaxants	Thiosina Tablet	Thiocolchicoside Amorphous aescin	
	Lodine kuhnil Cap/Tab/SR Tab	Eodolac Micronized	
Gastrointestinal	Wellcon Tab.	Calcium polycarboxyl	
	Bioflor 250 Pow	Saccharomyces boulardii	

## R&D Pipeline

Product	Indication	Research	Preclinical	Phase I/PK	Phase II	Phase III	Launch
Cardiovascular							
KI 1101	Hyperlipidemia						
KI 1102	Hyperlipidemia						
KI 1107	Hyperlipidemia						Launch
KI 1114	Hyperlipidemia						Under registration
KI 3101	Hyperlipidemia						
KI 3106	Hyperlipidemia						
Gastrointestinal							
KI 3110	Diarrhea						
OOL							
KI 1120	Female Hypoactive Sexual Desire Disorder						
Others							
KI 1115	Iron Chelator						Launch

### CONTACT US

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## The First Pioneer in Korean Pharmaceutical R&D Products

Since its foundation in 1947, LG Chem has served as Korea's representative chemical company, contributing to the development of the national economy and the enhancement of the quality of life through continuous technological development, new product introduction, and quality innovation based on its stable growth. We have established the production, sales, and R&D networks at home and abroad, expanding our business into the global market, aiming to become a world-class company that provides innovative materials and solutions by sharpening our competitive edge in high-value added core businesses while expanding new business opportunities in IT & Electronic Materials and Energy Solutions.

In addition, we have recently merged LG Life Sciences, a former subsidiary of LG Chem in order to strengthen and expand its business in Life Science area.

In the business area which LG Chem has focused on nurturing as a new growth engine of the future, LG Chem became the first in Korea to develop gamma interferon by applying genetic engineering technologies in 1989 and the first to receive approval for a new drug from U.S. Food and Drug Administration (FDA) with its development of "Factive"(quinolone antibiotic) in 2003. LG Chem will continue to secure competitiveness in the global market through aggressive investment and enhancement of its R&D capabilities based on its technological prowess that has succeeded in commercializing the drugs.



Factive®



Eutropin Pen®



Zemiglo®



Eupenta®



Synovian®



Zemiro®

### Products

**Factive®** - Fast Active, the most potent quinolone antibiotic in the world, commercialized in over 30 countries worldwide  
**Zemiglo®** - A novel dipeptidyl peptidase IV (DPP IV) inhibitor for T2DM with good efficacy and safety profiles.

Approved by the MFDS in June, 2012

**Zemilro®** - Fixed dose combination drug of gemigliptin and rosuvastatin for patients with T2DM and dyslipidemia.

Approved by the MFDS in July, 2017

**Eutropin®** - The right choice for managing short stature recombinant human growth hormone with proven efficacy and safety since 1993

**Espogen®** - Human recombinant erythropoietin, safe and effective treatment for anemia of chronic renal failure

**Follitrope®** - Recombinant FSH, used in the treatment of female infertility in controlled ovarian hyperstimulation to induce the development of multiple follicles in a medically assisted reproduction program as well as anovulation

**Hyruan Plus®** - High molecular weight hyaluronic acid viscosupplement made by microbial fermentation for low side-effect, quality proven by EMEA and CE marking

**Eupenta®** - Combined Diphtheria, Tetanus, whole cell Pertussis, Hepatitis B and Haemophilus influenzae type B.

Eupenta can prevent five different childhood with a single injection

### R&D Pipeline

Class	Product	Indication	DS	PC	Clinical Trial			NDA
					P I	P II	P III	
Vaccine	LBVE	Pneumonia prevention				•		
	LBVD	DTP/HepB/Hib/IPV prevention			•			
	LBVC	Poliomyelitis prevention				•		
	New vaccine pipelines		•					
Biologics	LBEC0101	Autoimmune disease						•
	LBAL	Autoimmune disease					•	
	Eutropin Pentype	Pediatric growth hormone deficiency	•					
	Synovian combo.	Osteoarthritis	•					
	Immune Cell therapy		•					
	Stem Cell therapy		•					
Chemicals	Zemimet	Type 2 Diabetes						•
	ZemiStatin	Diabetes/Dyslipidemia						•
	LC280126	Myocardial infarction				•		
	LC510255	Ulcerative colitis			•			
	LC541239	Type 2 Diabetes	•					
	LC65AOD5	Type 2 Diabetes	•					
	New targets		•					

\*NME: New Molecular Entity IMD: Incrementally Modified Drug CRF: Chronic Renal Failure NASH: Nonalcoholic Steatohepatitis

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# Studying the Time of Humankind Medytox Inc.



Medytox is at the forefront of Korean biopharmaceutical industry, with our excellent R&D capabilities based on our top-tier biotechnologists, and to our state-of-the-art operations and production facilities.

As the first botulinum toxin developer and the market leader in Korea, we feel a sense of pride and responsibility for this industry, which is why we are leading the efforts to improve the transparency and the competitiveness of the Korean biopharmaceutical businesses by pushing for implementation of more objective and scientific guidelines for industry practice.

Medytox, as a company striving to change the future, has set a new goal of entering the Top 20 list of biopharma companies by 2022.

## Main Products

### 1. Botulinum Toxin product

Medytox is the only biopharmaceutical company in the world to have three different types of botulinum toxin products (Neuronox<sup>®</sup>, INNOTOX<sup>®</sup>, Coretox<sup>®</sup>), all developed by in-house R&D. Since the successful development of the fourth botulinum toxin type A product in the world, Neuronox<sup>®</sup> is a representative botulinum toxin type product of Medytox that is being exported to over 60 countries. Neuronox<sup>®</sup> ranks No.1 in market share in Korea and has gained significant market share in many other countries. INNOTOX<sup>®</sup> is the world's first liquid formulation of botulinum toxin type product which has been developed by totally excluding animal derived ingredients and human serum albumin in order to enhance product safety. Coretox<sup>®</sup> is an advanced new botulinum toxin type product that excludes animal derivatives, HSA and non-toxin proteins from its ingredients. It also prevents the immune system from developing antibodies that would eventually wear down the effects of botulinum toxin type A.



Neuronox<sup>®</sup>

### 2. Hyaluronic Acid Dermal Filler

Neuramis<sup>®</sup> is the hyaluronic acid dermal filler product developed and launched in 2011. The Neuramis<sup>®</sup> series, Neuramis<sup>®</sup> Meso(Export Only), Neuramis<sup>®</sup> Light Lidocaine, Neuramis<sup>®</sup> Lidocaine, Neuramis<sup>®</sup> Deep, Neuramis<sup>®</sup> Deep Lidocaine, Neuramis<sup>®</sup> Volume Lidocaine which can be used to add volume and fullness to the skin to correct moderate to severe nasolabial folds, the lines from your nose to the corners of your mouth.



Neuramis<sup>®</sup>

## R&D Pipeline

Code	Description	Indication	Stage
Biodrug	Neuronox	Essential blepharospasm, Neck dystonia, Benign masseteric hypertrophy, Idiopathic overactive bladder, Lateral canthal wrinkles, Migraine	Clinical
	Innotox	Aesthetic and treatment (USA & EU)	Clinical
	Coretox	Post-stroke upper limb spasticity	Clinical
	MT912	Macular degeneration	Non-Clinical
	MT914	Diabetic retinopathy	Discovery
	MT925	Type 1 diabetes	Discovery
	MT927	Immunological disease	Discovery
	MT932	Immunological disease	Discovery
	MT933	Melanoma	Discovery
	MT971	Inflammatory bowel disease	Discovery
Medical Device	MT981	Various solid tumor	Discovery
	Neuramis Volume Lidocaine	Midfacial Volume	Clinical
	Neuramis Deep Lidocaine	Nose, Lip wrinkles	Clinical
	Potenfill	Penis enlargement	Clinical
	MT942	Anti-adhesive agent	Clinical
Synthetic Drugs	MT943	Facial wrinkles	Clinical
	MT921	Fat reduction injection	Non-Clinical
Health Supplements	MT941	Osteoarthritis	Non-Clinical
	MT961	Decreasing body fat	Non-Clinical
	MT963	Hangover relief	Non-Clinical

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Total healthcare company Practicing Regeneration medicine for  
a Better and Longer Life

**PharmaResearch Products Co., Ltd.**



## PharmaResearch Products is a R&D focused biopharmaceutical company creating a value for a better and longer life.

PharmaResearch Products has been researching and developing healthcare products for anti-aging and improving Quality of Life. We are going to become a leading healthcare company in regenerative medicine through DNA fragment optimizing technology(DOT).

PharmaResearch Products was established in 1993 as the first pharmaceutical consulting firm for introducing and registering new drugs and medical devices in Korea. Through the consulting business, PharmaResearch Products get to have enough information and experience about new technology and products. In 2007, PharmaResearch Products stood up as a leading regenerative medicine company by developing endogenous repair stimulator PDRN® utilizing DNA fragment Optimizing technology.

Moreover, PharmaResearch Products diversified the product pipelines for regenerative medicine on license-in, co-developments and strategic investments. Through competitiveness of techniques and continuous R&D, PharmaResearch Products is promoting market extension in both domestic and global. Also, starting from China and Japan, PharmaResearch Product is practicing overseas business.



Re-an® Eye drops



Rejuvenex® injection



Rejuran®



Conjuran®

## Major Products

Over the Counter Drugs (OTC)

**Re-an® eye drop (Sodium Polydeoxyribonucleotide)**

Cornea and conjunctiva regenerative eye drop

- 1) Nutrition supply to cornea and conjunctiva with ulcerative diseases due to the lack of nutrition
- 2) Applicable to micro injuries of cornea and conjunctiva caused by external stress such as contact lenses etc.

Ethical Drugs (ETC)

**Rejuvenex® injection (Sodium Polydeoxyribonucleotide)**

Wound healing and tissue regenerative injection

- 1) Wound healing and tissue restoration for skin graft

Medical device

**Rejuran®**

New Regenerative Filler (Healer) for Satisfying both skin regeneration and filler effect

- 1) Skin elasticity improvement
- 2) Dermis density and thickness improvement

**Conjuran®**

Intra-articular injection for Cartilage regenerative osteoarthritis treatment

- 1) Knee pain relief

## R&D Pipeline

Classification	Project Name	Indication	Development Stage
Drugs	Therapeutic peptide	Ulcer	Clinical Study(Phase 3)
	PRM-003L	Beauty	Clinical study(Pivotal)
Medical devices	PRM-0011	Beauty	Activity test
	Functional peptide	Anti-adhesion	Formulation study
	Anti-aging cosmetics	Anti-aging cosmetics	Activity test
Cosmetics	Nucleic acid Supplement	Anti-aging	Approval Process
Health Supplement	Joint Health	Joint Health	Approval Process

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Pioneer of stem cell industry and Bio-company with cutting edge technology

**Pharmicell Co., Ltd.**



## The world best beyond the world first stem cell therapy product with paradigm shift of bio-chemical technology.

Pharmicell is a bio-pharmaceutical and bio-chemical research and development company that specializes in producing stem cell therapy products and active pharmaceutical ingredients, innovating stem cell banking technology.

Pharmicell is further committed to technological innovations that involve the commercialization of stem cells through bio-based business and cosmetics. Since the company's founding in 2002, Pharmicell has been driven by a passion for innovative research and technology, coupled with its commitment to improving the quality of life by pioneering safe, new, deliverable, revolutionary treatment products.

At the forefront of Pharmicell operational strategy is its unrelenting focus on ensuring the quality of life on a global scale by offering holistic and sustainable solutions to unmet medical needs through stem cell research and product distribution. Most importantly, Pharmicell sets itself apart in the bio technology industry by practicing generosity.

Over the past fifteen years, Pharmicell has become an asset to the stem cell treatment industry on a global scale by redefining the boundaries of science in order to create more innovative solutions for medical issues, thus cultivating global dependency and demand for Pharmicell's products.

### Main Products

#### 1. Cellgram®-AMI

It was approved from Ministry of Food and Drug Safety in July 2011 and became the world's first commercialized stem cell therapy product. As can be seen from the attached file, the product was approved for improving rapidly decreased cardiac function(Ejection Fraction) and MACE(Major Adverse Cardiac Events) from acute myocardial infarction patient. Also, various clinical trials are being conducted for such diseases of stroke, spinal cord injury, liver cirrhosis, erectile dysfunction, and critical limb ischemia. The efficacy of Pharmicell's stem cell therapy product was introduced via local and international mass communication which gives high reliability of the product. Especially, to precede clinical trials in US for liver cirrhosis, the Pre-IND meeting with US FDA was completed in 2014. The clinical trials will begin during second half of 2017.

#### 2. API(Active Pharmaceutical Ingredients)

**Polyethylene glycol(PEG)** is active pharmaceutical ingredients to enhance stability of therapeutics such as growth hormone, and insulin. PEG is supplied to internationally well know pharmaceutical companies as Merck and Roche. DNA diagnostic kits and therapeutics' core material of Nucleoside are supplied to Thermo Fisher and Sigma-Aldrich.



Cellgram Box



Cellgram product

### R&D Pipeline

Class	Commercialization Steps	Pre-Clinical	Investigator Initiated Trial	Phase I	Phase II	Phase III	Approved
Mesenchymal Stem Cell (MSC)	Cardiac Disease Cellgram®-AMI						
	Acute Myocardial Infarction	[Progress bar]					
	Chronic Cardiac Disease	[Progress bar]					
	Neuro Disease Cellgram-IS, Cellgram-SCI						
	Acute Ischemic Stroke	[Progress bar]					
	Chronic Spinal Cord Injury	[Progress bar]					
	Hemorrhagic Stroke	[Progress bar]					
	Parkinson's Disease	[Progress bar]					
	Pulmonary Disease Cellgram-IPF						
	Respiratory Failure	[Progress bar]					
Liver Disease Cellgram-LC	Liver Cirrhosis (KR)	[Progress bar]					
	Liver Cirrhosis(US)	[Progress bar]					
	Etc. Cellgram-ED, Cellgram-CLI						
	GvHD	[Progress bar]					
	Kidney transplant	[Progress bar]					
	Erectile Dysfunction	[Progress bar]					
	Critical Leg Ischemia	[Progress bar]					
Dendritic Cell (DC)	Cancer Cellgram-DC						
	Breast/Kidney/Ovarian Cancer	[Progress bar]					
	Glio-blastoma/Malignant Melanoma	[Progress bar]					
	Ovarian/Prostate Cancer	[Progress bar]					

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For the Health Life and Fruitful Future  
**Samjin Pharmaceutical Co., Ltd.**



**Samjin Pharm Co.,LTD. seeks to establish strategic alliances and partnerships that complement our expertise in the development of novel therapeutics with important scientific, clinical and business capabilities.**

Samjin is one of the Korean leading pharmaceutical companies striving to produce novel therapeutics with relentless effort. Since its establishment in 1968, Samjin has grown massively and achieved fruitful outcomes through its representative products such as Platless® (antiarteriosclerotic agent), Neuracetam® (Nootropics), Geworin® (NSAIDs) and etc. The R&D portfolio of Samjin covers several crucial therapeutic areas including dry eye syndrome, oncology, diabetes/obesity and neurology. Samjin is actively engaged in joint research with more than 20 cooperative research institutions. The Samjin's leading therapeutic candidates acting on dry eye syndrome and acute myelogenous leukemia (AML)/myelodysplastic syndrome (MDS), immune checkpoint inhibition have entered clinical and pre-clinical stage, respectively. Samjin has a track record in creating innovative strategic partnerships with academic institutions and commercial enterprises to accelerate the development of novel therapeutics. We are waiting for an innovative and collaborative global partnership with variety of business models.



NEUSTATIN-A



Neutoin®



Tiroxin®



Ferbon Tab



PLATLESS

**Main products**

Products	Category	Indication
Plateless Tablet	Clopidogrel bisulfate	Antithrombotic
Geworin Tablet	Acetaminophen, etc	NSAIDs
Neustatin-A Tablet	Atorvastatin calcium trihydrate	Antihyperlipidemia
Trestan	DL-Carnitine hydrochloride, etc	Appetite stimulant
Neutoin Tablet	Donepezil hydrochloride monohydrate	Treatment of dementia
Neustatin-R Tablet	Rosuvastatin calcium	Antiatherosclerotic
Neuracetam Tablet	Oxiracetam	Treatment of dementia, age related memory loss and head injury
Taurolin Injection	Taurolidine	Surgical chemotherapeutic

**R&D Pipeline**

	Code	Indication	Development Stage	Route of Administration
NCE	SA001	Dry eye syndrome	Clinical Phase II	Oral
		Sjogren syndrome	Clinical Phase I	Oral
	SJ-3366	HIV	Preclinical / Clinical	Oral / Topical
	SJ-3902	Cancer	Preclinical	Oral
	SJP1601	Cancer	Preclinical	Oral
	SJP1602	Cancer	Biological testing	Oral
	SJP1604 (APTA-16)	Cancer	Preclinical	Injection
	SJP1610	Cancer	Biological testing	Oral
	SJP1701/SJP1702	Alzheimer's disease	Biological testing	Oral
	SJP1801	Diabetes	Biological testing	Oral
IMD	SJP002	Dry eye syndrome	Clinical Phase II	Topical
	SJP004	HIV, HBV	Clinical	Oral
	SJP003	Platelet aggregation	Biological testing	Oral
	SJP005	Hormones	Biological testing	Injection

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Value Generating Pharma Company  
**Samyang Biopharmaceuticals Corporation.**



Samyang Biopharmaceuticals Corporation is engaged in the development and marketing of novel drug delivery systems and medical devices.

Samyang Biopharmaceuticals is focusing on healthcare as its core strategic business of the 21st century. The company's goal is to developing proprietary and unique core technologies for the development of world class novel drug delivery systems.

### Main Products

Category	Products	Active Ingredient	Strength / Grade	Comment
Injection	Genexol® PM	Paclitaxel	30mg, 100mg	· Cremophor-free, Ethanol-free formulation
	Nanoxel® M	Docetaxel	20mg, 80mg	· Tween-80 free formulation (No diluent vial)
	Zolenic®	Zoledronic acid	4mg / 5mL	· Launched in Korea & Georgia
	Pemed® S	Pemetrexed	100mg / 4mL, 500mg / 20 mL 1000mg / 40mL	· Launched in Korea
	Generic	Paclitaxel	30mg / 5mL, 100mg / 16.7mL 150mg / 25mL, 300mg / 50mL	· Launched in EU & Japan(Working as CMO) · All dossiers are ready for approval procedure
		Docetaxel	20mg/1mL, 80mg/4mL 140mg/7mL, 160mg/8mL	· Launched in EU (Working as CMO)
		Oxaliplatin	5mg/10mL, 100mg/20mL 200mg/40mL	· Launched in EU (Registered in DE, BG, RO, UK) & Japan · MRP running for other EU members
Pemetrexed		100mg 500mg	· Launched in Korea · Approval process ongoing in Iran	
Oral	Lenalid®	Lenalidomide	25, 20, 15, 10, 7.5, 5, 2.5mg	· Launched in Korea · Dosage form : Tablet (Size reduction)
			Patch	Fentaderm®
	DemenCure®	Rivastigmine		4.6mg/day, 9.5mg/day
API		Paclitaxel	EP, USP	· CEP completed
		Docetaxel	EP, USP	· CEP completed
		Pemetrexed	in-house	· KDMF completed
		Bortezomib	in-house	· KDMF completed

### GMP Certifications

Year	Product	Inspection Authority
2017	Oncology Injections	Germany (BGV)
2014	Paclitaxel (API), Docetaxel (API), Synthetic Paclitaxel (API), Pemetrexed (API)	Germany (BGV)
2013	Docetaxel (API)	Japan (PMDA)
	Paclitaxel (API)	Japan (PMDA)
2010	Diclofenac Patch	Australia (TGA)

### R&D Pipeline

Category	Technology Description	Products	Development Status
Anticancer	PM(Polymeric Micelle)	Paclitaxel	Market
		Docetaxel	Market
		Temsirolimus	Preclinical
	PNP(Polymeric Nano-Particle)	Docetaxel	Clinical
		Sirolimus	Preclinical
		Oral_BA	SYO-1644
Ulcerative colitis	SENS (Stability Enhanced Nano Shells for nucleic acid delivery)	siRNA	Research
		mRNA	
		pDNA	
Antiemetic	Oral_CSDS (Colonic Specific Drug Delivery System)	Prednisolone	Research
	Oral_FDT	Ramosetron	Registration

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## Sanofi: A Health Journey Partner

Sanofi is dedicated to supporting people through their health challenges. We are a global biopharmaceutical company focused on human health. We prevent illness with vaccines, provide innovative treatments to fight pain and ease suffering. We stand by the few who suffer from rare diseases and the millions with long-term chronic conditions. With more than 100,000 people in 100 countries, Sanofi is transforming scientific innovation into healthcare solutions around the globe. Sanofi is headquartered in Paris, France and listed in Paris (EURONEX:SAN) and New York (NYSE:SNY).

In Korea, Sanofi has three legal entities in the areas of pharmaceuticals and consumer healthcare (Sanofi-aventis Korea), vaccines (Sanofi Pasteur) and specialty care (Genzyme Korea).

Sanofi-aventis Korea has been contributing to Korea healthcare industry to move advance through 'open innovation'. Accredited as Innovative Pharmaceutical Company in 2014, Sanofi-aventis Korea has established and looked forward to seeking out partnerships with promising pharmaceutical companies, bio-techs, clinical research centers as well as academia in Korea to bring innovation where high unmet patient needs exists, while continuously investing in clinical development of new medicines and help Korean partners go global.



Plavix®



Lantus®



Aprovel®



Eloxatin®



Taxotere®

## Products

### Plavix®

Atherosclerosis symptoms

### Lantus®

Diabetes

### Aprovel®

Essential hypertension, Renal disease in type 2 diabetes with hypertension

### Eloxatin®

Colorectal cancer, stomach cancer, pancreatic cancer

### Taxotere®

Breast cancer, stomach cancer, non-small cell lung cancer, head and neck cancer, ovarian cancer, esophageal cancer and prostate cancer

## R&D Pipeline

Myelofibrosis, Articular cartilage defects, Muscular atrophy, Diabetes, Rheumatoid arthritis, Dyslipidemia, Atopic dermatitis and Asthma

## History

- 1973 Founded Sanofi
- 1991 Established Sanofi Korea
- 2004 Established sanofi-aventis Group
- 2005 Established clinical R&D unit under direct control of corporate headquarters
- 2006 Started sanofi-aventis Korea
- 2010 Launched Cenovis, the consumer healthcare brand
- 2012 Started Sanofi Group Integrated Management Committee
- 2013 Received Family-Friendly Company Accreditation by MOGEF
- 2014 Accredited as Innovative pharmaceutical Company by MOHW
- 2016 Re-accredited Family-Friendly Company by MOGEF
- 2017 Acquired Consumer Health Care from Boehringer Ingelheim
- 2017 Renewed Innovative pharmaceutical company by MOHW

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For the health of the people

**Shin Poong Pharm.Co.,Ltd**



Shin Poong Pharm. Co., Ltd is a R&D oriented multinational pharmaceutical company headquartered in Seoul, South Korea, with 7 manufacturing site worldwide with global partners in over 59 countries. Main focusing areas are CV, CNS, surgical wound care, musculoskeletal and anti-infective.

Under the management philosophy of 'for the health of the people', Shin Poong Pharm. Co., Ltd. specializes in manufacturing remedy drugs with sincere efforts put into producing every single tablet of life-saving drugs ranging from ingredients to finished products based on our state-of-the-art manufacturing facilities and quality assurance system. We are committed to realizing the spirit of Shin Poong 3V (Vision, Venture and Victory) with top-notch competitiveness based on in-house ingredient synthesizing technologies obtained through rigorous R&D efforts and to further developing the company into the one that receives confidence from our customers and that contributes to promoting the wellbeing of human beings.



Pyramax®  
Tablets & Granules.



CandeAmlo®



EzeRosu®



Hyal Forte®



Medicurtain®

## Main Products

Name	Indication	Phase	Classification
Pyramax® Tab.	Antimalarial	On Market	NCE
Pyramax® Gran.	Antimalarial	On Market	NCE
Medicurtain®	Adhesions after surgery	On Market	Novel Medical Device
Hyal Forte®	Osteoarthritis	On Market	Generic
Candeamlo® Tab.	Hypertension	On Market	IMD/FDC
Ezerosu® Tab.	Hyperlipidemia	On Market	IMD/FDC

## R&D Pipeline

Category	Products	Indication	Stage
NCE	Pyramax® Tab.	Anti-malaria	Launched
	Pyramax® Gran.	Anti-malaria	Launched
	SP-8203	Acute ischemic stroke	Phase 2 (Korea)
	SP-35454	Osteoporosis/Fracture healing	Phase 1 (Europe)
	SP-8008	Anti-platelet	Pre-clinical
	SP-8356	Atherosclerosis	Pre-clinical
	SP-8232	Heart failure	Pre-clinical
NME	HyalOne™	Osteoarthritis (one injection)	Phase 1 (Korea)
	FreeWink™	Dermal/body filler	Pre-clinical
Novel Medical Device	Medicurtain®	Adhesions after surgery	Launched

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# Developing Premium Vaccines, New Chemical Entities, Biopharmaceutical Drugs SK Chemicals Co. Ltd.



Sunpla Inj.



Joins Tab.



Mvix ODF



Trast Patch



SKYCellflu prefilled syringe



SKYCellflu Quadrivalent prefilled syringe



Rivastigmine patch

## SK Chemicals contributes to enhance human health and the quality of life by developing new synthetic drugs, premium vaccines and innovative manufacturing technologies.

SK Chemicals opened a new chapter in the history of the Korean pharmaceutical industry in 1999, when it succeeded in launching SUNPLA, Korea's and the world's first third generation platinum complex cancer drug. In 2007, the company launched the world's fifth PDE5 inhibitor, a novel erectile dysfunction agent in Korea. In 2011, it also succeeded in commercializing the world first orally dissolving film (ODF) formulation containing the PDE5 inhibitor.

In particular, the platform technology of manufacturing not only ODF formulation but also transdermal patch formulation had made SK Chemicals as a leader in developing incrementally modified formulation drugs. As a result, dementia patch called SID710 was successfully approved for sale in Europe. SK Chemicals is actively marketing and exporting the product to major markets.

In the virtue of ceaseless investment to its R&D activities, SK Chemicals now possesses a wide range of R&D portfolio from premium vaccines and plasma derived products to recombinant protein drug. Particularly, the next generation technology of cell-culture based vaccine, it succeeded in obtaining the Korea's first marketing authorization of cell-culture technology based influenza vaccine. As a part of continuous commitment to vaccine R&D, it also completed building a state-of-the-art vaccine manufacturing plant in Andong city. As a result, the company already entered into a couple of major licensing agreements with multinational organizations.

## Main Products

Product	Information
Sunpla injection (3rd generation platinum complex anti-cancer drug)	Anti-cancer agent *The 1 <sup>st</sup> Korean new chemical entity
Trast patch (Piroxicam)	Patch formulation with anti-inflammatory
Joins (Clematis mandshurica, Trichosanthes Killilowii, Prunella vulgaris ext)	Cartilage protective agent *The 1 <sup>st</sup> Korean new herbal drug
Mvix (Mirodenafil)	Orally dissolving film formulation (ODF) for erectile dysfunction (ED) treatment
Rivastigmine patch	Patch formulation for Alzheimer's disease exporting worldwide
SKYCellflu	Prevention for influenza virus *The 1 <sup>st</sup> Korean cell culture influenza vaccine
SKYCellflu Quadrivalent	Prevention for influenza virus *The World 1 <sup>st</sup> Quadrivalent cell culture influenza vaccine

## R&D Pipeline

SK Chemicals focuses on developing premium vaccines, plasma derivatives and chemical drugs in therapeutic areas with high unmet medical needs.

Product	Indication	Description	Status
NCE407	Multiple sclerosis	New Chemical Entity	Screening
NBP601	Hemophilia	Recombinant Plasma protein (Bio-better)	Approved in US, EU (Licensed out)
NBP602	Hepatitis B immunoglobulin	Plasma product	Marketed
NBP604	Haemophilia	Bio-better	Preclinical
NBP606	Pneumococcal diseases	Vaccine	Registration
NBP607	Seasonal cell culture flu	Vaccine	Marketed
NBP608	Herpes zoster	Vaccine	Registration
	Varicella	Vaccine	Phase III
NBP	-	Vaccine	Phase I
NBP	-	Vaccine	Phase I
THVD201	Overactive Bladder	Chemical, combination drug	Registration
SID125	Erectile dysfunction	Orally dissolving film	Marketed
SID142	Chronic arterial occlusion	Botanical / chemical	Phase III
SID143	Stroke, systemic embolism	BA enhancing tech	Screening
SID1601	Epilepsy	Chemical, controlled release	Screening
SID1601	Parkinson's disease	Chemical, patch formulation	Screening

## CONTACT US

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• Specialty Specially chemicals and life science business  
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World Leader in API Custom Manufacture  
**ST Pharm Co., Ltd.**



## “ST Pharm Provides Reliable and On-time Services Under cGMP Condition”

Established in 1983, ST Pharm (formerly known as Samchully Pharm) is offering top custom manufacturing services for active pharmaceutical ingredient (API) and their intermediates in compliance to cGMP to fulfill the client’s high expectations for the use of our products in pharmaceutical development and commercialization.

In 2010, ST Pharm became a member of Dong-A Socio Group that has been the leading healthcare company in Korea since 1967.

In 2016, ST Pharm was listed as a public company under KOSDAQ

### Main Products

1. Custom Manufacturing
  - 1) New Drug APIs & Intermediates
  - 2) GMP-Oligonucleotides (for RNA therapeutics)
2. Generic APIs & Intermediates  
 ST Pharm extends the product pipelines to generic APIs and intermediates with supportive DMFs and high-spec quality control required to timely enter domestic and global market.

### Products List (selected)

Category	Products	Customer	Indication/Stage
New Drug APIs	HCV drug	Originator (Worldwide)	HCV/Marketed
	Diabetes drug	Originator (Worldwide)	Diabetes/Marketed
	Antibiotics drug	Originator (Worldwide)	Antibiotics/Marketed
Generic APIs	HCV drug	Originator (Worldwide)	HCV/Phase I
	Chiral epoxide	Originator (Worldwide)	HIV/Marketed
	Chloro-(L)-sugar	Originator (Worldwide)	HBV/Marketed
Generic APIs	Nucleoside monomers	US/EP/JP	Various RNA therapeutics/Clinical
	Atorvastatin	Domestic/JP/ROW	Hyperlipidemia/Marketed
	Clopidogrel	Domestic/ROW	Anticoagulant/Marketed
	Terizidone	S.Africa/Germany/CIS	Tuberculosis/Marketed
	Gadobutrol	Domestic/JP/ROW	MRI contract/Marketed
	Voriconazole	JP	Antifungal/Marketed

### R&D Pipeline (selected)

Category	Project	Goal
New Drug	Diabetes	For clinical trial
	Anti-viral	For clinical trial
	Anti-viral	A For clinical trial
New Drug	Cancer	Phase I in 2018
	Anticoagulants	Phase I in 2018
	HIV	Pre-clinical in 2018
Generic APIs	MRI contract Media	Released in 2018
	Anticoagulants	Released in 2021
	Diabetes	Released in 2024

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 · Homepage <http://www.stpharm.co.kr>  
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Taejoon Pharmaceutical Co., Ltd. is a leading specialty pharmaceutical company in ophthalmology, contrast media, and gastrointestinal agents with a global presence in the United States of America, Europe, Asia Pacific Region and Africa.

## Main Products

### Ophthalmic therapeutics

- **XALOST SUD (API: LATANOPROST, Preservative Free)**
  - Indication: For the reduction of IOP in patients with open-angle glaucoma, chronic angle-closure glaucoma or ocular hypertension
- **CYPORIN N (API: CYCLOSPORINE, Nano-technology)**
  - Indication: Increase tear production in patients whose tear production is presumed to be suppressed due to ocular inflammation associated with keratoconjunctivitis sicca. Increased tear production was not seen in patients currently taking topical anti-inflammatory drugs or using punctual plugs.



Xalost SUD



Cyporin N



Gadobutrol (Pre-filled Syringe)

### Contrast Media

- **Gadobutrol (Pre-filled Syringe) (API: Gadobutrol)**
  - Indication: MR imaging in adult and children of all ages for the whole body
- **IOBRIX INJ. (API: IOHEXOL)**
  - Indication: Myelography, angiography, urography, contrast enhancement of computerized tomography.

## GMP Certification List

No.	GMP	Facility	Year
1	KGMP	Sterile ophthalmic solution	1995, 2010, 2011, 2012, 2014, 2018
2	US FDA Audit	Ophthalmic solution	2016
3	EU GMP	Sterile ophthalmic solution	2008, 2011, 2014, 2017
4	Vendor Audit (Italy)	Vendor audit for sterile ophthalmic solution	2009
5	Vendor Audit (EU)	Vendor audit for sterile ophthalmic solution	2010, 2013, 2014, 2016
6	Anvisa GMP	Sterile ophthalmic solution	2010
7	NAFDAC GMP	Sterile ophthalmic solution	2011

## R&D Pipeline

Product Name	Indications	Current Status
Antibiotic product (New Chemical Entity)	Bacterial conjunctivitis	Pre-clinical
Dry eye product (New Chemical Entity)	Dry eye	Pre-clinical
Combination or Improved drugs	Ophthalmic/GI indications	Phase 3 ~ Pre-clinical

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At the leading edge of cell therapy  
**TEGO SCIENCE, INC.**



## A World Leader in Cell Therapy & Advanced Regenerative Medicine

Tego Science is a Seoul-based biopharmaceutical company specializing in regenerative skin cell therapy for wound healing. It has pioneered Korea's cell therapy market with autologous and allogenic cultured skin grafts widely used in burn and ulcer clinics. Tego's chief strengths have been leading-edge technologies in cell culture, skin-graft manufacturing and cryopreservation. It is now evolving into wider regenerative medicine areas involving musculo-skeletal, ophthalmological and dermatological targets, with plans for overseas expansion. Tego Science has been listed in KOSDAQ since 2014.



Holoderm®



Kaloderm®



Rosmir®



Neoderm®

### Products

**Holoderm®** is a cultured skin autograft. Its commercialization was Korea's first and world's second. The patient's own skin cells are cultured and exponentially expanded to produce grafts that are transplanted back on the patient's wound. It is indicated for large 3<sup>rd</sup> degree burn.

**Kaloderm®** is an allogeneic cultured skin sheet indicated for deep 2<sup>nd</sup> degree burn and chronic skin ulcer. It promotes healing of the wound and minimizes scar formation. Since source cells are from another human, it can be manufactured ahead and stored frozen for long duration. It can be used on all types of acute/chronic wound and has promising applications in the cosmetic surgery and dermatology markets. It is a globally unique product that has cost, therapeutic and shelf-life advantages over potential overseas competitions. Sales have so far been limited to South Korea, but work is under way to introduce it to overseas markets.

**Neoderm®** designates a group of human skin models consisting of live human cells. Any or all layers of the human skin can be replicated in vitro, making it possible to test the safety and efficacy of cosmetic/therapeutic substances without resorting to inhumane and expensive animal testing.

**Rosmir®** is an autologous fibroblast therapy intended for the treatment of nasojugal grooves, or tear trough deformities. It was approved for marketing in December 2017 and sales will commence during the first half of 2018.

### R&D Pipeline

Category	Indications	Pre-Clinical	Clinical			NDA
			I	II	III	
Dermal fibroblasts (auto)	Wrinkles	██████████	██████████	██████████	██████████	ROSMIR® completed (Dec: 2017)
Dermal fibroblasts (auto)	Rotator-cuff tear	██████████	██████████	██████████	██████████	
Dermal fibroblasts (allo)	Rotator-cuff tear	██████████	██████████	██████████	██████████	
Mucosal keratinocytes (auto/allo)	Oral mucosal defects	██████████	██████████	██████████	██████████	
Mucosal keratinocytes(auto)	Corneal defects		Investigator's trial under way			
Chemokine	Cutaneous wounds	██████████	██████████	██████████	██████████	
Chemokine	Cartilage defects	██████████	██████████	██████████	██████████	

\* Arrows indicate current progress with KFDA

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 · Homepage www.tegoscience.com



Leading Biotechnology Company Targeting Cardiovascular Disease, Neuropathy, Cancer and Immune-related Disorder.

ViroMed Co., Ltd.



ViroMed Co., Ltd. ("ViroMed"), a leading biologics company focusing on developing novel and innovative drugs, was established in 1996, headquartered in Seoul, Korea and a US office in Atlanta. ViroMed is a publicly traded company listed on the KOSDAQ stock exchange (084990) from 2006. ViroMed has assembled a diverse yet technologically and conceptually linked pipeline of new and innovative therapeutics targeting cardiovascular and neurological diseases, cancers, and immune disorders in the US, Korea, and China. ViroMed runs several clinical trials internationally. This includes 2 active phase III clinical trials (diabetic peripheral neuropathy, chronic diabetic foot ulcer) and an approved rare disease (amyotrophic lateral sclerosis) in phase II clinical trial in the US. An additional phase II (coronary artery disease) is ongoing in Korea. In China, a phase III clinical trial is underway for chemotherapy-induced thrombocytopenia. ViroMed also runs a botanical therapeutics program as a cash cow to balance the long-term biologics programs.

### Representative Product – Biologics (Clinical trial)

Product	Target Disease	Technology	Country	Development Stage
VM202-DPN	Diabetic Peripheral Neuropathy	DNA	USA	Phase III (Underway)
VM202-PAD	Chronic Diabetic Foot Ulcer	DNA	USA	Phase III (Underway)
VM202-ALS	Amyotrophic Lateral Sclerosis	DNA	USA	Phase II (Approved)
VM202-CAD	Ischemic Heart Disease	DNA + Injection Catheter	Korea	Phase II (Underway)
VM206	Breast Cancer	DNA+Virus	Korea	Phase II (Planned)
VM501	Thrombocytopenia	Protein	China	Phase III (Underway)

#### VM202 – New and Innovative Drug for Cardiovascular and Neurological Diseases

VM202 is a DNA-based medicine designed to express two isoforms of hepatocyte growth factor (HGF) gene. HGF has been extensively researched and is known to induce the formation of new collateral blood vessels and the growth and regeneration of damaged peripheral nerve cells. Currently, VM202 is under clinical trials for 4 indications in cardiovascular and neurological disease categories. In these studies, VM202 is delivered through intramuscular injection around the affected regions. ① ViroMed is conducting a phase III clinical trial for diabetic peripheral neuropathy (VM202-DPN) in the US. ② ViroMed successfully completed a phase I/II trial for amyotrophic lateral sclerosis (VM202-ALS), also known as Lou Gehrig's disease then its phase II IND was approved by the US FDA. The program has received fast track designation and orphan drug designation from US FDA. ③ Phase III clinical trial of chronic non-healing ischemic foot ulcers in diabetes patients (VM202-PAD) is underway in the US. ④ After successful phase I trial for ischemic heart disease (VM202-CAD), a phase II study is underway in Korea for subjects who have had percutaneous coronary intervention (PCI) for acute myocardial infarction.

#### VM206 – Therapeutic Cancer Vaccine

VM206 is a therapeutic cancer vaccine delivered through intramuscular injection and induces an immune response against the tumor-associated antigen Her2/neu, found in several types of cancers such as breast cancer. A phase I clinical study for breast cancer has been successfully completed in Korea, showing that the administration of VM206 would effectively induce both humoral (antibody) and cellular (CTL) immune responses against tumor. The product is being safety and effectively developed for patients who have received surgery and/or chemotherapy. A phase II trial is planned for Korea.

#### VM501 – Recombinant Protein for Chemotherapy-Induced Thrombocytopenia (CIT)

The only drug approved for CIT by the US FDA is a recombinant interleukin 11 (IL-11) protein called Neumega. Its use has been highly limited because of serious side effects associated with the drug. VM501 is a genetically engineered interleukin 11 (IL-11) designed to produce a high level of efficacy, but with improved safety. After successful phase I and II studies, a phase III clinical study is currently ongoing in China.

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As a leading global producer and distributor of pharmaceuticals, APIs/intermediates and consumer goods, Yuhan's mission is to improve health and well-being by offering high quality, innovative products and services in parallel with ongoing efforts to support social progress.

Our large-scale Shihwa Synthetic Plant and Ochang General Formulation Plant employ the latest cutting edge technology with full FDA, EMEA and PMDA approval. Together, these plants allow us to deliver active pharmaceutical ingredients manufactured to the highest standards to our partners across the globe.

With full spectrum drug-development capabilities from medicinal chemistry through to process innovation and clinical trials, Yuhan is relentlessly committed to delivering precision medicines and quality consumer products to improve health and quality of life. Our focused R&D efforts have yielded Revanex, the world's first acid-pump antagonist of its class designed to treat gastric ulcers, as well as a number of new drug entities for antibiotics, cancer, hepatitis C, arthritis, and osteoporosis. Yuhan is committed to taking the lead toward a future filled with new pharmaceutical discoveries, with ongoing research in oncology, cardiovascular and metabolic disorders, and inflammatory diseases. We welcome you to join us in our journey to create a healthier and more prosperous society.

### Products

Product name	Indication
3-Chamber TNA (Total Nutrient Admixture)	Supply of nutrition
Duowell Tablet	Treatment for hypertension and hyperlipidemia
Newfactan	Treatment for respiratory distress syndrome of newborns
Yucla Tablet	Antibiotics
Almagate Suspension	Antiacidic functions
Antipharmine S Lotion	Anti-inflammatory agent
Willogel Double Action Suspension	Alleviation of heartburn & indigestion

### R&D Pipeline

Projects	Indications	Type	Current stage
<b>Gastrointestinal disorders</b>			
YH12852	Chronic constipation, IBS	NCE	Phase 1/2
<b>Metabolic &amp; Cardiovascular disorders</b>			
YH25724	NASH	Biologics	Preclinical
YH-NCE	NASH	NCE	Lead discovery
YH-NCE	NASH	NCE	Lead discovery
<b>Immunology &amp; Inflammation disorders</b>			
YH-NCE	Asthma	NCE	Lead discovery
YH-NCE	Grave's orbitopathy	NCE	Lead discovery
YH-BIO	Obesity	Biologics	Lead discovery
YH-BIO	Keloid	siRNA	Lead discovery
YH23537	Periodontitis, arthritis	Herbal	Phase 2
YH14755	Hyperlipidemia / diabetes	IMD	Phase 3
YH22162	Hypertension	IMD	Phase 3
YHP1604	Hyperlipidemia / hypertension	IMD	Phase 3
YHP1701	Hyperlipidemia / hypertension	IMD	Phase 3
YHD1119	Diabetic neuropathy	IMD	Phase 3
YH1177	Otitis media	IMD	Phase 2
YH26153	Periodontitis	IMD	Phase 1
<b>Cancer</b>			
YH25448	NSCLC	NCE	Phase 1/2
YH24931	Solid cancer	Biologics	Preclinical
YH-NCE	Solid cancer	NCE	Lead discovery
YH-NCE	Solid cancer	NCE	Lead discovery
YH-NCE	Solid cancer	NCE	Lead discovery
YH-NCE	Solid cancer	NCE	Lead discovery
YH-NCE	Solid cancer	NCE	Lead discovery
YH-NCE	Solid cancer	NCE	Lead discovery
YH-NCE	Solid cancer	Biologics	Lead discovery
YH-BIO	Solid cancer	Biologics	Lead discovery
YH-BIO	Solid cancer	Biologics	Lead discovery
YH-BIO	Solid cancer	siRNA	Lead discovery

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# Supplement

1. Products Expected to Export
2. Technology Transfer
3. Certifications from Health Authorities

## 1. Products Expected to Export

Company	Product name	Active Ingredient	Indication	Category	Expected country	Note
BCWORLD PHARM. CO., LTD.	Mepem Inj. 1g	Meropenem 1g	Antibiotics	Prescription Medicine	US, EU, Middle East	-
	Sinraci Inj. 500mg	Imipenem, Cilastatin sodium	Antibiotics	Prescription Medicine		-
	Vitamin Inj.	Tamiflumate	Well-being products	Prescription Medicine		-
	Morphine Sulfate Inj.	Morphine Sulfate	Narcotics	Prescription Medicine		-
	BC Atorvastatin Tab.	Atorvastatin Calcium	Lipid-Lowering agents	Medicine		-
	Remiba Inj.	Remifentanyl HCl	Narcotics	Medicine		-
BIONEER CORPORATION BIONEER CORPORATION	PROBIOTICS					
	BNR17	Lactobacillus gasseri	anti-obesity	probiotics	Global	
	NEW Drug					
	SMAiRNA™-IPF	siRNA	IPF (Idiopathic Pulmonary Fibrosis) COPD (chronic obstructive pulmonary disease)	siRNA drug	Global	
	SMAiRNA™-Keloids	siRNA	Keloid Treatment and Removal of Keloid Scars	siRNA drug	Global	
	SMAiRNA™- Lung cancer target	siRNA	Non-small cell lung cancer of EGFR mutation	siRNA drug	Global	
	SMAiRNA™- Alopecia	siRNA , miRNA	Alopecia	RNAi drug	Global	
	Molecular Diagnostic					
	AccuPower® ZIKV(DENV, CHIKV) Multiplex Real-Time RT-PCR Kit	PCR reagent	Zika, Dengue and Chikungunya viruses	Molecular Diagnostic Kit	Global	Listed on WHO EUAL/CE marked
	AccuPower® HIV-1 Quantitative RT-PCR Kit	PCR reagent	HIV-1	Molecular Diagnostic Kit	Global	
	AccuPower® HBV Quantitative PCR Kit	PCR reagent	Hepatitis B virus	Molecular Diagnostic Kit	Global	
	AccuPower® HCV Quantitative RT-PCR Kit	PCR reagent	Hepatitis C virus	Molecular Diagnostic Kit	Global	
	AccuPower® TB&MDR Real-Time PCR Kit	PCR reagent	<i>Mycobacterium tuberculosis</i> , Multidrug-resistant tuberculosis (MDR-TB)	Molecular Diagnostic Kit	Global	CE marked
	AccuPower® MERS-CoV Real-Time RT-PCR Kit	PCR reagent	MERS-CoV	Molecular Diagnostic Kit	Global	CE marked
AccuPower® HPV Genotyping Kit	PCR reagent	Humanpapillomavirus	Molecular Diagnostic Kit	Global	CE marked	
AccuPower® New Inf A (H1N1) & Inf A Real-Time RT-PCR Kit	PCR reagent	New Influenza A(H1N1), Influenza A	Molecular Diagnostic Kit	Global	CE marked	
Boryung Pharmaceutical co.,Ltd.	Kanarb®	Fimasartan	Humanpapillomavirus	Prescription Medicine	MENA, CIS, EU	
	Kanarb Plus®	Fimasartan with HCTZ	New Influenza A (H1N1),	Prescription Medicine	MENA, CIS	
	Dukarb®	Fimasartan with Amlodipine	Influenza A	Prescription Medicine	MENA, CIS	
	Tuvero®	Fimasartan with Rosuvastatin	Hypertension/Dyslipidemia	Prescription Medicine	MENA	
	ADmycin	Doxorubicin	Antineoplastics	Prescription Medicine	Global	
	Oxalitin	Oxaliplatin	Antineoplastics	Prescription Medicine	Global	
	Gelfos®	Colloidal Aluminum Phosphate	Gastric Hyperacidity Heartburn	Non-Prescription Medicine	Global	
	Besto®	Lafutidine	Gastric ulcer	Prescription Medicine	Global	
	Todula®	Cilnidipine	Essential Hypertension	Prescription Medicine	Global	

Company	Product name	Active Ingredient	Indication	Category	Expected country	Note
Boryung Pharmaceutical co.,Ltd.	BR Krill Oil Omega-3	Krill Oil Omega-3	Food Supplement	Non-Prescription Medicine	Global	
Chong Kun Dang pharmaceutical Corp.	TacroBell	Tacrolimus	Immunosuppressant	Prescription Medicine	Worldwide	
	Duvie	Lobeglitazone	Anti-diabetics	Prescription Medicine	Worldwide	
	Duvimet XR	Lobeglitazone + Metformin	Anti-diabetics	Prescription Medicine	Worldwide	
	Cantabell	Candesartan + Amlodipine	Anti-hypertensives	Prescription Medicine	Worldwide	
	Leukivec	Imatinib	Anti-cancer	Prescription Medicine	Worldwide	
	Gemtan	Gemcitabine	Anti-cancer	Prescription Medicine	Worldwide	
	Belotaxel	Docetaxel	Anti-cancer	Prescription Medicine	Worldwide	
CJ HealthCare corporation	Moveloxin Inj.	Moxifloxacin	Infection	Antibiotics		
	Cinezolid Tab&Inj.	Linezolid	Infection	Antibiotics		
	Citopcin Inj.	Ciprofloxacin	Infection	Antibiotics		
	Tapocin Inj.	Teicoplanin	Infection	Antibiotics		
	Vancorin Inj.	Vancomycin	Infection	Antibiotics		
	Epokine Inj.	Erythropoietin	Anemia	Biologicals		
	Leukokine Inj.	Filgrastim	Neutropenia	Biologicals		
	Pemta Inj.	Pemetrexed	Cancer	Oncology		
	Calmtop Inj.	Irinotecan	Cancer	Oncology		
	OmapOne Lipid Inj.	Soybean oil Olive oil, Fish oil Medium-Chain Triglycerides	Parenteral Nutrition	IV Solution (1-chamber bag)		Generic of Smof Lipid®
	OmapOne Peripheral Inj.	Lipid, Amino acid, Glucose	Total Parenteral Nutrition (TPN)	IV Solution (3-chamber bag)		Generic of Smof Kabiven Peri®
Enteone Tab.	Entecavir	Hepatitis B infection	Antiviral			
Corestem Inc.	Neuronata-R®	Autologous bone marrow derived mesenchymal stem cell	amyotrophic lateral sclerosis(ALS, Lou Gehrig's disease)	Stem cell Therapy Product	Global	
Crystal-Genomics, Inc	Acelex	Polmacoxib	Osteoarthritis	Small molecule	Worldwide	
DAEHWAE PHARMACEUTICAL CO., LTD.	Liporaxel Oral solution	Paclitaxel 10mg/ml	Gastric cancer	Anticancer	Worldwide	
	Cepharmethyl Cap.	Methylol cephalixin lysinate 500mg	Bronchiectasis, bacterial pneumonia, otitis media, mastoiditis, paranasal sinusitis, tonsillitis, pharyngitis etc.	Antibiotics	Worldwide	
	Rivamensa Patch	Rivastigmine 9, 18mg	Symptomatic treatment of mild to moderate dementia associated with Alzheimer's disease or Parkinson's disease Symptomatic treatment of severe Alzheimer's dementia	CNS	Worldwide	
	Resnaln Patch	Tulobuterol 0.5, 1, 2mg	Respiratory distress caused by airway obstruction of bronchial asthma, acute bronchitis, chronic bronchitis, or emphysema	Bronchodilator	Worldwide	
	Gastric Cap.	Roxatidine acetate 37.5, 75mg	Gastric and duodenal ulcer, acute gastritis, relapse period of chronic gastritis	G.I Agents	Worldwide	
	FLOSPAN Tab.	Phloroglucinol 80mg	Renal and urinary colic hepatic, gall bladder and spasmodic colic, intestinal colic and dysentary syndrome	Antispasmodic	Worldwide	
	Daewon	Renamezin	oral adsorptive charcoal	Chronic renal failure		
Freefol MCT		Propofol	Anesthesia	anesthetic		
Megex-I		Megestrol Acetate	Anorexia	Anticancer		

Company	Product name	Active Ingredient	Indication	Category	Expected country	Note
Daewoong Pharm-aceutical. Co. LTD	DW206	APA (AcidPumpAntagonist)	Antiulcer program	New chemical	worldwide	
	Easyef Spray	EGF	Diabetic foot ulcer, oral mucositis, wounds	Biologics	WW (SYRIA, EGYPT, INDONESIA, CHINA, CIS)	
	Easyef Ointment	EGF	Acute wound	biologics	worldwide	
	Caretropin 22.5 IU	hGH	Growth hormone deficiency	biologics	WW (LATAM, MENA)	
	Eposis	EPO	Anemia in end stage renal disease	biologics	worldwide	
	Novosis	BMP-2	Dental sinus lift graft	biologics	WW (EU, ASIA)	
	Novosis – OS	BMP-2	spinal fusion	biologics	WW (EU, ASIA)	
	Nabota	Botulinum toxin type A	glabellar lines, upper limb spasticity	biologics	WW (NORTH AFRICA, INDIA)	
	Olostar	Olmesartan + Rosuvastatin	Concomitant hypertension and dyslipidemia	Value-added Generics & Generics	WW (NORTH AFRICA, INDIA)	
	URSA	Ursodeoxycholic acid	Liver & bile disease including cholestasis, Gallstone etc	Value-added Generics & Generics	WW (AUSTRALIA, USA, MALAYSIA)	
	Albis	Ranitidine + Bismuth + Sucralfate	Gastric & duodenal ulcer, gastritis	Value-added Generics & Generics	WW (LATAM, MENA, Russia, CIS)	
	Dehecta	Diocetahedral smectite	Relief of painful symptoms associated with esophageal-gastric and large intestinal diseases, Acute/Chronic diarrhea	Value-added Generics & Generics	worldwide	
	Luphere	Leuprolide	Prostate cancer, Endometriosis, Precocious puberty	Value-added Generics & Generics	WW (JAPAN, USA, ROW)	
	Neovest	Iopromide	CT contrast media	Value-added Generics & Generics	WW (RUSSIA, MENA, CHINA)	
	Nurigra	Sildenafil	Erectile Dysfunction	Value-added Generics & Generics	worldwide	
Nurigra Chew	Sildenafil	Erectile Dysfunction	Value-added Generics & Generics	worldwide		
Mediclone	poloxamer, gelatin, chitosan	medical device - adhesion barrier	medical device	WW (EU, JAPAN, ASIA, LATAM)		
Dong-A ST	Growtropin Inj.	Somatropin	Growth hormone deficiency	ETC	Brazil	
	Closerine Cap.	Cycloserine	Tuberculosis	ETC	WHO	
Dong Wha Pharm	Zabolante	Zabofloxacin D-aspartate Hydrate	Acute Exacerbation of Chronic Obstructive Pulmonary Disease	Antibiotic		
GC Pharma	Green Gene F inj.	Blood coagulation factor VIII, recombinant	For the prevention and control of bleeding episodes and preoperative management in Hemophilia A	Recombinant Product t	Worldwide	
	GCFLU inj.	Purified Inactivated Influenza Virus Antigen Type A (H1N1) Purified Inactivated Influenza Virus Antigen Type A (H3N2) Purified Inactivated Influenza Virus Antigen Type B	For the Prophylaxis against Influenza	Vaccines	Worldwide	PQ from WHO & Procured through PAHO

Company	Product name	Active Ingredient	Indication	Category	Expected country	Note
GC Pharma	GCFLU Quadrivalent inj.	Purified Inactivated Influenza Virus Antigen Type A (H1N1) Purified Inactivated Influenza Virus Antigen Type A (H3N2) Purified Inactivated Influenza Virus Antigen Type B-Yamagata Purified Inactivated Influenza Virus Antigen Type B-Victoria	For the Prophylaxis against Influenza	Vaccines	Worldwide	PQ from WHO
	I.V.-Globulin SN inj.	Human Immunoglobulin-G	1)/-Hypogammaglobulinemia 2)Combined therapy with antibiotics in severe bacterial or viral infections 3)Idiopathic Thrombocytopenic Purpura 4)Guillain-Barre Syndrome 5) Kawasaki Syndrome	Plasma Derivatives	Worldwide	
	Hunterase	Idursulfase-β	For patients with Hunter Syndrome (Mucopolysaccharidosis II, MPS II) as an enzyme replacement therapy	Recombinant Product	Worldwide	Orphan Drug Designation granted from US FDA
	Neulapeg inj.	Pegylated Recombinant Human G-CSF	For decreasing the duration of neutropenia in a patient treated with chemotherapy using myelosuppressive anti-cancer drugs	Recombinant Product	Worldwide	
	Varicella Vaccine-GCC inj.	Varicella Vaccine(Live)	For prophylaxis against Varicella	Vaccines	Worldwide	
	Hepabig.inj	Human Hepatitis B Immunoglobulin	1) For prophylaxis of hepatitis B after exposure to HBsAg 2) For prophylaxis of hepatitis B in neonates	Plasma Derivatives	Worldwide	
	I.V.Hepabig inj.	Human Hepatitis B Immunoglobulin for intravenous administration	For prevention of recurrence of hepatitis B in patients with liver transplant	Plasma Derivatives	Worldwide	
	Sero-Tet inj.	Human Tetanus Immunoglobulin	For prophylaxis of tetanus and reduction of tetanus symptoms by providing passive immunization against infection caused by Clostridium tetani	Plasma Derivatives	Worldwide	
Green VIII inj.	Human Coalugation Factor VIII	For treatment of hemophilia A	Plasma Derivatives	Worldwide		
Handok Inc.	KETOTOP Plaster	Ketoprofen	Arthritis, muscle pain, anti-inflammation	OTC	-	
	Hutos Joateunteun	Zinc gluconate	Immunity	Food supplement	China	
	Hutos Nadossuksuk	Calcium carbonate	Growth	Food supplement	China	
	Hutos Probiotics	lactic acid bacillus	Intestinal health	Food supplement	China	
	READY Q Drink	Curcumin	Hangover remedies	Food & Beverage	China, Taiwan, Japan, South-East Asia, India, U.S., Canada, EU, Australia, South America	
	READY Q Chew	Curcumin	Hangover remedies	Food & Beverage	China, Taiwan, Japan, South-East Asia, India, U.S., Canada, EU, Australia, South America	
HANLIM PHARM. CO., LTD.	Nasaflex Nasal Spray	Mometasone furoate, Azelastine HCl	Perennial allergic rhinitis	Allergy & ENT	Worldwide	
	T-Sporin Eye Drops	Cyclosporin 0.5mg	Increase tear production	Ophthalmic	Worldwide	
	Hyaluron Eye Drops (Single dose)	Sodium Hyaluronate	Endogenic disease, dry eye syndrome	Ophthalmic	Worldwide	CE Mark
	Risenex Plus Tab.	Sodium Risedronate, Cholecalciferol	Osteoporosis	Endocrine	Worldwide	
	Heparin Sodium Inj.	Heparin Sodium	Anticoagulant	Anticoagulant	Worldwide	
Hanlim Vasopressin Inj.	Vasopressin	Pituitary hormone agent	Endocrine	Worldwide		

Company	Product name	Active Ingredient	Indication	Category	Expected country	Note
Hanmi Pharm. Co.,Ltd	Duted	Dutasteride	BPH	Urology		
	Gugu	Tadalafil	ED, BPH	Urology		
	Gugutams	Tamsulosin + Tadalafil	ED, BPH	Urology		
	Monterizine	Montelukast + Levocetirizine	Asthma, Rhinitis	Respiratory		
	Rosuzet	Rosuvastatin + Ezetimibe	Dyslipidemia	CV		
	Hyalrheuma	Hyaluronic acid	Osteoarthritis	OA		
HUONS CO., LTD.	Norepirin inj.	Norepinephrine Bitartrate 8mg/4mL	For the treatment of acute hypotension, cardiogenic shock, septic shock.	Drug	Saudi Arabia	
	Clacier Eye drop	Cyclosporine 0.2mg/0.4mL	Increase of tear production in patients with suppressed tear formation due to keratoconjunctivitis sicca- related ocular inflammatory disease	Drug	Peru, Saudi Arabia	
	Huons Articaine HCl 4% with Epinephrine inj. 1:100,000	Articaine HCl 40mg/mL,	Lercanidipine HCL 10mg	Prescription Drug	South-East Asia Southwest Asia	
	Epinephrine Bitartrate 0.018mg	Use in topical, infiltration and conduction anesthesia in dentistry	Drug	Turkey, Cambodia	Latin America, Northeast Asia	
Hyundai Pharm Co.,Ltd	Lidocaine HCl 1%	Lidocaine HCl 10mg	Nerve block and infiltration	Drug	USA	-
	Levotuss (Tab, SYR)	levodropropizine	Cough : acute and chronic bronchitis	Respiratory	Worldwide	-
	Uremin (Tab)	desmopressin acetate	Nocturnal enuresis	Urogenital system	Worldwide	-
	Drovan (Tab)	ibandronate sodium	Prevention of osteoporosis in postmenopausal women	Musculo-Skeletal system	Worldwide	-
	Tarmirin (SR Tab)	Galantamine	Alzheimer's disease	Central Nervous System	Worldwide	-
	Mirap (ER Tab)	Pramipexole	Parkinson's disease	Central Nervous System	Worldwide	-
IL-YANG PHARM-ACEUTICAL CO., LTD.	Noltec tab.	Ilaprazole	Gastric Ulcer, Duodenal Ulcer, Erosive Esophagitis	prescription medicine	Asia, US, Europe	-
	Supect cap.	Radotinib	1 <sup>st</sup> and 2 <sup>nd</sup> line of CML(chronic myeloid leukemia)-CP(chronic phase)	prescription medicine	Asia, Europe, Middle East	-
	ILYang Flu Vaccine Pre-filled Syringe inj	Trivalent purified inactivated Influenza virus antigen	Influenza Vaccine	Vaccine	Except Korea	-
	ILYang Flu Vaccine Pre-filled Syringe inj.	Quadrivalent purified inactivated Influenza virus antigen	Influenza Vaccine	Vaccine	Vaccine	-
	GINSENG ENERGY	Taurine, Multi Vitamin	Improves performance	Raw Material	Any	-
	WONBI-D LIQUID	Korea Ginseng	Improves Health	OTC Product	Any	-
ISU Abxis	Abcertin®	Imiglucerase	Gaucher Disease	Orphan Drug	Worldwide	
	Fabagal®	Agalsidase beta	Fabry Disease	Orphan Drug	Worldwide	
	Clotinab®	Abciximab	Anti-thrombotic	Orphan Drug	Worldwide	
JW Pharm-aceutical	Combiflex Lipid	Refined soybean oil, Glucose, Amino Acid, Electrolytes	Supply of all Nutrition	I.V. Solution	Global	
	Lipision	Refined soybean oil	Lipid based IV solution	I.V. Solution	Global	
	Freamine	15 amino acids	Amino Acid IV Solution	I.V. Solution	Global	
	Hepatamine	15 amino acids & 4 electrolytes	Amino Acid IV Solution	I.V. Solution	Global	
	Nephramine	8 amino acids, 3 electrolytes & etc.	Amino Acid IV Solution	I.V. Solution	Global	
	Prepenem	Imipenem, Cilastatin	Carbapenem Antibiotics	Antibiotics	Global	
	Pospenem	Meropenem	Carbapenem Antibiotics	Antibiotics	Global	
	Levofloxacin	Levofloxacin	Quinolone Antibacterial Agent	Antibacterial	Global	
	Heparin	Heparin	thrombosis	Anticoagulant	Global	
Levitiracetam Premix	Levitiracetam	Epilepsy	Premix	Global		
Kolmar Korea Co., Ltd.	ZERO-X Cap.	Orlistat	Anti-obesity Agents	Prescription Medicine	EU South America Asia	-
	HIFORGE Tab.	Valsartan and Amlodipine	Antihypertensive	Prescription Medicine	EU Asia Middle Eas	-

Company	Product name	Active Ingredient	Indication	Category	Expected country	Note
Kolmar Korea Co., Ltd.	Oseltami Cap.	Oseltamivir	Anti-viral Medicine	Prescription Medicine	EU Asia LATAM	-
	Azimax dry syrup	Azithromycin hydrate 5.01g	Antibiotics Antifungal, acute/chronic tracheitis etc.,	Prescription medicine	EU, Southeast asia, Latin america	-
	Calmio gel, ointment	Calcipotriol monohydrate, Betamethasone dipropionate	Psoriasis vulgaris	Prescription medicine	EU, Southeast asia, Latin america	-
Korea United Pharm. Inc.	Clanza®CR Tab.	Aceclofenac 200mg	Pain caused by rheumatism	Prescription Medicine	Global	Controlled Release Formulation
	Cilostan®CR Tab.	Cilostazol 200mg	Ischemic symptoms, Thrombosis	Prescription Medicine	Global	Controlled Release Formulation
	Clavixin®Duo Cap.	Clopidogrel 75mg and Aspirin 100mg	Acute coronary syndrome (antiplatelet)	Prescription Medicine	Global	Fixed Dose Combination
	Kalomim®Tab.	Pelargonium sidoides ext.	Upper respiratory tract infections	Prescription Medicine	Global	New Dosage Formulation
	Losasc®Tab5/50	Amlodipine 5mg and Losartan 50mg	Hypertension	Prescription Medicine	Global	Fixed Dose Combination
	Losasc®Tab5/100	Amlodipine 5mg and Losartan 100mg	Hypertension	Prescription Medicine	Global	Fixed Dose Combination
	Gastiin®CR Tab.	Mosapride 15mg	Gastrointestinal symptoms	Prescription Medicine	Global	Controlled Release Formulation
	Levotics®CR Tab.	Levodropropizine 90mg	Cough suppressant	Prescription Medicine	Global	Controlled Release Formulation
	Unigril®CR Tab.	Sarpogrelate HCl 300mg	Antithrombotic drugs	Prescription Medicine	Global	Controlled Release Formulation
Kuhnil Pharmaceutical Co.,Ltd	Aventro Inhalation solution	Ipratropium bromide monohydrate 0.521mg	Respiratory	Prescription Medicine	Mongolia	
	Ampibax Injection	Ampicillin sodium 500mg+ Sulbactam sodium 250mg	Antibiotics	Prescription Medicine	Philippines	
	Amocra syrup	Amoxicilin 1,250mg+Pot. Clavulante 312.5mg	Antibiotics	Prescription Medicine	Vietnam/ Myanmar	
	Amocra Duo syrup	Amoxicilin 2,000mg+Pot. Clavulante 285mg	Antibiotics	Prescription Medicine	Vietnam/ Cambodia	
	Omega-3/Rosuvastatin mini capsule 2000/5 mg	Omega-3+ Rosuvastatin	Cardiovascular system drugs	Prescription Medicine	Worldwide	
	Omega-3/Atorvastatin mini capsule 2000/10 mg	Omega-3+ Atorvastatin	Cardiovascular system drugs	Prescription Medicine	Worldwide	
	Pulmican Suspension	Budesonide micronized 0.5mg	Respiratory	Prescription Medicine	Mongolia	
LG Chemical, Ltd.	EPO	Erythropoetin	Anemia in chronic renal disease	Biological product	MENA, Brazil, Russia	-
	rFSH	recombinant FSH	Infertility	Biological product	MENA, Mexico, Brazil	-
	hGH	human Somatropin	Growth hormone deficiency	Biological product	Mexico, Russia, Southeast Asia	-
	Hyruan plus/SIHA	Hyaluronic acid	Joint arthritis	Medical device	MENA, Southeast Asia,	-
	Yvoire	Hyaluronic acid	Wrinkle correction	Medical device	Eastern Europe	-
Medytox Inc.	Neuronox	Botulinum toxin type A	Blepharospasm, Focal spasticity in pediatric cerebral palsy, Glabellar wrinkles	Biological product (Prescription medicine)	ROW, etc	
	Neuramis	Hyaluronic acid	Wrinkles	Medical device	US, EU, etc	

Company	Product name	Active Ingredient	Indication	Category	Expected country	Note
Pharma-Research Products Co., Ltd.	Re-an® eye drop	Sodium Polydeoxyribonucleotide	Nutrition supply to cornea and conjunctiva	Medicine	China	
	Rejuvenex® injection	Sodium Polydeoxyribonucleotide	Wound healing and tissue regeneration	Medicine	China	
	Rejura®	Sodium Polynucleotide	Temporary correction of facial wrinkles	Medical device	China, USA	
	Conjuran®	Sodium Polynucleotide	Intra-articular injection indicated for reduction of knee joint mechanical friction through physical restoration	Medical device	China, USA	
Samjin Pharmaceutical Co., Ltd. Samjin	PLATLESS Tablet	Clopidogrel bisulfate	Antithrombotic	Prescription Medicine	Worldwide	-
	BAMEDINE Tablet	Rebamipide	Treatment of gastroduodenal ulcers and gastritis	Prescription Medicine	Worldwide	-
	NEUSTATIN-A Tablet	Atorvastatin Calcium	Antihyperlipidemia	Prescription Medicine	Worldwide	-
	AIDBONE PLUS D Tablet	Alendronate sodium + Cholecalciferol	Treatment of Osteoporosis	Prescription Medicine	Worldwide	-
	Clopidogrel bisulfate (form 1)	APIs	Antithrombotic	Active Pharmaceutical Ingredients	Worldwide	-
	Rosuvastatin Calcium	APIs	HMG-CoA reductase inhibitor	Active Pharmaceutical Ingredients	Worldwide	-
	Atorvastatin Calcium	APIs	HMG-CoA reductase inhibitor	Active Pharmaceutical Ingredients	Worldwide	-
	Celecoxib	APIs	COX-2 selective NSAID	Active Pharmaceutical Ingredients	Worldwide	-
Samyang Biopharmaceuticals Corporation	Genexol® PM	Paclitaxel	Anti-cancer	Prescription Medicine	Russia, CSI, Africa, South-America, etc.	Cremophor free formulation
	Nanoxel® M	Docetaxel	Anti-cancer	Prescription Medicine	Worldwide	Tween-80 free formulation
	Oncology Injectables	Paclitaxel Docetaxel Oxaliplatin Bortezomib Zoledronic acid	Anti-cancer	Prescription Medicine	Worldwide	Generic
	Oncology Orals	Lenalidomide	Anti-cancer	Prescription Medicine	Worldwide	Same PK, tablet form
	Injectables	Palonosetron	Anti-emetic	Prescription Medicine	Worldwide	No patent infringement
	Demencure® Patch	Rivastigmine	Dementia	Prescription Medicine	Worldwide	Lower API & same PK
	Fentaderm® Patch	Fentanyl	Severe pain	Prescription Medicine	Worldwide	Lower API & same PK
Shin Poong Pharm. Co.,Ltd	Pyramax® Tablets	Pyronaridine & Artesunate	Anti-malaria	Prescription Medicine	Worldwide	
	Pyramax® Granules	Pyronaridine & Artesunate	Anti-malaria	Prescription Medicine	Worldwide	
	Candeamlo® Tablets	Amlodipine & Candesartan	Hypertension	Prescription Medicine	Worldwide	
	Ezerosu® Tablets	Rosuvastatin & Ezetimibe	Hyperlipidemia	Prescription Medicine	Worldwide	
	Medicurtain® In-jection	Sodium hyaluronate & HES	Anti-dhesive	Prescription Medicine	Worldwide	
SK Chemicals Co. Ltd.	Rivastigmine patch	Rivastigmine	Alzheimer's disease	Prescription medicine	EU, US, Asia, Latine America, Middle east	Already exporting to EU
	SK Albumin	Human serum albumin	Hypo-albuminemia, Hemorrhagic shock	Prescription medicine (Blood product)	Asia, Middle east, Latine America	Exporting to India, China etc.
	Liv-Gamma IV	Human normal immunoglobulin G	Agammaglobulinemia	Prescription medicine (Blood product)	Asia, Middle east, Latine America	Exporting to Egypt Thailand, etc.
	Hepabulin IV	Human hepatitis B immunoglobulin	Prophylaxis of hepatitis B recurrence in liver transplant recipients	Prescription medicine (Blood product)	Asia, Middle east, Latine America	

Company	Product name	Active Ingredient	Indication	Category	Expected country	Note
SK Chemicals Co. Ltd.	Tetabulin IV	Human tetanus immunoglobulin	Prophylaxis and treatment of tetanus	Prescription medicine (Blood product)	Asia, Middle East, Latin America	
	ETBI Inj.	Human blood coagulation factor VIII	Human blood coagulation factor VIII	Prescription medicine (Blood product)	Asia, Middle East, Latin America	Exporting to India
	Trast	Piroxicam	Osteoarthritis, Tenosynovitis, Myalgia & others	OTC product	Asia, Latine America	Exporting to some Asian countries
	Joins	Clematis mandshurica & others	Osteoarthritis	Prescription medicine	Asia, Latine America	
	Mvix	Mirodenafil	Erectile dysfunction	Prescription medicine	Asia, Latine America	
	Tadalafil ODF	Tadalafil	Erectile dysfunction	Prescription medicine (ODF)	Asia, Middle east, Latine America	
	SKYCellflu	Purified inactivated influenza virus surface antigen	Active immunization for the prevention of influenza disease	Vaccine	Asia, Middle east, Latin America	Preparation for WHO PQ
	SKYCellflu Quadrivalent	Purified inactivated influenza virus surface antigen	Active immunization for the prevention of influenza disease	Vaccine	Asia, Middle east, Latin America	
ST Pharm Co., Ltd.	API	Montelukast	Asthma	API	US, EU etc.	-
	API	Stavudine	anti HIV/AIDS	API	US, EU etc.	-
	API	Terizidone	anti Tuberculosis	API	US, EU etc.	-
	API	Clopidogrel Bisulfate	Anti-coagulant	API	US, EU etc.	-
	API	Atovastatin Calcium Anhydrous	Metabolic disease	API	US, EU etc.	-
Taejoon Pharmaceutical Co., Ltd	Cyprin N	Cyclosporine	Dry eye	Prescription medicine	US, EU, Asia	
	Xalost Preservative Free	Latanoprost	Anti-glaucoma	Prescription medicine	US, EU, Asia	
	Xalost Plus	Latanoprost plus Timolol maleate	Anti-glaucoma	Prescription medicine	EU, Asia	
	Xalost	Latanoprost	Anti-glaucoma	Prescription medicine	EU, Asia	
	Alpadine	Olopatadine HCl	Conjunctivitis	Prescription medicine	US, EU, Asia	
	Iobrix	Iohexol	Angiography	Prescription medicine	US, EU, Asia	
	Coolprep	Polyethylen Glycol	Bowel cleansing for x-ray and endoscopic examination	Prescription medicine	US, EU, Asia	
	Lamina G	Sodium Alginate	Gastric & duodenal ulcer, erosive gastritis	Prescription medicine	US, EU, Asia	
TEGO SCIENCE, INC.,	Holoderm®	Autologous Keratinocytes	- Deep 2 <sup>nd</sup> degree burn over 30% of TBSA - 3 <sup>rd</sup> degree burn over 10% of TBSA	Cell Therapy Product (Prescription Medicine)	World Wide	
	Kaloderm®	Allogeneic Keratinocytes	- Deep 2 <sup>nd</sup> degree burn(2005.03) - Diabetic Foot Ulcer(2010.06)	Cell Therapy Product (Prescription Medicine)	World Wide	
	Rosmir®	Autologous Fibroblasts	Improvement of Nasojugal Grooves	Cell Therapy Product (Prescription Medicine)	World Wide	
	Neoderm®	Reconstituted 3D Human Skin	For cosmetics testing and drug discovery	Tester Kit for Research	World Wide	Alternative methods to animal testing
Yuhan Corporation	3-Chamber TNA (Total Nutrient Admixture)	Glucose+Amino acid+Lipid	Supply of nutrition	ETC Medicine		
	Duowell Tablet	Telmisartan Rosuvastatin	Treatment for hypertension and hyperlipidemia	ETC Medicine	Asia, Middle, East, Africa, CIS and so on	
	Newfactan	Bovine Lung Surfa	Treatment for respiratory distress syndrome of newborns	ETC Medicine		
	Yucla Tablet	Amoxicillin Clavulanate Potassium	Antibiotics	ETC Medicine		

Company	Product name	Active Ingredient	Indication	Category	Expected country	Note
Yuhan Corporation	AlmagateSuspension	Almagate	Antiacidic functions	OTC Medicine	Asia, Middle, East, Africa, CIS and so on	
	Antiphlamine S Lotion	Methyl Salicylate L-menthol	Anti-inflammatory agent	OTC Medicine		
	Willogel DoubleAction Suspension	Sodium alginate Calcium carbonate Sodium bicarbonate	Alleviation of heartburn & indigest	OTC Medicine		
	Nazacare Nasal Spray Solution	Momethasone Furoate	Nasal Symptoms of allergic rhinitis. Nasal polyps, Acute rhinosinusitis	ETC Medicine		
Yungjin Pharm. Co.,Ltd.	Cefcapene Pivoxil (API, Tab., Fine Granule)	Cefcapene Pivoxil	Infection	Antibiotics	Worldwide	
	Cefditoren Pivoxil (API, Tab., Fine Granule)	Cefditoren Pivoxil	Infection	Antibiotics	Worldwide	
	Cefmetazole (API, Inj.)	Cefmetazole Sodium	Infection	Antibiotics	Worldwide	
	Cefotiam (API, inj.)	Cefotiam HCl/HCl+Na <sub>2</sub> CO <sub>3</sub>	Infection	Antibiotics	Worldwide	
	Ceftizoxime (API, inj.)	Ceftizoxime Sodium	Infection	Antibiotics	Worldwide	
	Loxoprofen (API)	Loxoprofen	Anti-inflammatory, Analgesic	CNS	Worldwide	
	Febuxostat (API)	Febuxostat	Hyperuricemia	CV	Worldwide	
	Opast (Tab.)	Limaprost	Spinal stenosis	CV	Worldwide	
	Linezolin (tab.)	Linezolid	Infectioin	Antibiotics	Worldwide	
Denogan (API, inj.)	Propacetamol	Anti-inflammatoryAntipyretic, Analgesic	CNS	Worldwide		

## 2. Technology Transfer

Company	Category	Indication	Development Status		Targeted country	Note	
			Korea	Overseas			
BCWORLD PHARM. CO., LTD.	Biologic	Cancer	Preclinical	-	US / EU	-	
	Biologic	Cancer	Preclinical	-	US / EU	-	
	small molecule	hyperlipidemia	Preclinical	-	US / EU	-	
	small molecule	Schizophrenia	Preclinical	-	US / EU	-	
Boryung Pharmaceutical co.,Ltd.	New Chemical Entity (ARB: Fimasartan)	Hypertension	Launching	Launching	MENA		
	Oncology	Anticancer	Launching	Launching	Global		
Chong Kun Dang pharmaceutical Corp.	CKD-504 (Small Molecule)	Parkinson's Disease	Non-clinical	-	Worldwide		
	CKD-506 (Small Molecule)	Autoimmune Disease	-	Phase 1 (Netherland)	Worldwide		
	CKD-516 (Small Molecule)	Colon Cancer	Phase 1/2a	-	Worldwide		
	CKD-519 (Small Molecule)	Dyslipidemia	-	Phase 1/2a (Australia)	Worldwide		
	CKD-581 (Small-Molecule)	Multiple myeloma	Phase 1/2a	-	Worldwide		
	CKD-701 (ranibizumab biosimilar candidate)	AMD, DME	Non-clinical	-	Worldwide		
	CKD-11101 (Darbepoetin- alfa biosimilar candidate)	Anemia	Phase 3	-	Worldwide		
	Methoxy Polyethylene Glycol-Epoetin Beta biosimilar candidate	Anemia	Process development	-	Worldwide		
	CKD-760 (Adalimumab) biosimilar candidate	Rheumatoid Arthritis	Non-clinical	-	Worldwide		
	CKD-12101 (Pegfilgrastim) biosimilar candidate	Leukopenia	Non-clinical	-	Japan		
	Hyaluronic acid (cell bank & manufacturing technology)	Process development				ROW & China	
	Botulinum toxin (cell bank & manufacturing technology)	Process development				ROW & China	
	HPV vaccine (cell bank & manufacturing technology))	Process development				ROW & China	
CJ HealthCare corporation	CJ-12420	GERD	Phase 3	Phase 1 (Completed)	LATAM, South-East Asia	NCE	
	VogMet® (voglibose+metformin)	Diabetes	Launched	N/A	Worldwide	IMD	
	Pemta® RTU (pemetrexed)	Oncology	Launched	N/A	Worldwide	RTU(ready-to-use) liquid	
	CJ-30056 (atorvastatin+metformin)	Hyperlipidemia & Diabetes	Phase III	N/A	Worldwide	IMD	
	CJ-30059 (candesartan+amlodipine)	Hypertension	Launched	N/A	Worldwide	IMD	
	CJ-30060 (amlodipine + valsartan + rosuvastatin)	Hypertension & Hyperlipidemia	Phase III	N/A	Worldwide	IMD	
	CJ-30061 (amlodipine + valsartan + atorvastatin)	Hypertension & Hyperlipidemia	Phase I	N/A	Worldwide	IMD	
	CJ-40001 (darbepoietin $\alpha$ biosimilar)	Renal enemia	Phase III	N/A	Worldwide	Biosimilar	
	CJ-40010 (Vaccine)	Hand Foot Mouth disease	Pre-clinical	N/A	Worldwide	Vaccine	
	CJ-40012 (Ranibizumab biosimilar)	Age-Related Macular Degeneration	Pre-clinical	N/A	Worldwide	Biosimilar	
Corestem Inc.	CA20AT04(BM-MSC)	systemic lupus erythematosus (SLE)	Phase 1	-	Global	-	
	CS10BR05(BM-MSC)	multiple system atrophy (MSA)	Phase 1	-		-	
	CS30MS02(cartilage)	Osteoarthritis (OA/cartilage defect)	Preclinical	-		-	
Crystal-Genomics, Inc.	CG400549	ABSSSI, Osteomyelitis and other serious Staph infections including MRSA	-	Phase IIa completed (USA)	Worldwide		
	CG200745	Pancreatic cancer & MDS	Phase Ib/II	-	Worldwide		
	CG026806	AML, CLL, DLBCL	Preclinical	-	Worldwide		

Company	Category	Indication	Development Status		Targeted country	Note
			Korea	Overseas		
DAEHWA PHARMACEUTICAL CO., LTD.	Anticancer	Gastric cancer	Phase 3 ended	Preparing PK and Phase I	World wide	-
	Antibiotics	Bronchiectasis, bacterial pneumonia, otitis media, mastoiditis, paranasal sinusitis, tonsillitis, pharyngitis etc.	Marketed		World wide	-
Daewon Pharm. Co., Ltd.	Analgesic	Osteoarthritis, Rheumatoid, Lumbargo	0		China	
Daewoong Pharmaceutical Co. LTD	biologics	Diabetic foot ulcer, oral mucositis, acute wounds	launched	launched	worldwide	
	biologics	Anemia in end stage renal disease	launched	launched	worldwide	
	biologics	Growth hormone deficiency	launched	launched	worldwide	
Dong-A ST	DA-1241 (GPR119 agonist)	Type 2 diabetes		IND approved (US)	US/EU	
	DA-8010 (M3 receptor antagonist)	Overactive Bladder		Ph I on-going (EU)	US/EU	
	DA-3880 (Darbepoetin alfa, Aranesp® biosimilar)	Anemia		Ph I completed (EU) Global Ph III planned, Ph I completed (JP), Ph III on-going (JP)	US/EU	
	DA-9801 (Botanical drug)	Diabetic Neuropathy		Ph II completed (US), Ph III planned (US)	US/EU	
	DMB-3111 (Trastuzumab, Herceptin® biosimilar)	Breast cancer		Ph I completed (JP), Ph III planned (EU)	US/China/MENA	
Genexine, Inc.	HyTropin(GX-H9)	AGHD/PGHD	Phase 2	Phase 2	Worldwide	
	HyLeukin-7(IL-7-hyFc)	Immuno-Oncology	Phase 1b/2a	Phase 1b/2a	Worldwide	
	HyPoietin(GX-E2)	Anemia	Phase 3 IND Approval	-	Worldwide	
	HyGrastim(GX-G3)	Neutropenia	Phase 2	Phase 2	Worldwide	
	HyGlutide(GX-G6)	Type 2 Diabetes	-	Phase 1	Worldwide	
	Papitrol-188(GX-188)	Cervical Intraepithelial Neoplasia	Phase 2	Phase 2	Worldwide	
	Papitrol-188(Combination)	HPV Cancer	Phase 1b/2		Worldwide	
GC Pharma	Biologics	Hunter syndrome	Launched	US pre-IND	Worldwide	
	Biologics (EGFR)	Colon cancer	Phase I	-	Worldwide	
	Vaccine	Tetanus, diphtheria and pertussis	Phase I	-	Worldwide	
	Vaccine	Varicella Vaccine(Live)	Phase II	-	Worldwide	
	Biologics (ADC)	solid tumor	preclinical	-	Worldwide	
Handok Inc.	Biologics	Adult growth hormone deficiency (AGHD)	Ph 2 completed	Ph 2 completed	USA/EU	
	Biologics	Pediatric growth hormone deficiency (PGHD)	Phase 2	Phase 2	USA/EU	
HANLIM PHARM. CO., LTD.	IMD	Mixed hyperlipidemia	Phase III		Japan, East Asia	
	IMD	Surgery area marker	Phase II		USA, EU	

Company	Category	Indication	Development Status		Targeted country	Note
			Korea	Overseas		
HANLIM PHARM. CO., LTD.	IMD	Allergic rhinitis, pruritus	NDA		Japan, East Asia	
	Small molecule	AMD		EU Phase I	USA, EU	
	Small molecule	Rheumatoid arthritis	Phase I		USA, EU	
	Herb	Acute bronchitis	Phase III		Japan, EU, East Asia	
	Stem cell	Systemic lupus erythematosus	Phase I		Japan, USA, EU	
New Biologics	efpeglenatide(LAPSGLP-1; long-acting GLP-1 analog)	Diabetes & Obesity		Phase III		Licensed to Sanofi
	HM12460A/HM12470(LAPSIInsulin/LAPSIInsulin115; long-acting Insulin analog)	Diabetes		Phase I		
	HM14220(LAPSIInsulin/LAPSGLP-1 Combination)	Diabetes	Preclinical			Licensed to Sanofi
	HM12525A(LAPSGLP/GCG; long-acting GLP/GCG)	Diabetes & Obesity		Phase II		WW rights ex. Korea, China licensed to Janssen Pharmaceuticals
	efpegsomatropin(LAPShGH; long-acting hGH)	GHD	Phase II	Phase II		
	Rolontis™(eflapegrastim; LAPSGCSF; long-acting GCSF analog)	Neutropenia	Phase III	Phase III		WW rights ex. Korea, China and Japan licensed to Spectrum Pharmaceuticals
	HM15211(LAPSGLP/GIP/GCG; long-acting GLP/GIP/GCG)	Obesity & NASH		Phase I		
	HM15136(LAPSGlucagon; long-acting glucagon analog)	Congenital Hyperinsulinism	Pre-clinical			
	HM15450(LAPSASB; long-acting enzyme replacement therapy)	Mucopolysaccharidosis	Pre-clinical			
	HM15912(LAPSGLP-2; long-acting GLP-2 analog)	Short bowel syndrome	Pre-clinical			
Hanmi Pharm.	Oraxol™(Paclitaxel + HM30181A)	Breast cancer		Phase III		WW rights ex. Korea licensed to Athenex
	Oratecan™(Irinotecan + HM30181A)	Solid tumors		Phase I		WW rights ex. Korea licensed to Athenex
	Poziotinib(Pan-HER inhibitor)	Breast, Lung cancer		Phase II		WW rights ex. Korea, China licensed to Spectrum Pharmaceuticals
	HM95573(2nd-generation RAF inhibitor)	Solid tumors	Phase I			WW rights ex. Korea licensed to Genentech
	KX2-391(Src kinase/tubulin dual inhibitor)	Solid tumors	Phase I			Licensed from Athenex
	HM71224(BTK inhibitor)	Autoimmune disease		Phase II		WW rights ex. Korea licensed to Eli Lilly and Company
	HM43239(FLT3 inhibitor)	Acute Myeloblastic Leukemia	Pre-clinical			
	HM81442(FGFR4 inhibitor)	Hepatocellular Carcinoma	Pre-clinical			
	LSD1 inhibitor	Small Cell Lung Cancer	Pre-clinical			
	HM71224 (BTK inhibitor)	Rheumatoid arthritis		Phase II		Licensed to Eli Lilly and Company
Technology	PENTAMBODY	Solid tumors	Pre-clinical	Pre-clinical		Partnership with Innovent to co-develop a novel immuno-oncology bispecific antibody

Company	Category	Indication	Development Status		Targeted country	Note
			Korea	Overseas		
HUONS CO., LTD.	Prescription drug(Biologics)	Dry eye syndrome		Preclinical	Worldwide	
	Prescription drug	Dry eye syndrome	Launched		Worldwide	IMD
Hyundai Pharm Co.,Ltd	CNS	Epilepsy	PC	-	Worldwide	-
	GI	Protective agent of the gastric mucous membrane	PC	-	Worldwide	-
IL-YANG PHARM.	Prescription Medicine	Gastric Ulcer, Duodenal Ulcer, Erosive Esophagitis	Launched	US Ph 2 completed	Asia, US, Europe	-
	Prescription Medicine	1 <sup>st</sup> and 2 <sup>nd</sup> line of CML(chronic myeloid leukemia)-CP(chronic phase)	Launched	Asian population Ph 3 completed	Asia, Europe, Middle East	-
	Prescription Medicine	Anti-viral agent	Pre-clinical	-	Any	-
ISU Abxis	Abcertin®	Gaucher Disease	Launched	Launched in Mexico, Iran and Kazakhstan MMA in progress a part of Middle East and South America	Worldwide	
	Fabagal®	Fabry Disease	Launched	N/A	Worldwide	
	ISU104	Cancer (Solid Tumor)	Phase I	N/A	Worldwide	
	ISU305	Paroxysmal Nocturnal Hemoglobinuria	Preclinical	N/A	Worldwide	
JW Pharmaceutical Corporation	NCE	Acute Myeloid Leukemia / Multiple Myeloma	○	○	Global	
	NCE	Gout / Hyperuricemia	○		Global	
	NCE	Atopic Dermatitis	○		Global	
	NCE	Androgenic Alopecia	○		Global	
	Cell Therapeutic	HepatoCellular Carcinoma	○		Global	
Korea United Pharm. Inc.	Controlled Release Formulation	Analgesic	Launched	Clinical	Worldwide	
	Controlled Release Formulation	Antithrombotic	Launched	Clinical	Worldwide	
	Fixed Dose Combination	Antithrombotic	Launched		Worldwide	
	New Dosage Formulation	Antitussive	Launched		Worldwide	
	Fixed Dose Combination	Anti-hypertensive	Launched		Worldwide	
	Controlled Release Formulation	GI modulator	Launched		Worldwide	
	Controlled Release Formulation	Antithrombotic	Launched		Worldwide	
	Controlled Release Formulation	Antitussive	Launched		Worldwide	
LG Chemical, Ltd.	Biologics	Rheumatoid arthritis	Phase 1	N/A	Worldwide	Antibody biosimilar
	Small molecule	Gout	Phase 1	N/A	Worldwide	XO inhibitor
	Small molecule	Atherothrombosis	Phase 1	N/A	Worldwide	P2Y12 inhibitor
Medytox Inc.	Biologics (Botulinum toxin product)	Glabella wrinkles, etc.	NDA approved	-	-	-
Samjin Pharmaceutical Co., Ltd.	SA001	Dry eye syndrome	Phase II	Preclinical	Worldwide	-
		Sjogren syndrome	Phase I	Preclinical	Worldwide	-
	SJP002	Dry eye syndrome	Phase II	-	Worldwide	-
	SJP1601	Cancer	Preclinical	-	Worldwide	Immune checkpoint inhibitor
SJP1604	Cancer	Preclinical	-	Worldwide	Acute myeloid leukemia	

Company	Category	Indication	Development Status		Targeted country	Note	
			Korea	Overseas			
Samyang Biopharmaceuticals Corporation	polymer-based parenteral DDS tech.	Anti-cancer	launching	Ph 2	US, EU	Solubility enhancing	
	polymer-based parenteral DDS tech.	Anti-cancer	Ph 1	-	US, EU	Solubility enhancing, Sustained release	
	polymer-based long-acting DDS tech.	Oncology CNS	Preclinical	-	US, EU	Sustained release	
	TDS tech.	Neuropathic pain	Ph 2 (completed)	-	US, EU	Better patient compliance	
	Tumor-targeting	Oncology	Discovery	-	US, EU	Biologics	
	Immunotherapy	Oncology	Discovery	-	US, EU	Gene delivery	
	TDS tech.	Severe pain	Ph 1 (completed)	-	US, EU	Marketed	
	SiRNA DDS	Anti-cancer	Preclinical	-	US, EU	Safe polymer based DDS	
Shin Poong Pharm. Co.,Ltd	SP-8203	Anti-stroke	Clinical(P2)	-	Worldwide	KOREA MOHW (Ministry of Health and Welfare) supported Project	
	SP-8008	Anti-platelet	-	Preclinical	Worldwide	KOREA MOHW (Ministry of Health and Welfare) supported Project	
	SP-35454	Fracture healing /Osteoporosis	-	Clinical(P1)	Worldwide	KOREA MOHW (Ministry of Health and Welfare) supported Project	
	SP-8232	Heart failure	Lead optimization	-	Worldwide	KOREA KDDF (Korea Drug Development Fund) supported Project	
	SP-8356	Atherosclerosis		Preclinical	Worldwide		
	HyalONE™	Osteoarthritis	Clinical(P1)	-	Worldwide	KOREA MOHW (Ministry of Health and Welfare) supported Project	
	FreeWink™	Dermal/body filler	Preclinical	-	Worldwide		
		ALK5 inhibitor	Fibrotic disease	Preclinical	Preclinical	Worldwide	
SK Chemicals Co. Ltd.		GPR40 agonist	Diabetes	Preclinical	Preclinical	Worldwide	
		GnRH antagonist	Endometriosis, uterine myoma, BPH and breast / prostate cancers	Phase I	Preclinical	Worldwide	
		ROR-gamma Antagonist	Multiple Sclerosis	Screening	Screening	Worldwide	
		NBP604	Hemophilia	Preclinical	Preclinical	Worldwide	
		Leuprolide Microsphere	Anticancer (rh. Factor VII)	Formulation		Worldwide	
		SID125	Erectile dysfunction	Approval		Worldwide	ODF
		SID141	Pain	Screening		Worldwide	Patch
		SID143	Stroke, systemic embolism	Screening		Worldwide	Oral BA enhancing
		SID1604	Dementia	Formulation		Worldwide	Patch
		SID1606	Parkinson's D.	Screening		Worldwide	Patch
		SKYCellflu	Active immunization for the prevention of influenza disease	Marketed		Worldwide	
		SKYCellflu Quadrivalent	Active immunization for the prevention of influenza disease	Marketed		Worldwide	
	TEGO SCIENCE, INC		Burn, Diabetic Foot Ulcer and various acute& chronic wound		N/A	USA, EU, Japan	

Company	Category	Indication	Development Status		Targeted country	Note
			Korea	Overseas		
ViroMed Co., Ltd.	Plasmid DNA	Chronic Diabetic Foot Ulcer	-	Phase III (Active)	Worldwide (excluding Korea and China)	
	Plasmid DNA	Diabetic Peripheral Neuropathy	-	Phase III (Active)	Worldwide (excluding Korea)	
	Plasmid DNA	Amyotrophic Lateral Sclerosis	-	Phase II (approved)	Worldwide	
	Plasmid DNA	Coronary Artery Disease		Phase II (Active)	Worldwide (excluding Korea)	
	Recombinant Protein	Chemotherapy-induced Thrombocytopenia	-	Phase III (Active)	Worldwide (excluding China)	
Yuhan Corporation	New chemical entity	GI prokinetics	Phase 1/2	-	US, EU, Asia, Latin	
	New chemical entity	Oncology	Phase 1/2	-	US, EU, Asia, Latin	
	Recombinant protein	NASH	preclinical	-	US, EU, Asia, Latin	
Yungjin Pharm. Co.,Ltd.	Respiratory	COPD/Asthma	-	Phase2	worldwide	
	Urology	BPH with ED	Phase3 ended	-	Worldwide	
	CV	Spinal Stenosis	Preclinical	-	Worldwide	
	CNS	Neuropathic pain	Phase1	-	worldwide	

### 3. Certifications from Health Authorities

Company	Product name	Active Ingredient	dosage form	Indication	International certification	Note
Boryung Pharmaceutical co.,Ltd.	Doxorubicin	Doxorubicin	API	Oncology	EU GMP	
	Fimasartan	Fimasartan	API	Cardiovascular	EU GMP	scheduled
	Alacepril	Alacepril	API	Cardiovascular	PMDA	
	Pitavastatin	Pitavastatin	API	Cardiovascular	PMDA	
	Fexofenadine	Fexofenadine	API	Antihistamine	PMDA	
	Aripiprazole	Aripiprazole	API	Schizophrenia	PMDA	
	Montelukast	Montelukast	API	Respiratory	PMDA	
	Tamsulosin	Tamsulosin	API	Urology System	PMDA	
Chong Kun Dang pharmaceutical Corp.	Ceftriaxone	Ceftriaxone Sodium hydrate	Injection	Antibiotiecs	PMDA certification	
	Rasenazolin	Cefazolin sodium	Injection	Antibiotiecs	PMDA certification	
	Pengood	Bacampicilin hydrochloride	Tablet	Antibiotiecs	PMDA certification	
	Kmoxilin	Amoxicillin/Potassium clavulanate	Tablet	Antibiotiecs	PMDA certification	
	Tacrolimus	Tacrolimus	Capsule.	Immunosuppressant	PMDA certification	
CJ HealthCare corporation	Best-Call®	Cefmenoxime Hcl	Inj.	Infection	Japan GMP Inspection	Supply APIs to a Japanese Company
	First-Sin®	Cefozopran Hcl	Inj.	Infection	Japan GMP Inspection	
	Pan-Sprolin®	Cefotiam Hcl	Inj.	Infection	Japan GMP Inspection	
	Banan® tab.	Cefopodoxime	Tab.	Infection	Japan GMP Inspection	Supply bulk-products to a Japanese company
	Banan® dry syrup	Cefopodoxime	Syrup	Infection	Japan GMP Inspection	
	Cinezolid Inj.	Linezolid	Inj.	Infection	Thai GMP Inspection	
	Moveloxin Inj.	Moxifloxacin	Inj.	Infection	Thai GMP Inspection	
	Cinezolid Inj.	Linezolid	Inj.	Infection	Philippines GMP Inspection	
	Moveloxin Inj.	Moxifloxacin	Inj.	Infection	Philippines GMP Inspection	
Dong-A ST	Closerine	Cycloserine	Capsule	Tuberculosis	WHO PQ	
	Growtropin Inj.	Somatropin	Vial, AQ, Pen	Growth hormone deficiency	ANVISA	
Dong Wha Pharm		Pantoprazole Sodium Sesquihydrate (API)			EU GMP	
		Ambroxol HCl (API)			J GMP	
GC Pharma	GCFLU inj. GFLU multi inj.	Purified Inactivated Influenza Virus Antigen Type A (H1N1) Purified Inactivated Influenza Virus Antigen Type A (H3N2) Purified Inactivated Influenza Virus Antigen Type B	Vial	For the Prophylaxis against Influenza	WHO PQ	
	GCFLU Quadrivalent inj. GCFLU Quadrivalent Multi inj.	Purified Inactivated Influenza Virus Antigen Type A (H1N1) Purified Inactivated Influenza Virus Antigen Type A (H3N2) Purified Inactivated Influenza Virus Antigen Type B-Yamagata Purified Inactivated Influenza Virus Antigen Type B-Victoria	Vial	For the Prophylaxis against Influenza	WHO PQ	

Company	Product name	Active Ingredient	dosage form	Indication	International certification	Note
Handok Inc.	Amaryl M SR 2/500mg	Glimepiride Metformin	Solid dosage form	Type II diabetes	Jordan MOH	
	Amaryl M IR 2/500mg	Glimepiride Metformin	Solid dosage form	Type II diabetes		
	Amaryl M SR 2/500mg	Glimepiride Metformin	Solid dosage form	Type II diabetes	Oman MOH	
Handok Inc.	Amaryl M SR Glimepiride 2 mg + METFORMIN 500mg Prolonged- release tablet	Glimepiride Metformin	Solid dosage form	Type II diabetes	Ivory Coast Authority	
	Amaryl Met XR GLIMEPIRIDE 2mg + METFORMIN 500mg Prolonged- release tablet	Glimepiride Metformin	Solid dosage form	Type II diabetes	Brazil Authority (ANVIS)	Launching cancelled
	AMARYL MET IR GLIMEPIRIDE 2mg + METFORMIN 500mg coated tablet	Glimepiride Metformin	Solid dosage form	Type II diabetes		
	Glamaryl combi 1/250mg	Glimepiride Metformin	Solid dosage form	Type II diabetes	Brazil Authority (ANVIS)	
	Amaryl M IR 2/500mg	Glimepiride Metformin	Solid dosage form	Type II diabetes	Peru Authority	
	Amaryl M SR 2/500mg	Glimepiride Metformin	Solid dosage form	Type II diabetes		
	Amaryl M IR 2/500mg	Glimepiride Metformin	Solid dosage form	Type II diabetes	Saudi Arabia FDA	
	Esperson oint. 0.25%	Desoxymethasone	Semi-solid dosage form	Corticosteroid-responsive dermatoses	Taiwan FDA - PIC/S	
	Amaryl M IR 2/500mg	Glimepiride Metformin	Solid dosage form	Type II diabetes		
	Daonil tab.	Glibenclamide		Type II diabetes		
	Lasix tab.	Furosemide		Edema., Hypertensionos		
	Frisium tab. 10mg	Clobazam		Epilepsy		
	Amaryl M SR 2/500mg	Glimepiride Metformin	Solid dosage form	Type II diabetes	Ukraine- PIC/S	
	Amaryl M IR 2/500mg	Glimepiride Metformin	Solid dosage form	Type II diabetes		
	Amaryl M IR 2/500mg	Glimepiride Metformin	Solid dosage form	Type II diabetes	Tanzania FDA	
	Amaryl M IR 2/500mg	Glimepiride Metformin	Solid dosage form	Type II diabetes	Ethiopia FDA	
	Amaryl M SR 2/500mg	Glimepiride Metformin	Solid dosage form	Type II diabetes	Yemen FDA	
Amaryl M IR 2/500mg	Glimepiride Metformin	Solid dosage form	Type II diabetes	Uganda NDA		
Amaryl M SR 2/500mg	Glimepiride Metformin	Solid dosage form	Type II diabetes	Colombia FDA		
AMARYL M 2mg/500mg film coated tablets	Glimepiride Metformin	Solid dosage form	Type II diabetes	Colombia FDA		
Hanmi Pharm.	Pidogle Tab.	Clopidogrel napadisilate	Tablet	Antithrombotic agent	GMP (BGV)	2009 2012 2015
			Solid formulation Eye bath drops		EU GMP (Germany BGV)	2012
	Amosartan Tab. 5/50mg, 5/100mg	Amlodipine camsylate Losartan K	Tablet	Hypertension	Syria	2012
	Esomezole Cap. 20mg, 40mg	Esomeprazole strontium tetrahydrate	Capsule	Gastroesopha geal reflux disease	Kazakhstan	2012

Company	Product name	Active Ingredient	dosage form	Indication	International certification	Note
Hanmi Pharm.	Amosartan Tab. 5/50mg, 5/100mg	Amlodipine camsylate Losartan K	Tablet	Hypertension	Kazakhstan	2012
	Amosartan Tab. 5/50mg, 5/100mg	Amlodipine camsylate Losartan K	Tablet	Hypertension	Russia	2013
			Solid formulation Eye bath drops		Peru	2013
	Esomezole Cap. 20mg, 40mg	Esomeprazole strontium tetrahydrate	Capsule	Gastroesophageal reflux disease	GCC(Gulf Cooperation Council)	2015
			Solid formulation Eye bath drops		Philippines FDA	2017
	Amosartan Tab. 5/50mg, 5/100mg	Amlodipine camsylate Losartan K	Tablet	Hypertension	MFDS (Korean FDA) PIC/S GMP Certificate	2017
HUONS CO., LTD.	Sodium Chloride Inj. 0.9%	Sodium Chloride	Ampoule	Diluent for injectable drug	US - FDA	
	Lidocaine HCl Inj. 1%	Lidocaine HCl	Ampoule	Local Anesthesia	US - FDA	
	Epilido Inj.	Lidocaine, Adrenaline	Cartridge Ampoule	Dental Anesthesia	Japan - PMDA	
	Isotonic Sodium Chloride Solution	Sodium Chloride	BFS 20mL	Flushing compatible intravenous tubing system and in dwelling intravascular access devices	Japan - PMDA	
	20% Glucose for Inj.	Glucose	BFS 20mL	Hypokalemia, cardiac collapse, glucose supplement during hypoglycemia, Cerebral edema, Shock, Cardiac disease, Non-oral supplement of water, Diagnosis	Japan - PMDA	
	Norepirin Inj.	Norepinephrine Bitartrate	Ampoule	Treatment of heart failure	KSA - SFDA	
	Hyaclon Inj.	Sodium Hyaluronate	Prefilled Syringe	Treatment of Osteoarthritis	EU - Ministry of Health of the Republic of Poland	
IL-YANG PHARM-ACEUTICAL CO., LTDI	IYEN2000	Taurine 2000, others	Bottle	Vitamin, Mineral & Nutrition	Japan Non-sterile Quasi-Drug GMP	-
ISU Abxis	Abcertin®	Imiglucerase	Injection	Gaucher Disease	Turkey, Mexico, Iran, Colombia, Kazakhstan	GMP Certification
	Clotinab®	Abciximab	Injection	Anti-thrombotic	Turkey, Iran, Colombia, Jordan, Pakistan	GMP Certification
JW Pharmaceutical Corporation	Prepenem Inj.	Imipenem monohydrate and Cilastatin sodium	Injection	Antibiotics	PMDA GMP	
	Pospenem Inj.	Meropenem trihydrate	Injection	Antibiotics	ANVISA GMP	
	Itraconazole SD	Itraconazole	Solid Dispersion	Fungal Infection	ANVISA GMP	
	Toracona tab.	Itraconazole	Tablets	Fungal Infection	PMDA GMP	
	Imipenem Mixture	Imipenem monohydrate and Cilastatin sodium	API	Antibiotics	PMDA GMP	
	Meropenem Mixture	Meropenem trihydrate	API	Antibiotics	COFEPRIS GMP	
	Montelukast tab.	Montelukast sodium	Tablets	asthma symptoms and to relieve the symptoms of seasonal allergies	COFEPRIS GMP	
	Bosentan Tab.	Bosentan	Tablets	Treating high blood pressure in the lungs	PMDA GMP	
	Azocemide	Azocemide	API	Diuretics	PMDA GMP	
	Anagliptin	Anagliptin	API	anti-diabetic	PMDA GMP	

Company	Product name	Active Ingredient	dosage form	Indication	International certification	Note
LG Chemical, Ltd.	Factive	Gemcifloxacin	Tablet	Antibiotics	PMDA GMP	-
	hGH	human Somatotropin	Injection	Growth hormone deficiency	FDA GMP certification EU GMP certification	-
	Euvax B	Hepatitis B vaccine	Injection	Hepatitis B vaccine	WHO GMP certification EU GMP certification	-
	Euforvac-Hib	DTP-HepB-Hib vaccine	Injection	DTP-HepB-Hib vaccine	WHO GMP certification	-
	Hyruan plus	Hyaluronic acid	Injection	Joint arthritis	CE certification	-
Medytox Inc.	Biologics (Botulinum toxin product)	Botulinum toxin type A	Vial (lyophilized)	Glabellar wrinkles, etc.	Preparing cGMP & EU GMP	
Pharma-Research Products Co., Ltd.	Re-an® eye drop	Sodium Polydeoxyribonucleotide	Nutrition supply to cornea and conjunctiva	Medicine	China	
	Rejuvenex® injection	Sodium Polydeoxyribonucleotide	Wound healing and tissue regeneration	Medicine	China	
	Rejuran®	Sodium Polynucleotide	Temporary correction of facial wrinkles	Medical device	China, USA	
Samyang Biopharmaceuticals Corporation	Oncology Injectables	Oncology Injectables	Injection	Anti-cancer	EU(Germany) GMP certification	2017
	Active Pharmaceutical Ingredient	Paclitaxel Docetaxel Synthetic Paclitaxel Pemetrexed	API	Anti-cancer	EU(Germany) GMP certification	2014
	Paclitaxel(API)	Paclitaxel	API	Anti-cancer	Japan(PMDA) GMP certification	2013
	Docetaxel(API)	Docetaxel	API	Anti-cancer	Japan(PMDA) GMP certification	2013
	Oncology Injectables	Oncology Injectables	Injection	Anti-cancer	EU(Germany) GMP certification	2012
	Oncology Injectables	Oncology Injectables	Injection	Anti-cancer	Japan(PMDA) GMP certification	2010
	Oncology Injectables	Diclofenac diethylammonium	Plaster	NSAIDs	Australia (TGA) GMP certification	2010
Shin Poong Pharm. Co., Ltd	Pyramax® Tab.	Pyronaridine, artesunate	Tablet	Anti-malaria	EU GMP Certification	
	Pyramax® Gran.	Pyronaridine, artesunate	Granules	Anti-malaria	EU GMP Certification	
	Medicurtain®	Sodium hyaluronate, hydroxyethyl starch	Injection	Anti-adhesion	CE certification	
	-	Clopidogrel bisulfate	API	Anti-platelet	PMDA	
	-	Loxoprofen sodium	API	NSAID	PMDA	
	-	Telmisartan	API	Anti-hypertensive	PMDA	
	-	Sulbactam sodium	API	Anti-biotic	PMDA	
	-	Valsartan	API	Anti-hypertensive	PMDA	
	-	Irbesartan	API	Anti-hypertensive	PMDA	
	-	Fosfomycin sodium	API	Anti-biotic	PMDA	
-	Cilostazol	API	Antithrombotics	PMDA		
SK Chemicals Co. Ltd.	OMED	Omeprazole	Tablet	Anti-ulcer	Germany(EU)	
	Rivastigmine Patch	Rivastigmine	Patch	Alzheimer's disease	Germany(EU), Brazil(ANVISA)	
	SKYCellflu	Purified inactivated influenza virus surface antigen	PFS	Active immunization for the prevention of influenza disease		
	Plasma derivatives		Blood product			

Company	Product name	Active Ingredient	dosage form	Indication	International certification	Note
ST Pharm Co., Ltd.	-	Zidovudine	API	anti HIV/AIDS	US FDA GMP-API	-
	-	Zidovudine	API	anti HIV/AIDS	PMDA GMP-API	-
	-	Zidovudine	API	anti HIV/AIDS	TGA GMP-API	-
	-	Zidovudine	API	anti HIV/AIDS	ANVISA GMP-API	-
Taejoon Pharmaceutical Co., Ltd	Xalost Plus	Latanoprost plus Timolol maleate	Solution	Anti-glaucoma	EU GMP certification	
	Xalost	Latanoprost	Solution	Anti-glaucoma	EU GMP certification	
	MC Free	Sodium CMC	Solution	Dry eye	CE Marking	
TEGO SCIENCE, INC.,	Holoderm®	Autologous Keratinocytes	Sheet	Deep 2 <sup>nd</sup> degree burn over 30% of TBSA 3 <sup>rd</sup> degree burn over 10% of TBSA	KGMP	
	Kaloderm®	Allogeneic Keratinocytes	Sheet	Deep 2 <sup>nd</sup> degree burn(2005.03) Diabetic Foot Ulcer(2010.06)	KGMP	
	Rosmir®	Autologous Fibroblasts	Intradermal Injection	Improvement of Nasojugal Grooves	KGMP	
Yuhan Corporation	API 1	API 1	-	Antiviral	USFDA, TGA, PMDA	
	API 2	API 2	-	Antiviral	USFDA, TGA, PMDA	
	API 3	API 3	-	Antiviral	USFDA, TGA, PMDA	
	API 4	API 4	-	Antiviral	USFDA	
	Ribavirin	PMH	-	Antibiotic	USFDA, TGA, EDQM	
	Voglibose	Ribavirin	-	Antiviral	USFDA, EDQM	
	Cilostazol	Voglibose	-	Antiplatelet	PMDA	
	Levofloxacin	Cilostazol	-	Antiplatelet	PMDA	
		Levofloxacin	-	Antibiotic	PMDA	
	Piperacillin	Piperacillin	-	Antibiotic	PMDA	
Yungjin Pharm. Co.,Ltd.	Cefaclor	Cefaclor Monohydrate	Capsule	Infection	PMDA	
	Cefmetazole	Cefmetazole Sodium	API	Infection	PMDA	
	Cefotiam	Cefotiam HCl	API	Infection	PMDA	
	Cefdinir	Cefdinir	API, Tablet	Infection	PMDA	
	Cefditoren	Cefditoren Pivoxil	API, Dry syrup	Infection	PMDA	
	Ceftriaxone	Ceftriaxone Sodium	Inj.	Infection	PMDA	
	Cefcapene	Cefcapene Pivoxil HCl	API, Tablet	Infection	PMDA	
			Fine Granule			
	Caftazidime	Caftazidime Pnetahydrate	API, Injection	Infection	PMDA	

