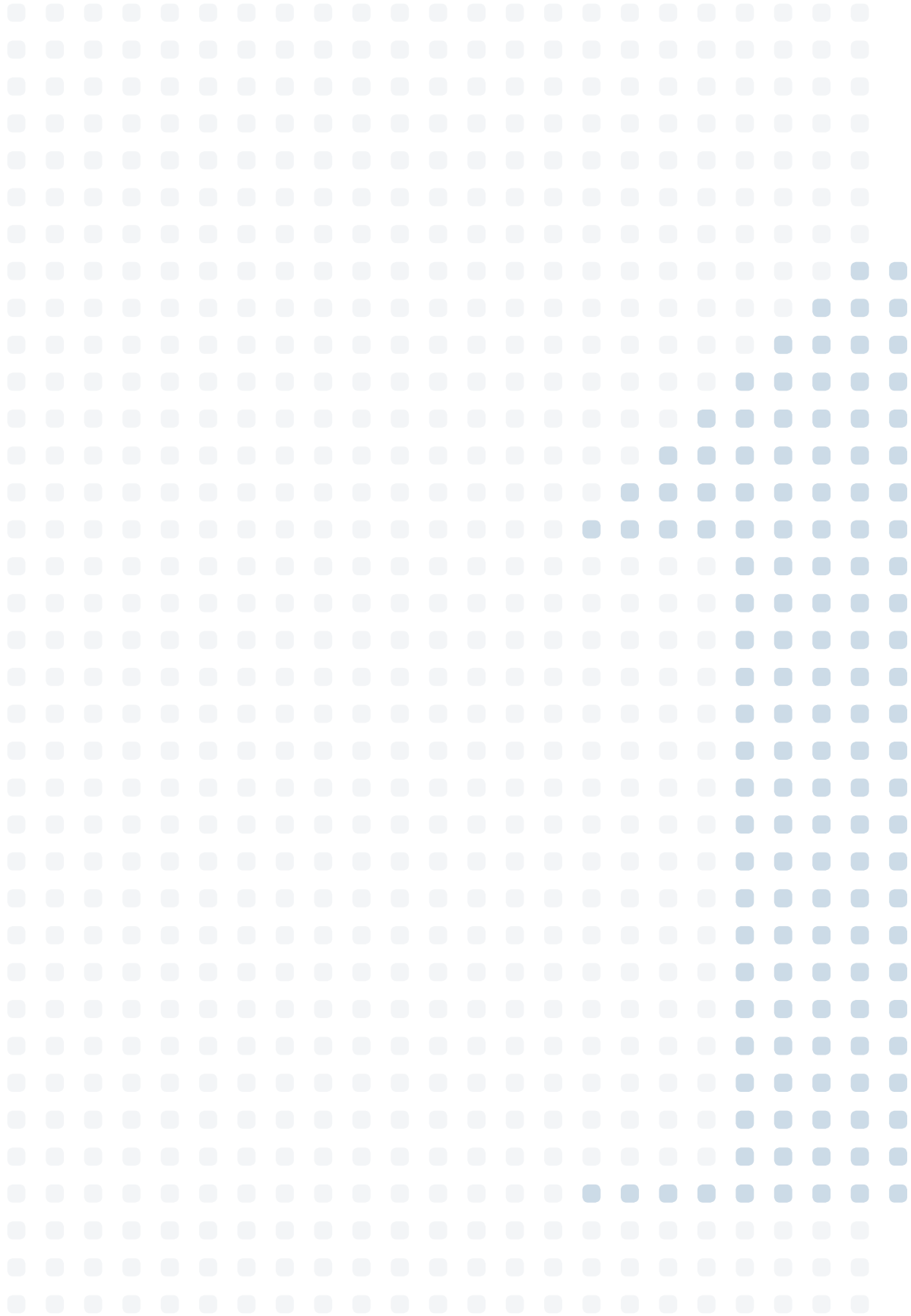


# ONWARD

ANNUAL REPORT 2015



DONG-A SOCIO GROUP





# UPWARD

Dong-A Socio Group has stayed competitive for more than 80 years – not because we are perfect, but because we make progress. Progress means the courage to seek new roads; that is why, in 2013, we left our well-trodden paths and set out in a new direction, to become a global healthcare group.

This Annual Report 2015 shows how Dong-A Socio Group has changed and innovated in last three years under the new holding company structure. It also underlines the progress we made in 2015, opening up new perspectives to grow in partnership with all of our stakeholders.

## Contents

Letter to Shareholders 004



### DONG-A SOCIO GROUP

Group Profile 008

Key Figures 014

CEOs of Major Entities of  
Dong-A Socio Group 015

Corporate Governance 016

Board of Directors 017

2015 Highlights 018

Milestones 046



### DONG-A SOCIO HOLDINGS

Dong-A Socio Holdings at a Glance 050

Subsidiaries 052

Financial Review 062

### DONG-A ST

Dong-A ST at a Glance 080

Business Review 082

R&D Review 088

Financial Review 093



### PRODUCT PORTFOLIO

Ethical Drugs 120

OTC & Healthcare Products 127

Active Pharmaceutical Ingredients 131

Corporate & IR Information 133

In 2015, Dong-A Socio Group took further steps to realize our goal toward a global healthcare group as we made good progress in R&D pipeline, significantly expanded global reach, and generated value for our stakeholders.



## Letter to Shareholders

**Dear customers and shareholders,**

Dong-A Socio Group was able to continue our balanced growth in 2015, thanks to your support and encouragement. In particular, based on the stable holding company structure, we established the foundations of a global healthcare group by making full use of our core capabilities, such as strong corporate governance and a corporate culture that relishes challenge and change.

Dong-A Socio Holdings' biosimilars unit was spin off and made into a new company, DM Bio, in early 2015, in efforts to develop our expertise in biosimilars, and to strengthen the strategic alliance with Japan's Meiji Seika Pharma. At the end of 2015, Dong-A ST's Active Pharmaceutical Ingredient (API) business unit was transferred to ST Pharm, which will boost our specialty and efficiency in API business. By overhauling our organizational system, Dong-A Socio Group has further strengthened our Over-the-counter (OTC) drug, Ethical (ETC) drug, bio-pharmaceutical, and API businesses.



R&D is the future of Dong-A Socio Group, and we continued to make outstanding achievements in R&D. We particularly made meaningful progress in global R&D – Sivextro<sup>®</sup>, an oxazolidinone class antibiotic developed by Dong-A ST, became the company's first in-house developed original drug to receive a New Drug Application (NDA) approval from the US Food and Drug Administration (FDA) in 2014, which was followed by launch in Europe and Asia in 2015, indicating the birth of new global drug. In addition, DA-9801, a diabetic neuropathy treatment, became the first new botanical drug in Korea to successfully complete a phase II clinical trial in the US. In Japan, we are carrying out clinical trials of a biosimilar of Herceptin<sup>®</sup> for breast cancer, and a biosimilar of Aranesp<sup>®</sup>, an anemia treatment. In the domestic market, we have received an NDA approval from the Korean Ministry of Food and Drug Safety (MFDS) for Suganon<sup>®</sup> (DA-1229, Evogliptin), a diabetes treatment. By successfully launching our fifth in-house developed original drug, we were able to maintain our undisputed position as an R&D leader in Korea with the most in-house developed original drugs of any Korean pharmaceutical company, while proving our R&D capabilities once again.

In 2015, Bacchus<sup>®</sup> became the first single product in the Korean pharmaceutical industry to exceed KRW 200 billion in annual sales. There were also substantial increases in sales of the API for a hepatitis treatment of ST Pharm, a company that specializes in APIs. In addition, M.I.Tech, a medical equipment specialist, achieved a considerable increase in exports. As such, all major entities of the Group achieved stable growth.

.....

Dong-A Socio Group aims to be a trusted and respected pharmaceutical company by creating social value, which is why we are committed to various social contribution activities in Korea and abroad. There was substantial stock market interest in the pharmaceutical industry in 2015, and so we were active across diverse channels in communicating with shareholders and investors to enhance our corporate value. We also continued to focus on making ethical management a fundamental of our corporate culture, and as a result, Dong-A ST achieved 'AA' rank, the highest rating in Korea, on CP Evaluation Program carried out by the Fair Trade Commission in December 2015.

2015 was a year in which Dong-A Socio Group's commitment to change and innovation truly began to bear fruit. However, we are not complacent, instead, based on our never-ending commitment to doing more, we have put cornerstones in place to take further steps forward. We will therefore pursue the following three strategic tasks in 2016:

### **First, we will strengthen the Group's global capabilities, based on the holding company structure.**

By further strengthening the holding company structure, we will ensure that expertise and capabilities of each company within the Group meet global standards. This will generate considerable synergy between members of Dong-A Socio Group, and strengthen our global position.

After a highly successful year in 2015, we look forward to the future with optimism: a future in which much will change, in which we will be spurred on by that change and will set our own course to achieve stronger and sustainable growth.

**Second**, we will make effective R&D investments, in order to secure future growth drivers.

Dong-A Socio Group has continually invested in R&D for the future irrespective of the ups and downs of the market, and has witnessed many positive outcomes as a result. We will make R&D investments in innovative new drugs and bio-pharmaceuticals, so that we can develop drivers of new growth for the Group.

**Lastly**, we will continue with our corporate philosophy of respecting life and maximizing shareholder value.

Everyone at Dong-A Socio Group is fully committed to 'respect for life' being our key value. A strong sense of ethics and transparency will enable us to become a trusted and respected global corporate citizen.

.....

In 2013, Dong-A Socio Group stepped off the easy road we were on as Korea's number one pharmaceutical company, and chose to take the more challenging path of seeking to become a global healthcare group. 2015 was the year when the possibilities of this challenge became visible, and 2016 will mark a new milestone on the road to a truly global healthcare group. I look forward to your unwavering trust and support.

Thank you.



**Shin-Ho Kang**  
Chairman, Dong-A Socio Group

# DONG-A SOCIO GROUP

Celebrating its 80th anniversary of the foundation in 2012, Dong-A had set the course for a sustainable and successful future. Over the past three years, continuous efforts have been made to successfully transform ourselves into a holding company structure in pursuit of **GROWTH IN UNISON** page 10 and **FOCUSED GROWTH.** page 12

## Summarized Financial Statements

(Unit: KRW billion)	2013	2014	2015
<b>Dong-A Socio Holdings</b>			
Total assets	988.3	1,081.1	1,223.5
Total liabilities	473.7	546.6	620.9
Total shareholders' equity	514.6	534.5	602.6
Sales	570.9	630.6	704.7
Operating profit	33.6	20.8	64.4
Net profit	21.5	6.5	66.6
<b>Dong-A ST</b>			
Total assets	931.7	1,081.9	1,063.5
Total liabilities	492.4	593.5	509.8
Total shareholders' equity	439.4	488.3	553.8
Sales	501.0	578.6	581.0
Operating profit	39.8	49.4	55.4
Net profit	(65.7)	37.5	48.6

\* Consolidated figures basis

## Sales Structure

	Former Structure		New Structure		
	2012		2013	2014	2015
(Unit: KRW billion)			(Full year pro-forma)		
ETC	439.7	DONG-A PHARMACEUTICAL (Former)	383.7	352.6	330.4
Overseas	94.8		117.2	112.3	133.0
Medical Equipments & Diagnostics	73.7		65.0	65.7	66.8
OTC	140.0		152.3	159.3	159.5
Bacchus® (Domestic only)	170.9		179.2	186.5	201.0
					DONG-A ST DONG-A PHARMACEUTICAL

# GROWTH IN UNISON

## Growth Momentum

In March 2013, Dong-A Socio Group initiated a change to a holding company structure. The former Dong-A Pharmaceutical demerged into Dong-A Socio Holdings, the holding company, Dong-A ST, a company specializing in Ethical (ETC) drugs, and Dong-A Pharmaceutical, a company specializing in Over-the-counter (OTC) drugs. The existing Dong-A Socio Holdings entity completed a change of listing on the Korea Exchange (KRX) market on April 8th, 2013. Dong-A ST, the company created as a result of the equity spin-off, was re-listed. On October 30th, 2014, Dong-A Socio Holdings satisfied the requirements of the Fair Trade Act for becoming a holding company, and received approval from the Fair Trade Commission in December 2014, which marked the successful completion of its change to a holding company structure.

This transformation into a holding company structure has enabled the entities within the Group to increase their expertise, flexibility and efficiency, which in turn has made it easier and quicker to make investments into core businesses, such as new drug development. Transparency and management responsibility have improved substantially, as well. Dong-A Socio Group has thus been able to go beyond being Korea's number one pharmaceutical company, and is seeking the growth momentum to develop into a total global healthcare group.

## On Track for Growth

Dong-A Socio Group constantly strives to diversify its business portfolio, previously limited to medical treatments, to advance into medical equipment and healthcare services, which focus more on disease prevention and control. Furthermore, we are accelerating the development of innovative new drugs and bio-pharmaceuticals as future growth drivers, and widening our global network by exporting products and technologies, and by adding to our global R&D collaborations. As a result, there has been stable growth across the major entities of the Group, and they are expected to achieve profitable growth as well, thanks to diversified business portfolio.

Backed by our professional and flexible organization, everyone at Dong-A Socio Group works in unison to take on new challenges. In May 2014, we completed the construction of the DM Bio Plant, which has been designated as a current Good Manufacturing Practice (cGMP) plant. This plant will be our base for producing bio-pharmaceuticals, one of the most important business for our future. The development of innovative new drugs will also play a pivotal role in enabling us to grow into a global healthcare group. In June 2014, Sivextro<sup>®</sup>, an oxazolidinone class antibiotic developed by Dong-A ST, secured approval from the US Food and Drug Administration (FDA) for sales to begin later that year. This was followed by the successful launch in Europe and Asia, as well as sales approval in Korea in 2015, indicating the birth of global new drug. In addition, Dong-A ST and ST Pharm won the '100-Million-USD Pagoda of Exports' in 2014 and the '70-Million-USD Pagoda of Exports' in 2015, respectively, from the Korea International Trade Association, proving that the Group is well on track to be a global healthcare group.

## Dong-A Socio Holdings

Dong-A Socio Holdings defines the overall vision and formulates strategic goals of Dong-A Socio Group, and draws up the Group's human resource and investment plans to achieve the goals. The company also makes long-term investments toward new business and new innovative medicines, including bio-pharmaceuticals, while expanding its business areas by going beyond the previously pharmaceuticals-centered business structure to include medical services and other new business areas.

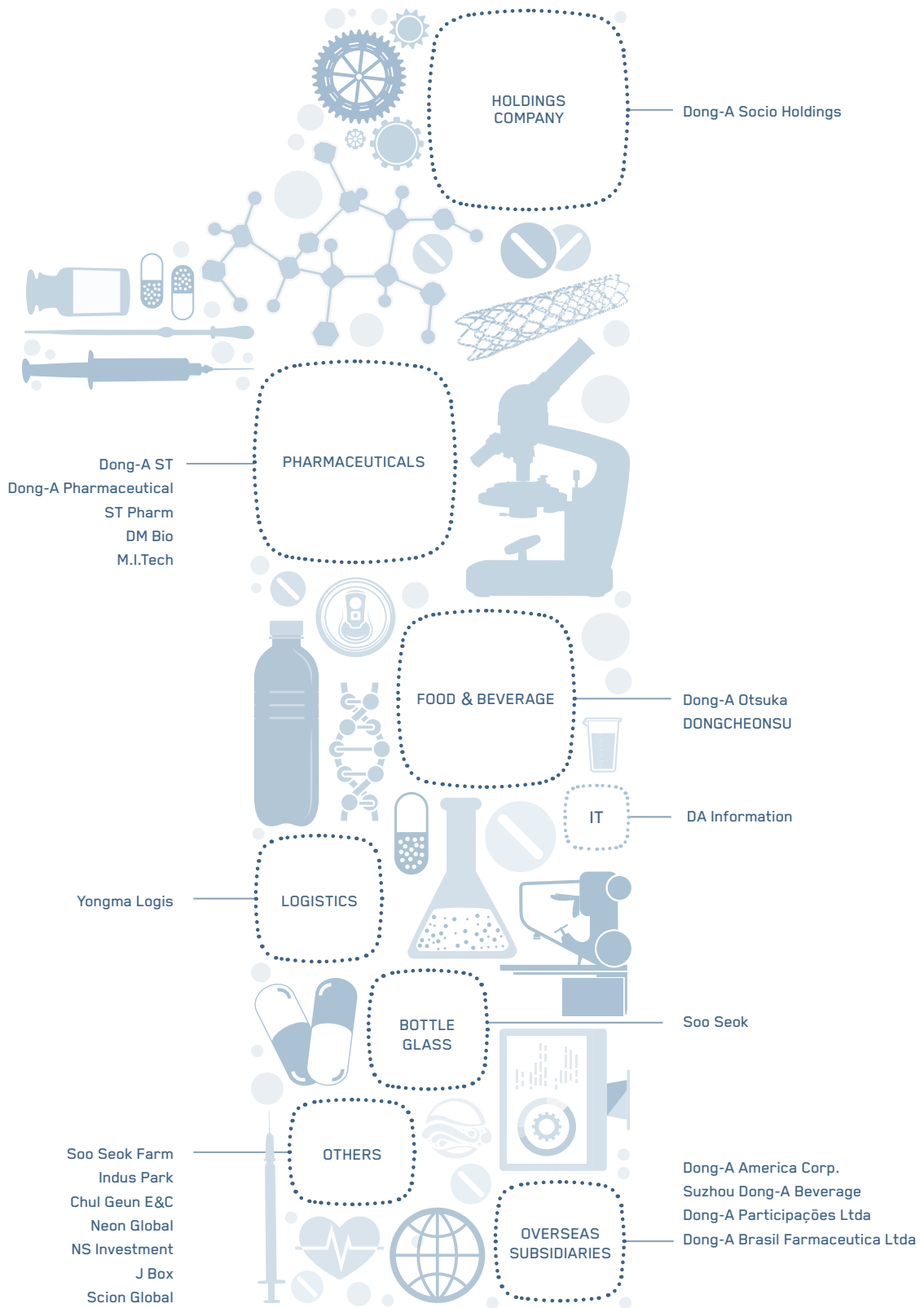
## Dong-A ST

Dong-A ST is a specialist for ETC drugs, overseas business, and medical equipment & diagnostics, and manages business collaboration and the registration of pharmaceuticals in countries which it currently exports to, while pursuing the expansion of global presence in the short- and mid-term. The company makes intensive efforts to develop global new drugs based on its outstanding research infrastructure of cutting-edge research centers and highly-skilled research experts, in an effort to grow into a global pharmaceutical company.

## Dong-A Pharmaceutical

Dong-A Pharmaceutical's main businesses include OTC drugs, health functional foods, and quasi-drugs such as Bacchus<sup>®</sup>. The company aims to be Korea's top healthcare company by adhering closely to its founding spirit of contributing to the health of the nation by creating medicines that will help people live better lives.

GROUP ORGANIZATION



\* 22 entities as of December 31, 2015

# FOCUSED GROWTH

With the new company structure fully established, Dong-A Socio Group seeks to build businesses capabilities where we can excel and grow. We are particularly looking to concentrate investment and expertise in entities within the group and business divisions that are expected to be drivers of future growth. This will make for efficient investment decisions, and will help us with our long-term goal of becoming a global healthcare group.

In order to increase our focus on biosimilars, Dong-A Socio Holdings' biosimilars unit was spun off to establish DM Bio in April 2015. Dong-A Socio Holdings now concentrates on subsidiary management and making investment decision, including in new business, while DM Bio is in charge of biosimilars. Dong-A Socio Group has established a governance structure that allows rapid and professional decision-making that is right for each company's business, and the Group has also put in place a suitable risk management structure across the entities.

In November 2015, Dong-A ST transferred its API business to ST Pharm, an affiliated company, in order to boost the ETC business. Dong-A ST transferred the Banwol Plant, the production site for API products, patent rights, relevant employees, and all other tangible and intangible assets related to API business to ST Pharm, so that Dong-A ST can focus on finished ETC pharmaceuticals and ST Pharm can manage the API business, which is an important driver of growth for Dong-A Socio Group.

The launch of the holding company has enabled us to set up specialized business operations across the Group, with ETC, OTC, API and biosimilars becoming the specialist areas of Dong-A ST, Dong-A Pharmaceutical, ST Pharm and DM Bio, respectively. In 2012, celebrating our 80th anniversary, Dong-A Socio Group announced our vision of becoming a global healthcare group, and began the change to a holding company structure. Now, after three years of strenuous efforts, the structure is in place to enable each company within the Group to further concentrate on its relevant business, with Dong-A Socio Holdings at the center as the holding company, taking charge of the investment business. And this will accelerate the pace of our growth into a total global healthcare group.

## Business Highlights

Our eyes are on global markets, and always have been. Dong-A Socio Group advanced into a global market by exporting Bacchus® in 1981, and now exports in-house developed original drugs, bio-pharmaceuticals, Active Pharmaceutical Ingredients (APIs) and finished products to around 40 countries world-wide. In addition, the Group is in collaborations with foreign companies and institutions, to make joint efforts to license in and out, and to undertake R&D and marketing in local markets around the world, all in effort to expand our global presence.

## R&D Highlights

Dong-A Socio Group concentrates our efforts and resources on developing innovative new drugs by adhering closely to our founding spirit of contributing to the health of the nation by creating good medicines. In 2015 such efforts and commitment led to tangible results, including the birth of our fifth in-house developed original drug Suganon®, successful completion of phase II clinical trial of DA-9801 in the US, and the sales approval of Sivextro® in Europe and Asia.

## CSR Highlights

The word 'Socio' in Dong-A Socio Group's name means 'society' in Latin, reflecting our determination to change society for the better. In 2015, Dong-A Socio Group continued to strengthen corporate ethics, improve communication with shareholders, and fulfill our corporate social responsibilities. As a result, we made progress in solidifying our Compliance Program (CP), enhancing shareholder value, and engaging in active social contribution activities, thereby taking a step forward becoming a 'world-leading company that is respected for innovative pharmaceuticals'.

## Key Overseas Achievements

# No. 1

Market share of Bacchus® in the Cambodian energy drink market

# 18.5%

Year-on-year sales increase of the Overseas Unit of Dong-A ST

## R&D Investment

# 37.1

 KRW billion  
Dong-A Socio Holdings <sup>1)</sup>

# 57.4

 KRW billion  
Dong-A ST <sup>2)</sup>

<sup>1)</sup> Consolidated figures basis

<sup>2)</sup> Separate figures basis

## Key CSR Milestones

# 10,282km

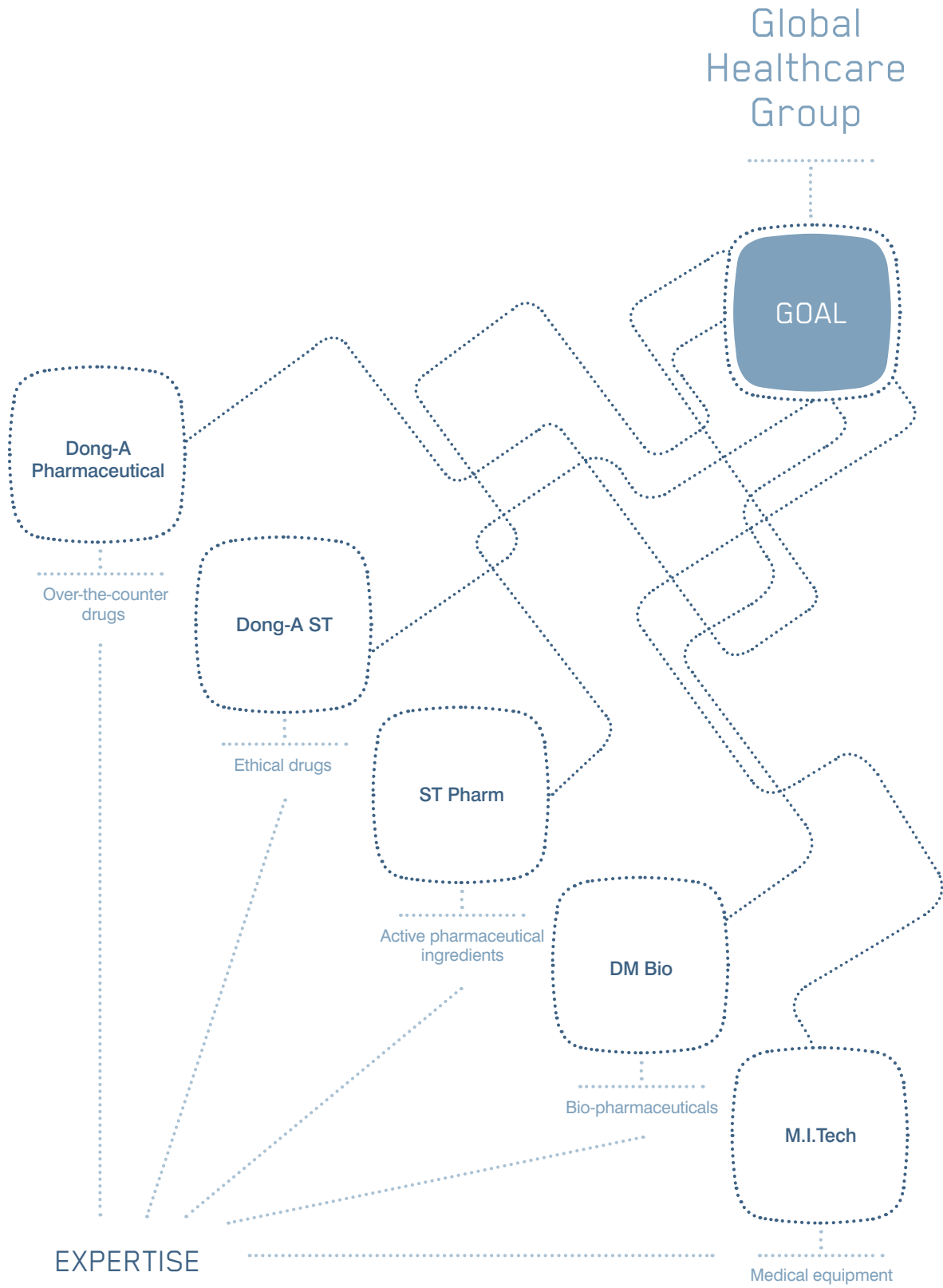
Cumulative distance of Dong-A Pharmaceutical's Tour Korea for College Students

# AA

Achieved 'AA' rank on CP Evaluation Program

\* As of December 31, 2015

EXPERTISE & GOAL



# Key Figures

## 2015 Summarized Financial Statements

### DONG-A SOCIO HOLDINGS

(Unit: KRW billion)

#### Statements of Financial Position

	SEPARATE FIGURE	CONSOLIDATED FIGURE
Total assets	618.8	1,223.5
Total liabilities	215.5	620.9
Total shareholders' equity	403.3	602.6

#### Statements of Income

Sales	48.9	704.7
Cost of goods sold	19.5	457.3
SG&A expenses	14.6	145.9
R&D expense	22.1	37.1
Operating profit	(7.3)	64.4
Profit before income tax	31.3	94.1
Net profit	26.4	66.6

### DONG-A ST

(Unit: KRW billion)

#### Statements of Financial Position

	SEPARATE FIGURE	CONSOLIDATED FIGURE
Total assets	1,059.0	1,063.5
Total liabilities	507.7	509.8
Total shareholders' equity	551.3	553.8

#### Statements of Income

Sales	567.9	581.0
Cost of goods sold	273.8	279.1
SG&A expenses	182.4	187.6
R&D expense	57.4	58.9
Operating profit	54.3	55.4
Profit before income tax	63.0	63.9
Net profit	48.0	48.6

## CEOs of Major Entities of Dong-A Socio Group

### DONG-A SOCIO HOLDINGS



**Chan-Il Park**  
CEO & President



**Dong-Hoon Lee**  
CEO & Executive Vice President

### DONG-A ST



**Soo-Hyoung Kang**  
CEO & President

### DONG-A PHARMACEUTICAL



**Won-Hee Lee**  
CEO & President

## Corporate Governance

Dong-A Socio Group strives to create values for our stakeholders on the back of responsible and transparent management through advanced governance system.

Dong-A Socio Holdings, Dong-A ST, and Dong-A Pharmaceutical each has a separate Board of Directors (BOD). The companies conduct efficient evaluations and prompt investments based on independent decision-making by the BODs. In order to best represent shareholder interests, each BOD is in charge of all of its respective business activities, ranging from formulating management strategies to monitoring whether performance goals have been achieved. They make decisions on remuneration for top management. In addition, we have drawn up regulations on BOD operations, in order to ensure efficient and responsible management.

As of the end of 2015, the BOD of Dong-A Socio Holdings consists of four internal directors and two outside directors. In 2015, the Board held a total of 20 meetings to deliberate on 28 agenda items and the rate of participation by outside directors was 100%.

The BOD of Dong-A ST consists of three internal directors, three outside directors, and two affiliated directors. In 2015, the Board held eight meetings to deliberate on 11 agenda items, and all outside directors participated in all meetings.

The BOD of Dong-A Pharmaceutical consists of one internal director, two outside directors, and two affiliated directors. Four meetings were held in 2015, to discuss nine agenda items, with the 100% participation rate of outside directors.



	DONG-A SOCIO HOLDINGS	DONG-A ST	DONG-A PHARMACEUTICAL
<b>Composition</b>	4 internal directors, 2 outside directors	3 internal directors, 3 outside directors, and 2 affiliated directors	1 internal director, 2 outside directors, and 2 affiliated directors
<b>Activities</b>	20 meetings on 28 agenda	8 meetings on 11 agenda	4 meetings on 9 agenda
<b>Outside directors' participation rate</b>	100%	100%	100%

\* As of December 2015

# Board of Directors

## Dong-A Socio Holdings

### INSIDE DIRECTORS

#### Chan-Il Park

CEO & President, Dong-A Socio Holdings

2013 CEO & President, Dong-A ST

1990 B.A. in Pharmacy, Seoul National University

#### Dong-Hoon Lee

CEO & Executive Vice President,  
Dong-A Socio Holdings

2012 Executive Director, Investment Advisory,  
Samjong KPMG

1995 M.A. in Business Administration,  
Ohio State University

#### Hong-Ki Chae

Executive Director & CFO, Dong-A Socio Holdings

2012 Head, Financial Administration Division,  
Dong-A Pharmaceutical

1989 M.A. in Law, Korea University

### OUTSIDE DIRECTORS

#### Bong-Soon Cho

2007 Professor, Business Administration,  
Sogang Business School

2004 Ph.D. in Business Administration,  
State University of New York

#### Han-Sang Lee

2013 Professor, Korea University Business School

2006 Ph.D. in Business Administration,  
Michigan State University

### AFFILIATED DIRECTORS

#### Won-Hee Lee

CEO & President, Dong-A Pharmaceutical

2010 CEO & President, Donga Otsuka

1982 B.A. in Social Welfare, Chung-Ang University

#### Dae-Sik Eom

Chairman, Korea Otsuka Pharmaceutical

1996 CEO & President, Korea Otsuka Pharmaceutical

1982 B.S. in Agriculture and Life Sciences,  
Seoul National University

### AUDITORS

#### Jong-Sik Yoo

Auditor, Dong-A Socio Holdings

2012 Outside Auditor, Dong-A Pharmaceutical

1987 B.A. in Landscape Architecture,  
Yeungnam University

#### Seok-Kyu Han

Auditor, Dong-A Socio Holdings

2014 Audit Team, Dong-A Pharmaceutical

1990 B.A. in Chemical Engineering,  
Kwangwoon University

## Dong-A ST

### INSIDE DIRECTORS

#### Soo-Hyung Kang

CEO & President, Dong-A ST

2013 CEO & President, DM Bio

1996 Ph.D. in Biochemistry, Korea University

#### Byoung-Ok Ahn

Head of Development & Licensing, Dong-A ST

2011 Head of Development & Licensing,  
Dong-A Pharmaceutical

2003 Ph.D. in Veterinary Science,  
Seoul National University

#### Hak-Kyung Kim

Executive Director of Sales & Marketing, Dong-A ST

2013 Head of Seoul Branch, Dong-A ST

1989 B.A. in German Language & Literature,  
Konkuk University

### OUTSIDE DIRECTORS

#### Keun-Soo Kim

2005 Professor, Business Administration, Graduate  
School of Pan-Pacific International Studies,  
Kyung Hee University

2000 Ph.D. in Economy, State University of New York

#### Byoung-Chang Woo

2011 Trustee of Director, Korea-Japan Law Association

1996 Ph.D. in Law, Korea University

### AFFILIATED DIRECTORS

#### Jung-Seok Kang

Vice Chairman, Dong-A Socio Holdings

2013 CEO & President, Dong-A Socio Holdings

2009 M.S. in Pharmacy, Sungkyunkwan University

#### Yoo-Seok Hong

CEO & President, GlaxoSmithKline (GSK) Korea

2007 CEO & President, Eli Lilly and Company Korea

1992 MBA, Wharton School of Business,  
University of Pennsylvania

#### Dae-Sik Eom

Chairman, Korea Otsuka Pharmaceutical

1996 CEO & President, Korea Otsuka Pharmaceutical

1982 B.S. in Agriculture and Life Sciences,  
Seoul National University

### AUDITOR

#### Kyung-Jun Park

Auditor, Dong-A ST

2011 Senior Manager, Samjong KPMG

1997 B.A. in Business Administration,  
Korea University

## Dong-A Pharmaceutical

### INSIDE DIRECTORS

#### Won-Hee Lee

CEO & President, Dong-A Pharmaceutical

2010 CEO & President, Donga Otsuka

1982 B.A. in Social Welfare, Chung-Ang University

#### Moon-Soo Han

Executive Director of Sales & Marketing,  
Dong-A Pharmaceutical

2013 Head of Operation Support,  
Dong-A Socio Holdings

2010 M.S. in Pharmacy, Sungkyunkwan University

#### Sung-Keun Lee

Executive Director & CFO, Dong-A Pharmaceutical

2011 Partner, Samil Pricewaterhouse Coopers (PwC)

1996 B.A. in Business Administration,  
Sogang University

### OUTSIDE DIRECTORS

#### Sang-Gyung Jun

2002 Professor, Business Administration,  
Hanyang University

2000 Ph.D. in Finance, State University of New York

#### You-Jae Yi

1993 Professor, Business Administration,  
Seoul National University

1987 Ph.D. in Business Administration,  
Stanford University

### AFFILIATED DIRECTOR

#### Jung-Seok Kang

Vice Chairman, Dong-A Socio Holdings

2013 CEO & President, Dong-A Socio Holdings

2009 M.S. in Pharmacy, Sungkyunkwan University

### AUDITOR

#### Sam-Beom Choi

Auditor, Dong-A Pharmaceutical

2005 Director, Accounting Firm Doore

1998 B.A. in Physics, Dongguk University



# ONWARD

In 2015, Dong-A Socio Group has stayed on track in challenging situations, and strived to build on our strengths that combine the expertise and excellence of all companies within the Group. As a result, we made major advances across our areas of R&D focus and delivered a strong financial performance.

Dong-A Socio Group has transformed our organizational business structure so that we are able not just better to respond to market changes, but to lead them. We will continue to seize opportunities to achieve stronger and more sustainable growth, always striving to become a truly global healthcare group.

# UPWARD



INNOVATION HIGHLIGHTS

5th

**Suganon®**  
Dong-A ST's  
fifth in-house developed  
original drug

DA-9801

**New Botanical Drug**  
Phase II clinical trial  
completed in the US

10  
Countries

**Sivextro®**  
Launched in 10 European  
countries in 2015

# LITTLE PILL



# BIG IMPACT



# ROBUST RESEARCH



GLOBALIZATION HIGHLIGHTS

No.1

**Bacchus®**  
The largest share of the Cambodian  
energy drinks market

70 million

**ST Pharm**  
Won the '70-Million-USD  
Pagoda of Export'

x2

**Closerin®**  
Export sales grew more than  
two times year-on-year

# GLOBAL REACH

INSPIRATION HIGHLIGHTS

10,282

**Tour Korea for  
College Students**

10,282km of cumulative  
distance as of the end of 2015

30,000

**Bottles of Bacchus®**

Donated to the Korean Red Cross  
on the 'International Volunteer Day'

AA

**CP Evaluation  
Program**

Dong-A ST achieved  
'AA' rank

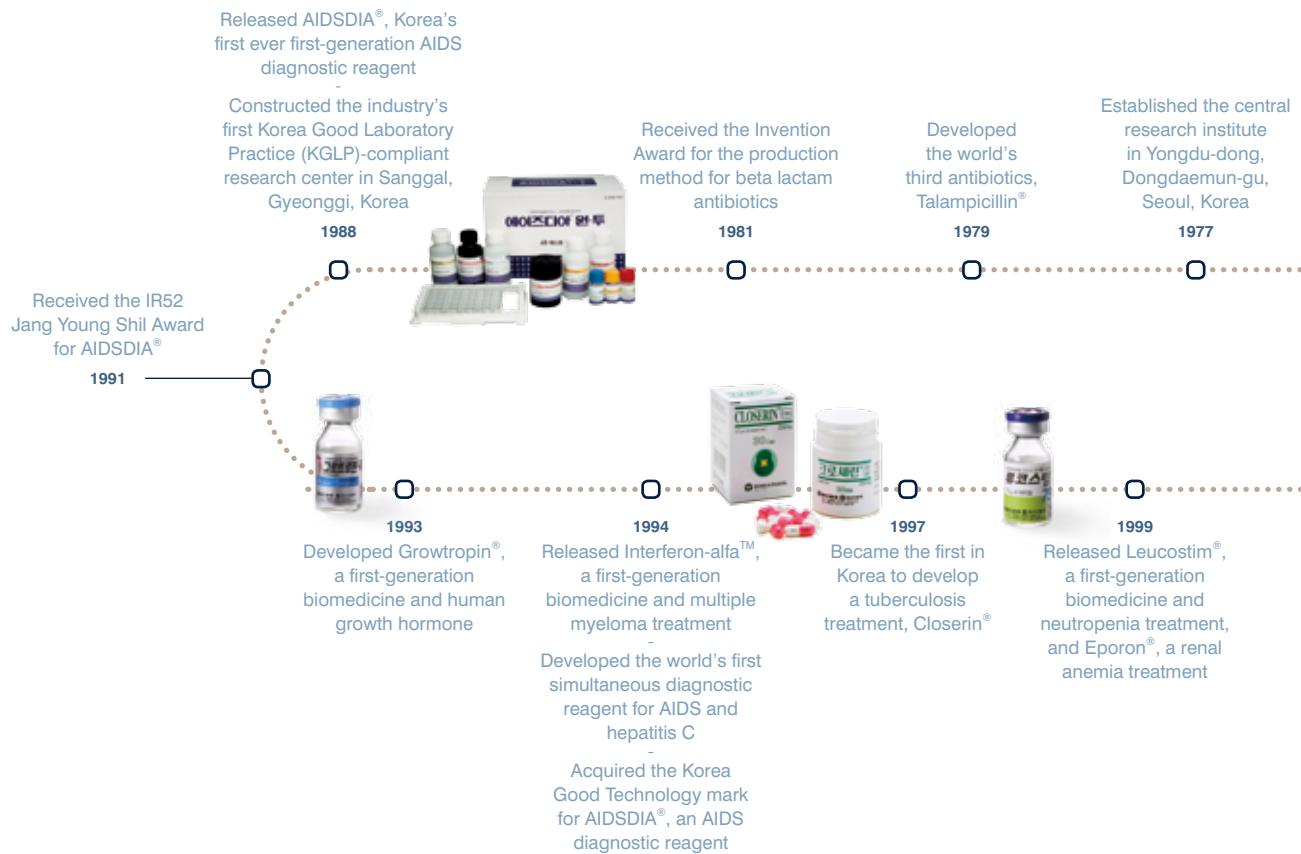


10,282km

SUSTAINABILITY



IN OUR DNA



# INNOVATION

## ON TRACK

New drug development is the goal and raison d'être of Dong-A Socio Group. Based on our founding spirit and unwavering commitment to 'contribute to the health of the nation by creating medicines that will help people live better lives', Dong-A Socio Group has been exploring possibilities where others only see limitations, and able to achieve tangible progress in recent years.

In 2015, we successfully completed a phase II clinical trial of DA-9801 in the US. Dong-A ST's in-house developed new botanical drug for the treatment of diabetic neuropathy. This has opened up the possibility of a global market for a Korean-made new phytomedicine. In addition to the successes of Sivextro<sup>®</sup>, which took further steps towards becoming a global new drug by obtaining its additional approval in Europe and Asia following commercial launch in the US in 2014, preparations are being made for a phase III global clinical trial of DA-3880, a biosimilar of Aranesp<sup>®</sup>, a second-generation anemia treatment. In the mAb biosimilar area, which is garnering attention as a next-generation growth driver, a phase I clinical trial in Japan of DMB-3111, a breast cancer treatment, was completed, followed by preparations

for a phase III global clinical trial. These successes are proving Dong-A's outstanding R&D competitiveness in regulated markets.

In October 2015, Suganon<sup>®</sup>, our fifth in-house developed original drug, received an NDA approval from the Korean Ministry of Food and Drug Safety (MFDS), solidifying our position as an R&D leader in Korea with the most in-house developed original drugs among Korean pharmaceutical companies.

Dong-A Socio Group undertakes constant high-level R&D to promote our own growth and to contribute to society through our spirit of respecting life, and will continue to actively develop new medicines by leveraging new science and technologies. In particular, Dong-A Socio Group will do our utmost to develop new drugs in unexplored areas, where there are currently no firmly established medicines, which will lead us to achieve sustainable growth and also help a greater number of people enjoy a healthy life.

R&D HISTORY



2002

Released Stillen<sup>®</sup>, Dong-A's first in-house developed original drug and a phytomedicine for gastritis

Released Zyderna<sup>®</sup>, Dong-A's second in-house developed original drug and an erectile dysfunction treatment

2005



Released Gonadopin<sup>®</sup>, a first-generation biomedicine and infertility treatment

2006

Licensed out Sivextro<sup>®</sup>, an oxazolidinone class antibiotic, to Trius Therapeutics of the US for the worldwide territory except Korea

2007

Received the IR52 Jang Young Shil Award for Zyderna<sup>®</sup>



2011

Released Motilitone<sup>®</sup>, Dong-A's third in-house developed original drug and a phytomedicine for functional dyspepsia

Signed a joint R&D contract with the Joint Center for Biosciences (JCB) Research Institute of the US on the AB-204, Bone Morphogenetic Protein (BMP)

2013

Received an Investigational New Drug (IND) application approval for a phase II clinical trial of DA-9801, a treatment for diabetic neuropathy, from the US Food and Drug Administration (FDA)

Established a Korea's first dementia research center



2012

Licensed out DA-1229 (Evogliptin), a diabetes treatment, to Luye Pharma Group of China for the Chinese market

Licensed out Monotaxel<sup>®</sup>, an Incrementally Modified Drug (IMD) for cancer, to Gloria Pharmaceutical of China for the Chinese market

Received the IR52 Jang Young Shil Award for Motilitone<sup>®</sup>

Licensed out DA-1229 (Evogliptin) to Alkem Laboratories of India for the Indian and Nepali markets



2014

Licensed out DA-3880 (Darbepoetin- $\alpha$ ), a long-acting bio-pharmaceutical drug stimulating erythropoiesis, to Sanwa Kagaku Kenkyusho (SKK) of Japan for the Japanese market

Obtained US FDA approval and launched Sivextro<sup>®</sup> (DA-7218, Tedizolid), an oxazolidinone class antibiotic, in the US by Cubist

Signed an Memorandum of Understanding (MOU) with the University of Freiburg in Germany on joint research of dementia and anti-cancer treatments

Secured Korean Ministry of Food and Drug Safety (MFDS) approval for Dulastin<sup>®</sup>, DA-3031 (PEG-G-CSF), a long-acting bio-pharmaceutical drug for neutropenia

Licensed out DA-1229 (Evogliptin), a diabetes treatment, to Eurofarma Laboratórios of Brazil for the Brazilian market

2015

Obtained European Commission (EC) approval and launched Sivextro<sup>®</sup> in European countries

Received Korean MFDS approval for Sivextro<sup>®</sup>

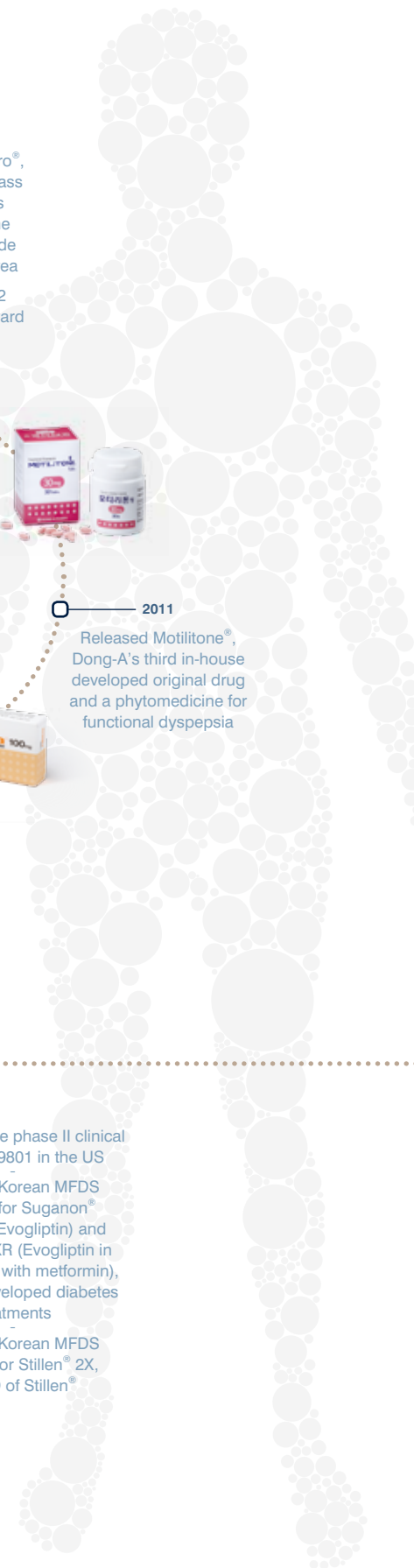
Licensed out DA-1229 (Evogliptin) to Eurofarma Laboratórios of Brazil for 17 countries in Latin America

Licensed out DA-1229 (Evogliptin) to GEROPHARM of Russia for the Russian, Ukrainian and Kazakhstan markets

Completed the phase II clinical trial of DA-9801 in the US

Received Korean MFDS approval for Suganon<sup>®</sup> (DA-1229, Evogliptin) and Sugamet<sup>®</sup> XR (Evogliptin in combination with metformin), in-house developed diabetes treatments

Received Korean MFDS approval for Stillen<sup>®</sup> 2X, an IMD of Stillen<sup>®</sup>



# DA-9801

We will accelerate the development of DA-9801 through our outstanding R&D, global collaborations, and a passion to find cure for diseases with unmet needs.

### Completion of a phase II clinical trial in the US

DA-9801 is Dong-A ST's in-house developed treatment for diabetic neuropathy, with pain reduction and nerve regeneration effects, and its phase II clinical trial in the US was completed in 2015. It is a novel botanical drug, and its main ingredients are Dioscorea Rhizome and Dioscoreae Nipponicae Rhizoma. We began its development in 2008 by screening numerous candidate drugs; the phase II clinical trial was conducted in the US, with aiming to advance into global market. DA-9801 was selected as one of the projects for global botanical drug development center in 2011 and supported by the Korean Ministry of Trade, Industry and Energy.

In 2013, DA-9801 became the first botanical drug in Korea to receive an IND approval for phase II clinical trial from the US Food and Drug Administration (FDA). The phase II clinical trial was conducted at 14 clinical institutions including the Johns Hopkins Hospital for about two years, and was successfully completed in January 2015. This made DA-9801 the first botanical drug in Korea to successfully complete an advanced clinical trial in a major overseas country. An End-of-Phase 2 (EOP2) meeting with the US FDA is planned to be held in March 2016, and preparations are under way for the next-phase clinical trial.

### Status of the diabetic neuropathy treatment market

Diabetic neuropathy is one of the leading complications of diabetes, and a major factor in reducing quality of life for diabetes patients. High blood sugar causes metabolites in cells to act as poisons, and kill or denature nerve cells. Main symptoms include numbness, severe pain, and sensory paralysis. Because the precise pathogenic mechanism is not known, treatment mainly involves pain relief.

The number of cases of diabetes, which is a chronic illness, is growing worldwide, mainly owing to an aging population and a rise in the onset and diagnoses of type 2 diabetes. As a result, the market for diabetic neuropathy treatments is expanding, and was worth around USD 2 billion as of the end of 2014, with the US market accounting for more than 70% of the total. However, the market is assumed to be substantially bigger, as there are many countries, including China, which have not been counted in existing figures.

There are only three types of diabetic neuropathy treatments that have received US FDA approval and are sold in the US. Two of these were developed as drugs for epilepsy and depression, and are not considered as dedicated treatments for diabetic neuropathy. Long-term high-dose use of the other treatment can result in dependence. In addition, while the main target of diabetic neuropathy is the peripheral nervous system, these treatments act on the central nervous system, and so they are inevitably accompanied by central neurogenic side effects. Because existing drugs cannot provide fundamental treatment, there has been increasing demand for a new treatment.

#### DEVELOPMENT STAGE



#### CODE NAME

**DA-9801**

#### DESCRIPTION

Botanical Drug

### Proven excellence of DA-9801

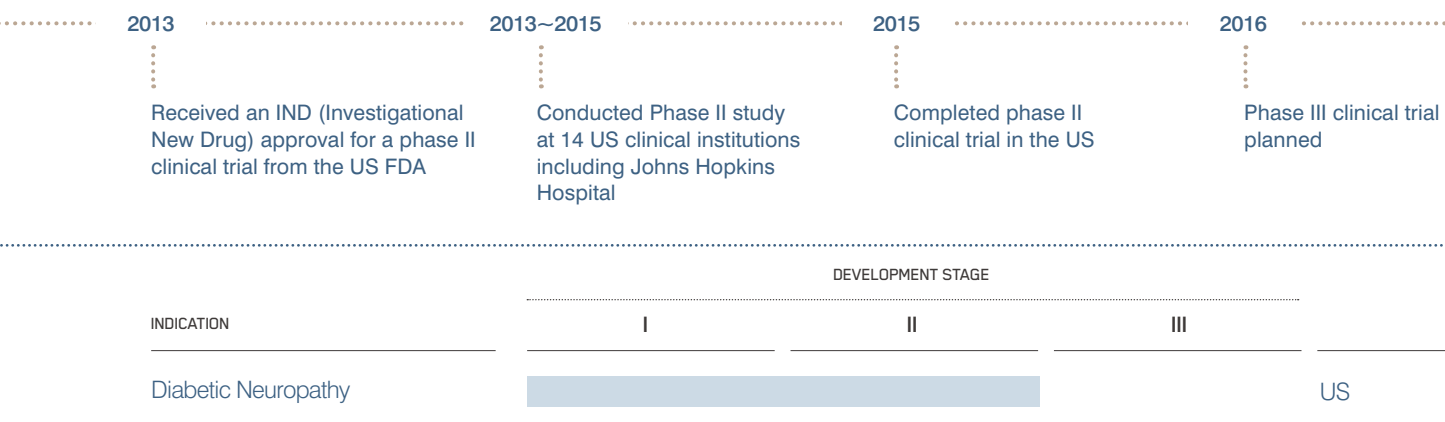
DA-9801 has far demonstrated positive medicinal effects, and has a strong possibility of commercialization, because it is a drug in a field with substantial unmet needs. In addition to providing pain relief greater than the efficacy delivered by other treatments, DA-9801 protects and regenerates nerve cells through Nerve Growth Factor (NGF), which makes it distinctive in treating the fundamental cause of the disease. NGF restrains the degeneration and death of nerve cells, thereby preventing nerve cell from being reduced. NGF is known to be an important protein in maintaining mature neurons by protecting nerve cells from damage, and NGF deficiency was confirmed in animal models and patients with diabetic neuropathy. There has also been extensive research indicating that NGF provides protection against nerve damage. Another strength of DA-9801 is its outstanding level of safety, achieved by using ingredients derived from natural substances. This safety was confirmed by the pre-clinical study and phase II clinical trials in the US.

The results of a pre-clinical study indicated that DA-9801 increased NGF, previously lacking in the sciatic nerve of animal models with diabetic neuropathy, to normal levels. It also reduced histological changes in the sciatic nerve, and eased hyperalgesia from thermal stimulation and mechanical stimulation. The phase II clinical trial in the US involved 128 patients

with diabetic neuropathy. Pain intensity was compared before and after the drug was administered for 12 weeks, and pain was reduced by more than 50% in half of the patients who were administered a 600 mg dose. Dr. Freeman, professor of neurology at Harvard Medical School, stated that DA-9801 would be highly competitive in the market for the treatment of diabetic neuropathy, as the phase II clinical trial results indicated how DA-9801 delivered treatment effects that were more than equal those of existing drugs, with the additional benefit of having less side effects.

### Future plans

With the successful completion of the phase II clinical trial, Dong-A ST is now preparing for the next-phase clinical trial. After the EOP2 meeting with the US FDA for official discussions on the outcome of the phase II clinical trial and development of the next-phase clinical trial, the company will initiate a next-phase clinical trial in 2016, and submit a New Drug Application (NDA) to the US FDA in 2019. Dong-A ST is also aiming to make DA-9801 the first botanical drug in Korea to launch in global market by partnering with or licensing-out to a multinational pharmaceutical company.



# DA-1229

We will open a new chapter of the development for new medicines in the Korean pharmaceutical industry through the successful launch of Suganon<sup>®</sup> at home and abroad.

## Birth of Dong-A's fifth in-house developed original drug

In October 2015, Suganon<sup>®</sup> (DA-1229, Evogliptin) received an NDA approval from the Korean MFDS. Suganon<sup>®</sup> is an original drug developed in-house by Dong-A ST, to treat diabetes. It is our fifth in-house developed original drug to receive approval – Dong-A's first in-house developed original drug was Stillen<sup>®</sup>, a gastritis treatment launched in 2002, followed by Zyderna<sup>®</sup>, an erectile dysfunction treatment launched in 2005, Motilitone<sup>®</sup>, a functional dyspepsia treatment launched in 2011, and Sivextro<sup>®</sup>, an oxazolidinone class antibiotic launched in the US in 2014 and approved in Korea in 2015.

Suganon<sup>®</sup> is an oral hypoglycemic agent with a Dipeptidyl peptidase-4 (DPP-4) inhibitory mechanism, and its main API is Evogliptin, meaning 'evolved gliptin', widely recognized being safe and effective. This project was initiated in 2005, and after initial two years being spent on choosing an outstanding substance, DA-1229 was selected as the candidate substance in 2007, and a pre-clinical study began. In 2008, the project was nominated by the Ministry of Health and Welfare as an innovative new drug research project, and received support from the Ministry for two years, beginning in May 2008, followed by the clinical development began in 2010. As a result of efforts to discover the drug's strengths and thanks to its excellence, DA-1229 was licensed out overseas, starting from the phase II clinical stage, and it is currently licensed out to more than 20 countries. Approval in Korea has also facilitated overseas development of partner companies.

## Status of overseas development of Suganon<sup>®</sup>

Dong-A ST is actively moving forward with the overseas development of Suganon<sup>®</sup>. In 2012, the company signed a licensing-out agreement with China's Luye Pharma Group for the Chinese market and with India's Alkem Laboratories for India and Nepal. In 2014, the company signed a licensing-out agreement for the Brazilian market with Brazil's Eurofarma Laboratórios, after which an additional agreement was signed in

2015. Eurofarma Laboratórios is in charge of product development and sales, including clinical trials and approvals for Evogliptin, in Brazil and 17 Latin American countries, including Mexico. In 2015, the company signed a licensing-out agreement with Russia's GEROPHARM for three markets – Russia, Ukraine, and Kazakhstan. Dong-A ST will receive milestone payments at certain stages of development, and will export APIs to its partners for development and commercialization.

## Excellence and growth potential of Suganon<sup>®</sup>

The strengths of Suganon<sup>®</sup> are its high potency and selectivity, and the convenience of administration. Since Suganon<sup>®</sup> has the high potency in its class, even a 5 mg tablet is able to show the therapeutic efficacy. It also has outstanding selectivity for DPP-4, which results in safe long-term administration. Suganon<sup>®</sup> also has limited impact on the absorption, metabolism, and excretion of other drugs, which is a major benefit for diabetes patients who are frequently exposed to polypharmacy. In addition, although many diabetes patients suffer from renal disorder, Suganon<sup>®</sup> can be used in patients with renal impairment without the need for dose adjustment. Dong-A ST plans to launch Suganon<sup>®</sup> (monotablet of evogliptin) and Sugamet<sup>®</sup> XR (fixed-dose combination drug of evogliptin and metformin) in Korea in 2016.

## STATUS OF LICENSE-OUT

### DA-1229

#### CHINA

Luye Pharma Group

#### INDIA

Alkem Laboratories (India, Nepal)

#### BRAZIL

Eurofarma Laboratórios (Brazil, Mexico, Argentina, Bolivia, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Paraguay, Peru, Uruguay, Venezuela)

#### RUSSIA

Geropharm (Russia, Ukraine, Kazakhstan)

## Sivextro®

Sivextro® is an oxazolidinone class antibiotic developed by Dong-A ST and licensed-out to US-based Trius Therapeutics, currently Merck (MSD). Following its launch in the US in 2014, Sivextro® received Marketing Authorization Application approval from the European Commission in March 2015, meaning it can be sold in 28 EU member countries and the three European Economic Area member countries of Iceland, Liechtenstein, and Norway. It is now being marketed across Europe, beginning with the UK in the 2nd quarter of 2015.

Sivextro® was developed for the treatment of Acute Bacterial Skin and Skin Structure Infections (ABSSSI) caused by gram-positive bacteria, including resistant bacteria such as Methicillin-resistant Staphylococcus Aureus (MRSA). It inhibits the synthesis of bacteria's proteins, and is available in both oral and IV injection dosage forms. As it offers efficacy with a short, 6-day course of treatment, its administration is very convenient and it can provide the patients with the economic benefits.

According to the Global Data, a market survey institute, the global market for the treatment of MRSA was worth around KRW 2.7 trillion in 2012, and is expected to grow to KRW 3.5 trillion by 2019. In Europe, more than 150,000 patients are infected annually with MRSA, and the market for its treatment was worth around KRW 630 billion in 2012.

Dong-A ST began development of Sivextro® in 2004 with pre-clinical studies, and received support for the pre-clinical studies from the Ministry of Health and

# DA-7218

Sivextro® became a global new drug, the outcome of our outstanding R&D capability, long-term investments and global partnerships.

Welfare, and completed the pre-clinical studies in 2006. A licensing-out agreement was signed with Trius Therapeutics in 2007 for all global territories, excluding Korea. Trius thereafter carried out US and global clinical trials, obtained US FDA NDA approval, and launched Sivextro® in the US in June 2014. Sivextro® is the second among new drugs developed by Korean pharmaceutical companies, and the first in-house developed original drug of Dong-A, to receive US NDA FDA approval.

Merck (MSD) acquired Trius/Cubist in January 2015, and is now in charge of Sivextro® sales in North American and European markets. As the original developer, Dong-A ST continues handling sales in Korea. In 2011, the original licensee Trius sub-licensed the development of, and sales rights to, Sivextro® in Asia, Latin America, Africa, and so on to Bayer. Bayer has now begun sales in Singapore, and been conducting a phase III clinical trial in China and Japan, respectively.

Currently, Sivextro® is indicated for the treatment of ABSSSI. In addition, global phase III clinical trial with Sivextro® for Hospital-Acquired/Ventilator-Associated Bacterial Pneumonia (HABP/VABP) is on-going.

## DEVELOPMENT STAGE BY REGION

### DA-7218

#### US

Sales begun by Cubist, currently Merck (MSD) in June 2014

#### EUROPE

Sales begun by Merck (MSD) in 2nd quarter 2015; Launched in 10 European countries including the UK

#### KOREA

New drug approval in April 2015

#### REST OF WORLD (All global territories excluding Korea, North America and Europe)

Launched in Singapore by Bayer, a sub-licensee; Under way for a phase III clinical trial in China and Japan



# DA-3880

The development of DA-3880 will make Dong-A Socio Group a new leader in the global biosimilars market.

## Global development of DA-3880

DA-3880 is a biosimilar of Aranesp® (darbepoetin  $\alpha$ ), which is a long-acting second-generation biomedicine for erythropoietin (EPO). It stimulates erythropoiesis which increases red blood cell levels, and is used to treat anemia, commonly associated with chronic renal failure and chemotherapy. Darbepoetin- $\alpha$  was jointly developed by Kirin of Japan and Amgen, a multinational pharmaceutical company, and recorded sales of USD 2.4 billion in 2014. The market size including EPO was USD 5.7 billion in 2014.

The development of DA-3880 began in 2009. At this time, Dong-A ST was already producing Eporon®, a first-generation EPO product developed by the company. However, the sales of Eporon® were not as high as expected given we were the late comer of the market. With Aranesp® becoming a blockbuster in the global market, the company decided to develop a biosimilar for Aranesp® by using its experience of developing the structurally similar Eporon®.

Our goal from the very beginning was global development, which is why Dong-A ST chose a global, professional Contract Research Organization (CRO) in the development phase, and conducted a non-clinical study in 2013. The results of the non-clinical study indicated high similarity with Aranesp®. The outcome of a pharmacokinetic (PK) study carried out by the same CRO confirmed similar PK parameters for both subcutaneous and intravenous administration.

A phase I clinical trial of DA-3880 in Europe was conducted in 2014. The phase 1 clinical trial was designed to compare DA-3880 and Aranesp® after single intravenous (IV) or subcutaneous (SC) administration by conducting a randomized, two-part, four-treatment, two-way cross-over study in healthy volunteers. The results were successful as we confirmed a bioequivalent PK profile and similar pharmacodynamics (PD) parameters to Aranesp®.

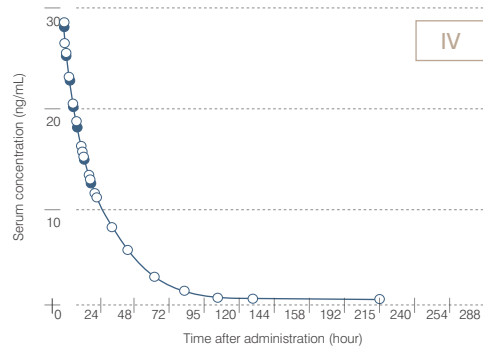
## Global collaboration for DA-3880

In January 2014, while the phase I clinical trial in Europe was being prepared, Dong-A ST signed a licensing-out agreement with Japan's Sanwa Kagaku Kenkyusho (SKK), to enter Japanese market. In 2015, SKK began a phase I clinical trial in Japan that is still in progress, and plans to launch in Japan after a phase III clinical trial and approval. Dong-A ST received up-front payment and will receive milestone payments at certain stages of development. Also, Dong-A will supply finished products to SKK upon commercialization.

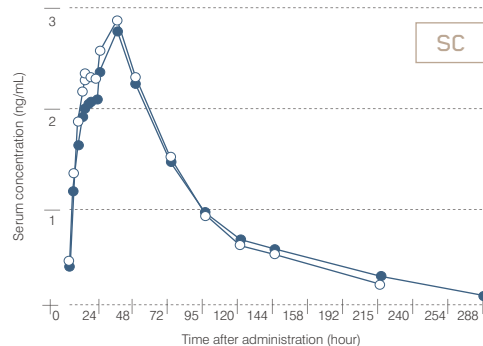
The licensing-out agreements to Japan and the execution of global clinical trials in bio-pharmaceuticals, which is considered to be the new growth driver in the global pharmaceutical market, prove our enhanced R&D capabilities. Dong-A ST is preparing a phase III global clinical trial for DA-3880 and discussing partnership for further market development. Dong-A ST is using DM Bio's facilities to produce investigational products for the phase III clinical trial – if successful, this would be the first commercially available product manufactured by DM Bio, and the first Aranesp® biosimilar to target advanced markets. It would also be contributing to Dong-A's sales substantially by entering the global market for Erythropoietin Stimulating Agents (ESA), which is currently worth about USD 6 billion.

## PK DATA OF PHASE 1 STUDIES

- DA-3880 IV (n=30)
- darbepoetin alfa IV (n=30)



- DA-3880 SC (n=30)
- darbepoetin alfa SC (n=30)



# DMB-3111

We put our efforts and resources on winning the biosimilar market, to enhance our global capabilities and sustain future growth.

## Strategic alliance for future growth driver

DMB-3111 is a biosimilar of Herceptin<sup>®</sup>, one of the best-selling biologics in the world, with sales in 2015 of CHF 6.5 billion. Herceptin<sup>®</sup> is a monoclonal antibody that interferes with the HER2/neu receptor. Its main use is to treat metastatic/early breast cancer and metastatic gastric cancer.

In 2011, Dong-A Socio Holdings entered into a strategic alliance with Meiji Seika Pharma of Japan to form DM Bio, which develops and manufactures next-generation, monoclonal antibody biosimilars at a state-of-the-art, cGMP-standard bio-facility in Incheon, Korea.

## Development status of DMB-3111

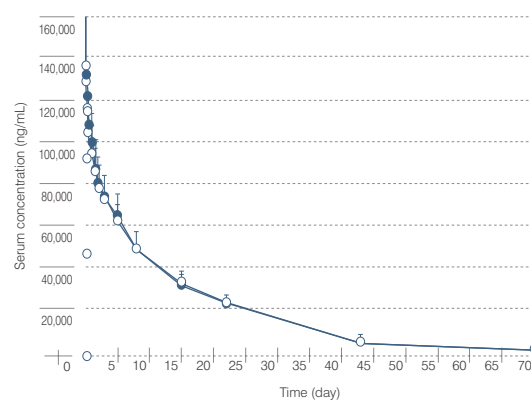
DMB-3111 is the lead candidate of DM Bio. A phase I clinical trial has been completed in Japan, showing a very high degree of similarity between DMB-3111 and Herceptin<sup>®</sup>. A clinical study in healthy Japanese male adults verified the PK bioequivalence of DMB-3111 and Herceptin<sup>®</sup>.

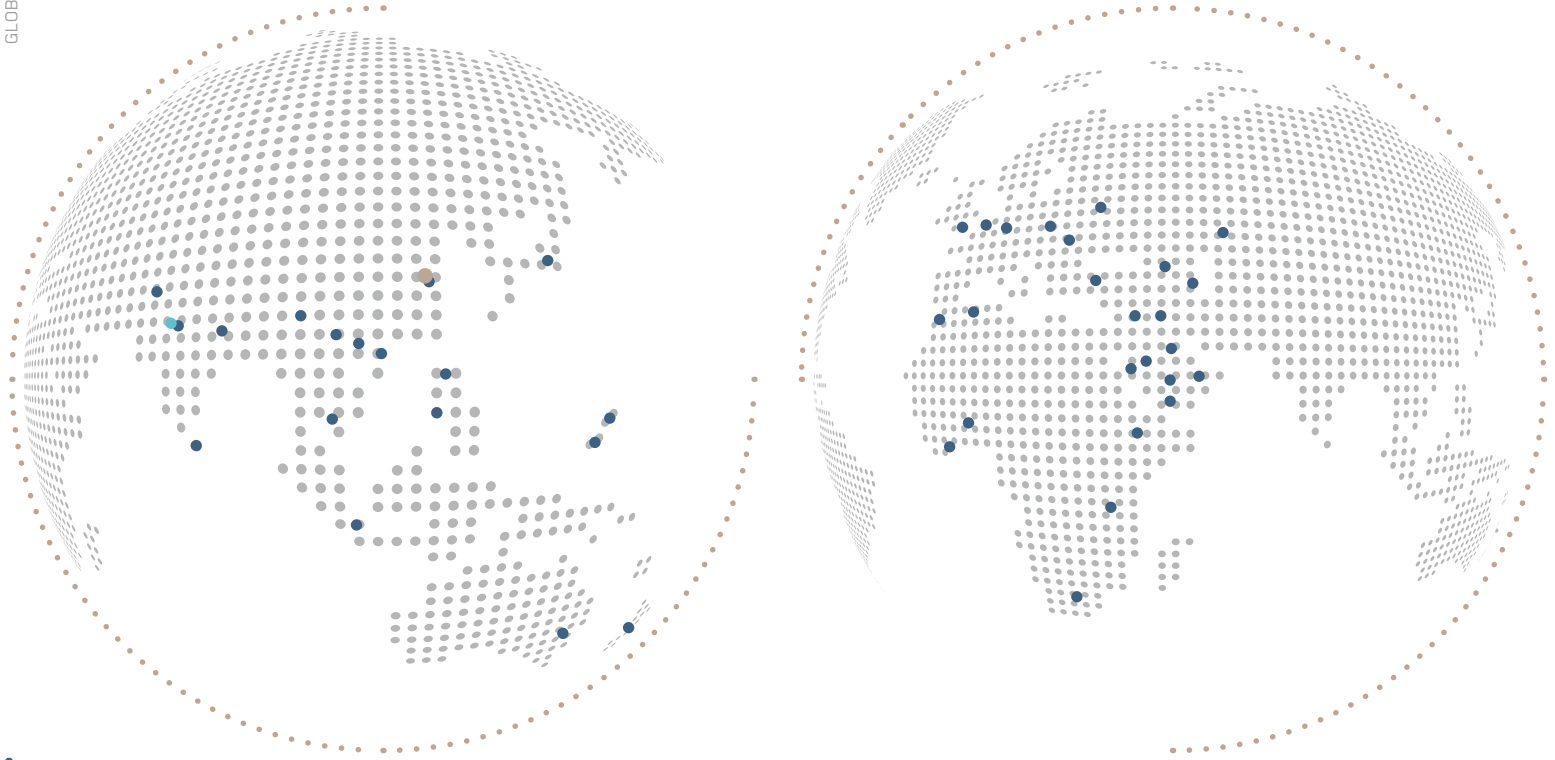
This was a randomized, double-blind, two-arm and parallel group study. The arithmetic means of the PK parameters were similar between the two products, and confidence intervals of differences in the average of the logarithmic values were within the predefined bioequivalence range. There were neither severe adverse events nor adverse events leading to discontinuation of this study. Adverse drug reactions after taking DMB-3111 or Herceptin<sup>®</sup> 6 mg/kg through a single intravenous administration were mostly Grade 1 or 2 in severity, and resolved without treatment or with taking medicine, suggesting that there are no problems with safety. Results of the study show that DMB-3111 is bioequivalent to Herceptin<sup>®</sup>, and is expected to demonstrate similar efficacy and safety in the treatment of cancer.

A global phase III clinical trial is currently being prepared, and we also continue to hold active discussions with candidates to be global and regional development and commercialization partners.

## PK DATA OF PHASE 1 STUDIES

- DMB-3111 (n=35)
- Herceptin<sup>®</sup> (n=35)





# GLOBALIZATION

## ON TARGET

Dong-A Socio Group is expanding our overseas presence, ahead of others with new perspectives. We set up a plan for global expansion as far back as 1980, and began exporting Bacchus® in 1981, and added antibiotic Active Pharmaceutical Ingredients (APIs) and Over-the-counter (OTC) drugs to our list of export items. The Group now exports in-house developed original drugs, bio-pharmaceuticals, APIs, and finished pharmaceutical products to some 40 countries across the globe.

Our globalization strategy, however, is more than increasing the number of export items or raising overseas sales. Dong-A Socio Group is aware of that we must develop global competitiveness to become a truly global healthcare group that can stand alongside world-renowned companies. To this end, we are extending our global reach by increasing cooperation with overseas companies and organizations, signing licensing-out agreements, and engaging in local R&D and marketing activities in regions around the world.

In 2015, Dong-A ST signed a licensing-out agreement for DA-1229 (Evogliptin), diabetes treatment, with Eurofarma Laboratórios of Brazil and GEROPHARM of Russia. In addition, Sivextro® (DA-7218), an oxazolidinone class antibiotic, has received Marketing Authorization Application approval in Europe, a big step towards becoming a global new drug. As a result of continuous efforts to increase overseas sales along with active, localized marketing activities across the globe, exports of Bacchus® reached KRW 51.7 billion in 2015. Last year also saw the official release of Zydena® in the Brazilian market, with a launch event in São Paulo. Other companies within the Group accelerated their pace for globalization as well – ST Pharm won the '70-Million-USD Pagoda of Export', and M.I.Tech signed an export contract with a global medical equipment company.



The Korean government's 2012 cuts in drug prices have resulted in limited growth and fierce competition throughout the Korean pharmaceutical industry. Dong-A Socio Group therefore turned our attention to global markets, speeding up our quest to become a global company. We will continue to leverage our top-quality products and distinctive marketing to strengthen our position in local markets on a global scale, and strive to increase global presence by building cooperation with overseas pharmaceutical companies and universities and by fostering global talent.

# GLOBAL SUCCESS STORY



## Sivextro® – Global New Drug on Horizon

Sivextro® is Dong-A's first in-house developed original drug to receive US Food and Drug Administration (FDA) approval, and it is now expanding its global presence. After being launched in the US market in June 2014, Sivextro® has been showing a gradual growth in sales with increasing prescriptions in the US. It was also launched in Europe and Asia in 2015.

The success of Sivextro® was enabled by several factors, including Dong-A's outstanding R&D competitiveness, timely global partnership strategies, and global collaboration with overseas partners. In 1996, Dong-A ST commenced the development of antibiotic that can fight super bacteria, and chose DA-7218 as a new drug candidate substance in 2004. The company afterwards applied for an international patent, and conducted a pre-clinical study with the Korea Institute of Toxicology to successfully complete all research in 2006. However, we saw the limitations of developing antibiotics targeting super bacteria only for the domestic market, and looked into ways for global advancement.

Dong-A, therefore, signed a licensing-out agreement with US-based Trius Therapeutics in 2007, after which Trius Therapeutics moved forward with global development. In 2013, Trius Therapeutics was acquired by Cubist, a company specializing in antibiotics with outstanding sales capabilities and relevant marketing skills for the antibiotics market. In 2015, Cubist was acquired by Merck (MSD), a multinational pharmaceutical giant, which in turn leads us to expect an expansion in our sales and distribution. The global clinical trial of Sivextro® became a clear success in licensing-out as our partnership with Trius Therapeutics, a venture company, way back in 2007 has led to partnerships with Cubist, an antibiotics specialist, and Merck (MSD), a global company.

Based on the excellent product competitiveness of Sivextro®, Dong-A ST will work together with Merck (MSD), which is in charge of sales in North America and Europe, and Bayer, which handles development and sales in Asia and emerging countries, with an aim to develop Sivextro® into a global innovative new drug.



\* Expected year to enter

\*\* Countries and regions where the product is available

**Bacchus® – Think Locally, Act Globally**

Bacchus® is the most popular tonic in Korea, and now it has a global position as well. It is exported to 19 countries around the world, including Cambodia, the Philippines, and Myanmar as of the end of 2015, and export sales last year reached KRW 51.7 billion, a year-on-year increase of 39.1%. Bacchus® has the highest share of the energy drink market in Cambodia; sales in Cambodia rose substantially in 2015, from KRW 34.2 billion in 2014 to KRW 49 billion in 2015. This remarkable achievement was enabled by localization strategies that began back in 2010, when Dong-A ST decided that Cambodia would be its base for Bacchus® in Southeast Asia, and started marketing activities dedicated to local consumers. Bacchus® was launched in Myanmar and Vietnam in 2013, Guatemala in 2014, and Ghana and Azerbaijan in 2015, expanding its global reach.

Dong-A ST's marketing activities take into account the tastes and unique characteristics of local consumers, following the success of this strategy for Bacchus® in Cambodia. In 2015, for example, the company hosted the Bacchus® Cup Marathon with its local partner company in Guatemala, and used local media to publicize Bacchus® throughout the country. In addition, more than 20 Dong-A Ambassadors visited Mongolia to conduct a large-scale PR campaign targeting pharmacists and general consumers. Intensive efforts will be made to extend the presence of Bacchus® in the global energy drink market, which is worth around KRW 7 trillion, through effective marketing and advancement into new markets.



**Closerin® – Growth on Global Scale**

Closerin® is an oral tuberculosis treatment. It is a second-generation treatment, specifically prescribed to multi-drug-resistant tuberculosis patients who have developed a tolerance to primary tuberculosis medicines such as Isoniazid and Rifampicin. Thanks to continued growth in overseas markets, sales of Closerin® more than doubled in 2015, from KRW 10.9 billion in 2014 to KRW 24.1 billion.



Dong-A ST received World Health Organization (WHO) pre-qualification in 2013, and became eligible to participate in the WHO's global tenders. The company took part in WHO global tenders for tuberculosis treatments in 2014 and 2015, and succeeded in being chosen as the supplier. In 2015, Dong-A ST won second place in the Rest of World tender and first place in the India tender, which contributed substantially to the rise in Closerin® exports.

Dong-A ST is making inroads into China as part of its efforts to expand sales in anti-tuberculosis medicines. In March 2014, the company signed a contract with China's SuzhouSino for the exclusive sales of Closerin® in the Chinese market. After securing the approval from China Food and Drug Administration in December 2014, the supply of Closerin® begun in 2015. According to the WHO, China is the world's second high-risk country for tuberculosis, after India, which means that there are about one million new tuberculosis patients annually in China, of whom 120,000 are multi-drug-resistant patients, the highest number in the world. With the Chinese government undertaking more projects for the elimination of tuberculosis, the market for the treatment of tuberculosis is expected to rise strongly. The goal for 2016, therefore, is to sign a contract for the supply of the APIs for anti-tuberculosis treatment; if successful, Dong-A would win a very strong position in China's tuberculosis treatment market and would expect to see a considerable increase in sales of Closerin®.



\* Expected year to enter  
 \*\* Countries and regions where the product is available

# GLOBAL EXPANSION

## ST Pharm wins the 70-Million-USD Pagoda of Export

ST Pharm won the '70-Million-USD Pagoda of Export' in 2015, by recording more than USD 70 million in exports from July 1st, 2014 through June 30th, 2015. This was an increase of more than 60% over the previous year, and accounts for around 75% of total sales. ST Pharm has built manufacturing facilities that have passed inspections by regulatory authorities in Korea and abroad, including the US FDA, Japan's Pharmaceuticals and Medical Devices Agency, and Australia's Therapeutic Goods Administration. The company produces top-quality APIs and exports them to countries around the world. Its major products are treatments for hepatitis and tuberculosis, and exports of APIs for hepatitis C treatments have been especially strong. ST Pharm will challenge itself to win the '100-Million-USD Pagoda of Export' in 2016 by producing globally competitive products, fostering global talent, and expanding its overseas network.

## DONGCHEONSU signs the largest mineral water export agreement in Korea

DONGCHEONSU is a mineral water company, and a subsidiary of Dong-A Socio Holdings. In April 2015, it signed an agreement with Cambodia's Camgold to export mineral water worth as much as KRW 70 billion over the next six years, which was the largest mineral water export contract signed by a Korean company. Camgold is a distributor in Cambodia, and is in charge of Bacchus® sales in that country. Camgold will use the current Bacchus® distribution network to sell DONGCHEONSU under the brand name "Bacchus® Natural Mineral Water", in order to target the local market which is already familiar with Bacchus®. Through this localization strategy, DONGCHEONSU aims to win a 25% share of Cambodia's mineral water market over the next five years, and plans are also made to advance into other Southeast Asian markets, including Vietnam and Laos.

## M.I.Tech establishes a business alliance with Boston Scientific

M.I.Tech has established a business alliance with the Japanese branch of Boston Scientific for the exclusive supply of non-vascular stents. Headquartered in the US, Boston Scientific is the world's leading medical

equipment company in sales of vascular stents, and, while it does have a non-vascular stent business, it has decided to cooperate with M.I.Tech to increase its market share in Japan. Japan's non-vascular stent market was worth about JPY 8.4 billion as of 2014, and M.I.Tech will supply non-vascular stents worth USD 15 million over the next five years. In the medium term, M.I.Tech is aiming to leverage this business alliance to win a 30% share of the Japanese non-vascular stent market, while pursuing the localization of existing Korean products for the Japanese market in the long run. By building an export base in Japan, one of the largest medical equipment markets in the world, M.I.Tech will pave the way to increase its share of the global medical equipment market.

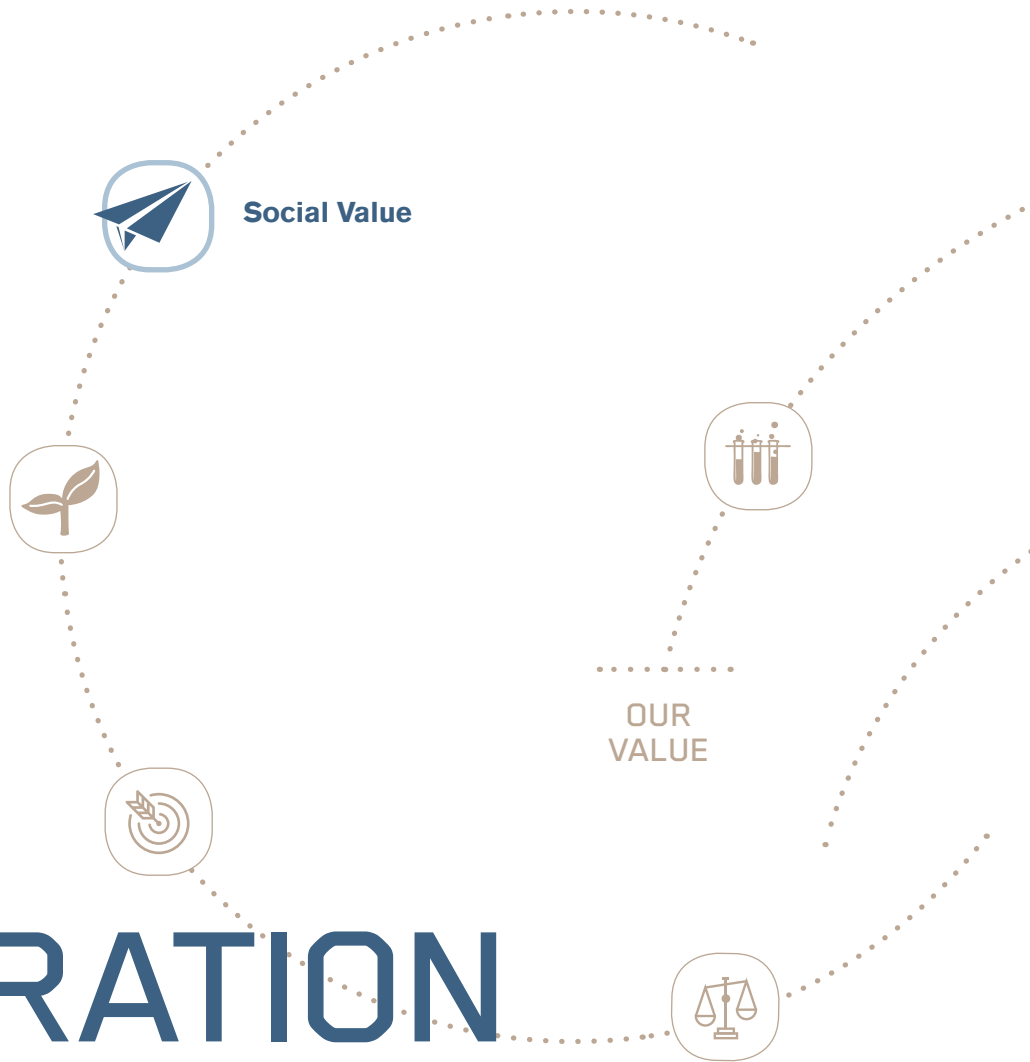


慶尙北道(속리산) 먹는샘물 캄보디아輸出 協約式  
 日時: 2015. 4. 9日 場所: (株)東九水 廣龍: (株)M.I.Tech 慶尙北道 慶尙北道商會



# INSPIRATION

## ALWAYS ON



Dong-A Socio Group aims to be a company that contributes to society, which is why we have included the word 'Socio', meaning 'society' in Latin, in our company name, reflecting strong determination to change society for the better.

Dong-A Socio Group's social contributions are not limited to donations or one-time volunteering activities. Instead, we put a lot of thought into ways for us to create a better society by leveraging what we are good at, based on our founding spirit of 'contributing to the health of the nation by creating medicines that will help people live better lives'. All members of Dong-A Socio Group are committed to business activities that go beyond just generating profits, and center their efforts on finding new ways to combine economic value with social and environmental value. Dong-A Socio Group has embedded social responsibility deep into

our corporate culture, and operates our business in a responsible way with respect to life, people, and the environment.

In 2015, we focused on strengthening corporate ethics, improving stakeholder communication, and solidifying our compliance and fair trade activities, in an effort to grow into a 'world-leading company that is respected for innovative pharmaceuticals'. We strengthened our Compliance Program (CP), an essential part of being a global pharmaceutical company, and received an 'AA' rating on CP Evaluation Program from the Fair Trade Commission, the best rating of any pharmaceutical company in Korea. We were also active in our communications with domestic and overseas investors, which not only increases shareholder value but also builds our trustworthiness. In addition to active social contribution activities using our expertise and



### Shareholder Value

Aim to carry out comprehensive and open IR activities to develop a relationship of trust with investors, and to maximize shareholder value



### HR Value

Reinforce a culture in which all employees feel respected, see opportunities, and contribute their diverse perspectives, experiences and ideas



### Ethical Value

Practice high standards of business ethics, act with integrity, and treat our stakeholders with dignity, so that we can earn greater trust from them



### COMPLIANCE MILESTONES

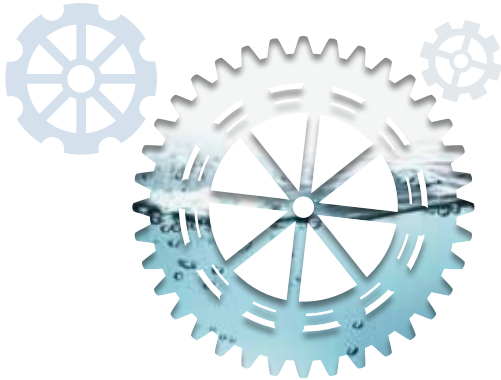
- 2007**
  - Adopted Compliance Program (CP)
- 2010**
  - Created the Compliance Team
  - Established CP Standards
- 2011**
  - Built a CP website
  - Provided CP training to executives and staff members at headquarters
- 2012**
  - Conducted CP training and monitoring at branches
  - Adopted Medical Advisor
- 2013**
  - Produced and distributed a CP Newsletter
  - Built a CP electronic approval system
- 2014**
  - Appointed the CEO and President of Dong-A ST as the Compliance Chief Officer and expanded the CP-dedicated organization
  - Held a ceremony to declare stronger CP
  - All employees made a compliance pledge
- 2015**
  - Held a ceremony to declare stronger CP
  - Received 'AA' rank on the CP Evaluation Program from the Fair Trade Commission

For Dong-A Socio Group, corporate social responsibility is a matter of inspiration, something that unites and guides us. It is about taking action to make a difference to all of our stakeholders.

experiences in pharmaceuticals, we attract talented people, retain and develop them to their full potential.

We will further focus on our duty and responsibility to undertake new drug development, to contribute to the health of mankind, and will strive for sustainable growth in partnership with our stakeholders by creating both economic and social value.

# ETHICAL VALUE



Dong-A Socio Group operates with the highest standards of business ethics and integrity, and is always aiming to earn the trust and support of our stakeholders.

## Culture of Ethics

Compliance and ethics are driving forces behind any company's continued growth. They fuel a company to become respected and sustainable. Dong-A Socio Group has led development and innovation in the Korean pharmaceutical industry, and is well aware of the importance of ethical management – that is why we make group-wide efforts to reinforce a corporate culture in which ethical management is embedded. We therefore share our Compliance Program (CP) and code of conduct with all of our employees, and have established detailed compliance training systems to support our ethical management.

## Compliance Program

The Group first adopted a CP in September 2007, and continues to train and monitor staff in all aspects of compliance and fair trade regulations. In 2015, we undertook various compliance activities, both internally and externally, to reinforce our culture of compliance.

During the year, we issued 12 CP-related publications, including Compliance Management System, Compliance Education & Training System and Compliance Handbook, and used our Intranet system to launch 'Dialogue with the Compliance Chief Officer'. In April 2015, we established 'Compliance Day' and held a ceremony to help staff understand compliance and be determined to put it into action. Our CEO, who is also the Compliance Chief Officer, spoke about the importance of ethical management, and all participants affirmed their determination to adhere to best practices in compliance.



In 2010, Dong-A ST was the first Korean pharmaceutical company to create a Compliance Team, which became a department in 2014. The CP Management Department handles corporate-wide compliance work and training. In 2015, there were a total of 1,206 hours of CP training for 1,207 employees, including staff at the Sales Department, and awards were given to outstanding CP branches and teams. Eight employees from the department earned Certified Compliance Professional certification, and the manager was appointed as chair of the Sub-Committee on Compliance Management of the Korea Pharmaceutical Manufacturers Association.

As a result of this commitment to compliance, Dong-A ST received an 'AA' rating, the best one among domestic pharmaceutical company, on the 2015 CP Evaluation Program carried out by the Fair Trade Commission in December. This will encourage us to maintain and develop our CP, so that it underpins our continuing growth.

In 2016, we will continue to build a culture of compliance, not just within the Group but also across the domestic pharmaceutical industry, by holding a CP related ceremony, encouraging our employees to pledge to the compliance, and strengthening monitoring activities. This demonstrates our will to fulfill corporate social responsibilities, and long-standing commitment to sustainability.



# SHAREHOLDER VALUE



Dong-A Socio Group undertakes comprehensive investor relations activities in order to develop a relationship of trust with investors, and to maximize shareholder value.

## IR Activities

Investor Relations (IR) activities are important as a two-way communication channel between a company and its investors, to enhance corporate value. Dong-A Socio Group engages in IR based on three core values – developing expertise, promoting efficient communications, and building investor trust.

Driven by soaring interest in pharmaceutical stocks in 2015, Dong-A Socio Group hosted 232 company visits, an increase of 59% over the previous year, and held quarterly conference calls as well as Non-Deal Roadshows (NDRs) for analysts and institutional investors in domestic and overseas markets. The same information disclosed in those meetings is unveiled through our websites, in order to protect general investors from information asymmetry. We also participated in overseas IR conferences to meet with overseas investors.

## IR Communication Channels

Dong-A Socio Group communicates with investors through various channels. The internal IR Council takes place before every quarterly performance announcement, and staffs from key departments share information on major issues. The IR Team works closely with the Public Relations (PR) Team to share accurate and timely information, and to immediately deliver them to the relevant senior executives. We hold an annual 'Analyst Day', with participation from key executives, to enable quick responses to changes in the market environment and to identify industry trends.

## Disclosure of IR Materials

The Group delivers important and essential information on the Group both quickly and accurately via fair disclosure. IR materials are posted on our website for the transparent sharing of information. Dong-A Socio Group is the only Korean pharmaceutical company to publish an annual report in English every year. Our 2015 Annual Report won the Platinum Award, the highest award available, in the pharmaceuticals category at the LACP Vision Awards, a global annual report contest, ranking 24th among the Global Top 100 Annual Reports. The Annual Report also won the Gold Award in the pharmaceuticals category and Silver Award in the holding company category at the 2015 ARC Awards, another global annual report contest. In Korea, it won the Excellent Overseas PR Material Award at the 2015 Korea Business Communications Awards.

## Training for IR Activities

Dong-A Socio Group provides trainings on IR activities to our employees, in order to manage IR more efficiently. In 2015, we offered training programs through the Korea Listed Companies Association to develop our staff's knowledge of stock market-related regulations and practices, which is essential for those involved in IR and associated public disclosure. We also took part in training sessions provided by the Korea Investor Relations Service, including an IR expert certification course and a session on overseas IR success strategies, to improve our IR capabilities.

The stock market showed an unprecedented level of interest in the pharmaceutical industry in 2015, resulted in a substantial rise in volatility in stock prices driven by expectations of extensive licensing-out agreements. There were also some negative incidents, including insider trading, we therefore provided additional training to our employees as a preventive measure. Dong-A Socio Group will continue to improve our abilities and mindset, to ensure maximum protection for investors and shareholder value.



# HR VALUE



Dong-A Socio Group builds a culture in which all employees are respected, see opportunities, and are valued for their diverse perspectives, experiences and ideas.

## Status of Experts

As of the end of 2015, there were 2,566 employees at major companies within Dong-A Socio Group – 263 at Dong-A Socio Holdings, 1,571 at Dong-A ST, 653 at Dong-A Pharmaceutical, and 79 at DM Bio. We focus on recruiting professionals such as pharmacists, lawyers, and patent agents. We currently employ 172 pharmacists, about 6.7% of total personnel. There are 348 R&D personnel at Dong-A Socio Holdings and Dong-A ST, accounting for 19% of total personnel. The number of R&D personnel continues to rise, up from 337 in 2013 and 341 in 2014.

## Recruitment, Wage Structure, and Benefits

Dong-A Socio Group recruits outstanding people through both rolling recruitment and a formal semi-annual recruitment processes for college graduates. In 2015, we recruited 62 college graduates in the first half of the year and 75 in the second half through our formal recruitment processes. In addition, a global internship program was offered to 20 foreign undergraduates residing in Korea, with an aim to employ global experts, strengthen the global mindset of our employees, and to foster experts working for Dong-A Socio Group in their home countries over the long term.

In 2008, Dong-A Socio Group changed its salary system from a seniority-based to a performance-based system, to ensure fair compensation. We offer participation in the four major public insurance schemes, and provide comprehensive health support for employees and their families, as well as educational initiatives for their children and post-retirement support. These measures help our employees to achieve a balance between their work and personal lives in a more stable employment environment.

## Human Resources Development Program

Dong-A Socio Group offered a total of 111 training courses in 2015 at the Group level, including courses on leadership, work duties, and basic job skills. We created the 'Decision Maker Course' for senior executives, to help them in efficient decision-making and develop leadership, and also set up 'Global Academy', 'Learning China', 'ASEAN Seminar' and 'Marketing Strategy' courses, in line with our imminent entry into overseas markets.

The Group ran the '1st Global Business Preparation Course' in 2014, to foster global experts, and offered an opportunity to learn in the field in Mongolia to staff who completed the course in 2015. The '2nd Global Business Preparation Course' is under way, and participants are receiving training to strengthen their language, business, and cross-cultural skills. Dong-A's unique Medical Representative (MR) Academy Course continued to be offered to improve the sales skills of our MRs, and children of our employees were benefited from programs, such as the Global Camp for College Students and the Phoenix Camp.

With the relocation of our HR Development Center to Sangju, North Gyeongsang Province in 2016, we will be able to offer more programs, and in a better environment.

## Creating a Great Workplace

Dong-A Socio Group seeks an organizational culture of mutual cooperation and respect. Launched in 1975, our Labor-Management Council is a window for mutual understanding and cooperation between labor and management. Labor-management negotiations take place without strikes every year, and as a result, The Group was chosen as an outstanding example of labor-management partnership by the Korea Labor Foundation in 2015. A mentoring program has been offered to new employees since 2010, with a total 628 participants to date.

We want to create a work environment that is a healthy and enjoyable place for our staff. That is why we offer facilities like the 'stairs that you want to walk on' and a pleasant company café for rest and relaxation, in addition to an anti-smoking campaign and a 'Healthy Place to Work' program which involves checking the health of our employees on a monthly basis.

# SOCIAL VALUE



In our efforts to shape a healthier society and a better future, Dong-A Socio Group undertakes a wide range of CSR activities, including volunteer work and sponsorships.

## Social Contribution Events

**Dong-A Pharmaceutical's Tour Korea for College Students** is an event at which 144 college students walk a total of around 600 kilometers over 21 days. The participants gain a sense of confidence and accomplishment as they overcome their difficulties and complete the tour. Dong-A has hosted the tour since 1998, which marked 2015 the 18th anniversary of the tour. Every year, around 10,000 students apply to participate, proving that the tour has become a symbol of the commitment of young people to good causes. As of the end of 2015, the total number of participants had reached 2,569 persons, and the cumulative distance walked was 10,282 kilometers.

**Class for Youth on Caring for the Environment and Life** is a five day class designed to teach 60 junior high school students how precious the environment is, and how to protect it. First run in 2004, it has helped participants learn the value of nature and life, and has encouraged them to share the importance of environmental protection with friends and family.

## Staff Volunteering Activities

**Baffor Sharing Volunteer Work** has been undertaken by Dong-A Socio Group's volunteer team since 2005. Every December, a team formed through an internal contest visits the Baffor Sharing Campaign Headquarters, a soup kitchen run by the Dail Community Foundation welfare group. The team helps prepare food for around 800 people, distributes the food and washes the dishes afterwards. Since 2014, Baffor Sharing Volunteer Work has been part of our new employee training program.

**Doori Volunteer Team** is a team established by Dong-A ST's labor union in 2014 for employee participation in volunteer work. 'Doori' is a Korean word meaning 'surrounding', and embodies the team's determination to look after those around us in most need, and to practice the spirit of sharing. The team repairs houses to improve the living conditions of people on low incomes, and also delivers coal briquettes to help the under-privileged stay warm in winter.

## Sponsorships

**Love Sharing Bazaar** has been held every May since 2009, and is a market at which Dong-A Socio Group sells its products to local residents and employees at low prices. The proceeds are then donated to the Dongdaemun-gu Social Welfare Council to provide rice and coal briquettes to low-income families, seniors living alone, and the under-privileged in the Dongdaemun-gu area of Seoul.

**Bacchus® Cup Junior Golf Team Championship** supports talented young golfers in Korea. It has been held every May since 2005, with participation by around 200 elementary, junior high, and high school students from across the nation.

**Bacchus® Cup Korea-China Chunwon Title** was launched in 1983 as the Bacchus® Cup Professional Baduk Competition, to celebrate the 50th anniversary of the founding of Dong-A Socio Group. As the first professional baduk competition to be sponsored by a company, it has been followed with great interest by baduk fans, contributing to the development and nurturing the culture of baduk in Korea. It changed name to the Bacchus® Cup Chunwon (Center Point) Title in 1996, and then the Bacchus® Cup Korea-China Chunwon Title in 2013, with professional baduk players from Korea competing with players from China.





**Garglin® Cup Professional Women's Baduk Championship** is a baduk competition that has been sponsored by Dong-A Socio Group since 1994, to increase the number of women playing baduk and to support professional women players. The Championship has produced many talented women baduk players, while performing an important role in raising awareness of the Garglin® brand.

**Korea-Japan Festival** is a cultural exchange event held by citizens in Korea and Japan. It takes place simultaneously in both countries every September. Dong-A Socio Group has sponsored the Festival since 2009, helping to improve bilateral relations through cultural exchange.

**Donation of pharmaceuticals** is a key activity for Dong-A Socio Group as a healthcare company. In 2015, we donated 30,000 bottles of Bacchus® to the Korean Red Cross to help its activities, and we are committed to making the same donation every December 5th, which is International Volunteer Day. In addition, Dong-A Socio Group has been donating Growtropin®, a human growth hormone, to children from low-income families since 2013. This helps children who need growth hormones, but have been unable to receive treatment due to financial difficulties. Dong-A Socio Group offers Growtropin® to children selected by the Hanmaeum Social Welfare Foundation.

**Supporting Cancer Patients from Low Income Backgrounds** is another activity that Dong-A Socio Group undertakes as a healthcare company. In 2014, we signed a memorandum of understanding with the Korea Medical Assistance Foundation whereby we gave KRW 100 million to the Foundation to support the medical fees of patients from low-income backgrounds who are prescribed Glinib®, an anti-cancer medicine produced by Dong-A.

## Global CSR

Dong-A Socio Group undertakes various CSR activities, including scholarships and lectures to medical and pharmacy students, in countries where we operate. Our unique social contributions, which harness our capability and dignity as a pharmaceutical company, have been well received, building the reputation of the Group in the regions, and, more importantly, helping talented people who want a better education about pharmaceuticals and medicine.

For example, Dong-A Socio Group has been providing scholarships and lectures on pharmacy to students attending the University of Pharmacy, Yangon, in Myanmar since 2014. These lectures cover subjects that are not always taught at school with a focus on actual cases, such as the development of new drugs, phytomedicines, bio-pharmaceuticals, pharmacy-related laws and pharmaco-vigilance. We have also supplied medical devices to Yangon General Hospital, and have funded scholarships to students studying medicine and pharmacy at the Mongolian National University of Medical Sciences since 2013.



Dong-A Socio Group sponsors cultural and sporting events in various countries. We sponsored the Bacchus® Taekwondo Championship in Liberia in 2014, and hosted the Bacchus® Cup Marathon in Guatemala in 2015. Around 1,700 keen runners participated in the marathon, and the Group provided souvenirs as well as trophies, prize money and rewards for the winners. There was also a stage show, and a related issues and Bacchus® were introduced through local media in Guatemala.

### Sooseok Cultural Foundation

The Sooseok Cultural Foundation was created in 1992 as part of the 60th anniversary celebrations of the former Dong-A Pharmaceutical, through the revamping of the Sooseok Scholarship Foundation which was established in 1987 by Dong-A Socio Group Chairman Shin-Ho Kang. The Foundation runs a scholarship and other programs that are aimed at promoting academic and cultural activities. As of the end of 2015, the Foundation had provided scholarships to 1,645 high school students and undergraduates, totaling KRW 2.6 billion.

The Hamchun Dong-A Medical Science Award was created by the Sooseok Cultural Foundation and is presented every December to honor scholars who have contributed to medical development. It began in 1993 as an award sponsorship by the alumni association of Seoul National University's College of Medicine. It was named the Hamchun Medical Science Award in 2009, and renamed

the Hamchun Dong-A Medical Science Award in 2010, with sponsorships worth KRW 30 million handed out every year. Dong-A Socio Group also sponsors the Excellent Pharmacist Award, which is presented every February by the Korean Pharmaceutical Association to encourage excellence at pharmacies. There is an award in each of five categories – drugstore pharmacist, public service, community service, pharmaceutical association development, and pharmacy research. Each winner is presented with 75 grams of pure gold and a trophy.

The Sooseok Cultural Foundation has sponsored the Marronier Women's Composition Contest since 1992, with the aim of increasing the number of women authors and promoting literary and creative activities by women. Hosted by the Arts Council Korea, the Contest has three categories – poetry, prose, and children's literature. The prize winners in each category are supported in making their official debuts as writers. The Foundation also publishes the pamphlet '3,000 Chinese Characters Used in Daily Life', and distributes it for free to schools, companies, and various other groups. 37,000 copies have been distributed since its first publication in 2006 as of the end of 2015.



# MILESTONES

1932~1958

## The Prelude of Dong-A

**1932**

Choong-Hee Kang's Wholesaler, a pharmaceutical and hygiene material wholesaler, began operations in Joonghak-dong, Jongro-gu, Seoul, Korea

**1947**

Pharmaceutical business began full operation

**1949**

Changed name to Dong-A Pharmaceutical Corporation

**1957**

Constructed modern facility, headquartered in Yongdu-dong, Dongdaemun-gu, Seoul, Korea  
- Manufactured antibiotics, such as Penicillin®

1959~1974

## Modernization of Pharmaceutical Business

**1961**

Began manufacturing Bacchus®

**1964**

Bacchus® ranked first in domestic tonic market

**1967**

Ranked first in sales among domestic pharmaceutical companies

**1970**

Initial Public Offering (IPO)

1975~1992

## Establishment of Growth Foundation

**1977**

Established a research center in Yongdu-dong, Dongdaemun-gu, Seoul, Korea

**1979**

Developed the world's third antibiotics, Talampicillin®

**1988**

Released AIDSIA®, Korea's first ever first-generation AIDS diagnostic reagent  
- Constructed the industry's first Korea Good Laboratory Practice (KGLP)-compliant research center in Sanggal, Gyeonggi, Korea

**1991**

Received the IR52 Jang Young Shil Award for AIDSIA®

1993~1999

## Overcoming Obstacles by Working Together

**1993**

Developed Growtropin®, a first-generation biomedicine and human growth hormone

**1994**

Released Interferon-alfa™, a first-generation biomedicine and multiple myeloma treatment  
- Developed the world's first simultaneous diagnostic reagent for AIDS and hepatitis C

**1995**

Bacchus® became Korea's first single pharmaceutical product to achieve sales of KRW 100 billion

**1997**

Became the first company in Korea to develop a tuberculosis treatment, Closerin®

**1999**

Released Leucostim®, a first-generation biomedicine and neutropenia treatment, and Eporon®, a renal anemia treatment

## Becoming an R&D-centered Pharmaceutical Company

**2001**

Received the Excellent Shareholder Focused Management Award

**2002**

Released Stillen<sup>®</sup>, Dong-A's first in-house developed original drug and a phytomedicine for gastritis

**2005**

Released Zyderna<sup>®</sup>, Dong-A's second in-house developed original drug and an erectile dysfunction treatment

**2006**

Released Gonadopin<sup>®</sup>, a first-generation biomedicine and infertility treatment

## Onward, Upward

**2013**

### Dong-A Socio Holdings

Signed a comprehensive business alliance contract with MEIC of Mongolia

- Demerged into three new companies – Dong-A Socio Holdings (the renamed existing entity), Dong-A ST (a stock spinoff entity), and Dong-A Pharmaceutical (an asset split-off entity)

- Signed a joint R&D contract with the Joint Center for Biosciences (JCB) Research Institute of the US on the AB-204, Bone Morphogenetic Protein (BMP)

- Established a Korea's first dementia research center

### Dong-A ST

Received an Investigational New Drug (IND) application approval for a phase II clinical trial of DA-9801, a treatment for diabetic neuropathy, from the US Food and Drug Administration (FDA)

## Challenging to Become a Global Company

**2010**

Entered into a comprehensive business agreement with GlaxoSmithKline (GSK) of the UK

**2011**

Released Motilitone<sup>®</sup>, Dong-A's third in-house developed original drug and a phytomedicine for functional dyspepsia

- Signed a comprehensive business alliance contract on biosimilars with Meiji Seika Pharma of Japan

**2012**

Began the construction of the DM Bio Plant in Songdo, Korea in conjunction with Meiji Seika Pharma

- 80th anniversary of the foundation of Dong-A

**2014**

### Dong-A Socio Holdings

Completed the construction of the DM Bio Plant

- Signed an memorandum of understanding (MOU) with the University of Freiburg in Germany on joint research of dementia and anti-cancer treatments

- Received holding company approval from the Fair Trade Commission

### Dong-A ST

Obtained US FDA approval and launched Sivextro<sup>®</sup> (DA-7218, Tedizolid), an oxazolidinone class antibiotic, in the US by Cubist

- Signed a strategic alliance contract with Combiphar of Indonesia

- Secured Korean Ministry of Food and Drug Safety (MFDS) approval for Dulastin<sup>®</sup>, DA-3031 (PEG-G-CSF), a long-acting bio-pharmaceutical drug for neutropenia

**2015**

### Dong-A Socio Holdings

Demerged the Biosimilar Business Department and established DM Bio

### Dong-A ST

Obtained European Commission (EC) approval and launched Sivextro<sup>®</sup> in European countries

- Received Korean MFDS approval for Sivextro<sup>®</sup>

- Licensed out DA-1229 (Evogliptin) to Eurofarma Laboratórios of Brazil for 17 countries in Latin America

- Licensed out DA-1229 (Evogliptin) to GEROPHARM of Russia for the Russian, Ukrainian and Kazakhstan markets

- Completed the phase II clinical trial of DA-9801 in the US

- Received Korean MFDS approval for Suganon<sup>®</sup> (DA-1229, Evogliptin) and Sugamet<sup>®</sup> XR (Evogliptin in combination with metformin), in-house developed diabetes treatments

- Received Korean MFDS approval for Stillen<sup>®</sup> 2X, an IMD of Stillen<sup>®</sup>

# DONG-A SOCIO HOLDINGS

In recent years, Dong-A Socio Holdings has consistently implemented its strategy, with the ingenuity and determination. Step by step, we are putting together the individual components to form a coherent whole, so that we can become a truly global healthcare company. In 2015, Dong-A Socio Holdings made further strategic progress through innovation and by collaborating in excellence.

## DONG-A SOCIO HOLDINGS

### AT A GLANCE

01

- 01.1 Organization
- 01.2 Company Overview

### SUBSIDIARIES

02

- 02.1 Dong-A Pharmaceutical
- 02.2 ST Pharm
- 02.3 DM Bio
- 02.4 Yong-Ma Logis
- 02.5 Soo Seok

### FINANCIAL REVIEW

03

- 03.1 Independent Auditors' Report
- 03.2 Separate Financial Statements
- 03.3 Independent Auditors' Report
- 03.4 Consolidated Financial Statements

# DONG-A SOCIO HOLDINGS

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## 01

DONG-A SOCIO HOLDINGS  
AT A GLANCE

## 01.1

## Organization

As the holding company of Dong-A Socio Group, Dong-A Socio Holdings defines the overall vision and strategic goals at the Group level. After its demerger from the former Dong-A Pharmaceutical in March 2013, Dong-A Socio Holdings formally became a holding company pursuant to the Monopoly Regulation and Fair Trade Act on October 30th, 2014. At the General Shareholders' Meeting held in March 2015, a decision was made to operate a separate legal entity for biosimilars business. Dong-A Socio Holdings accordingly concentrates on subsidiary management and new business investments, while DM Bio is in charge of the biopharmaceutical business. Dong-A Socio Holdings has therefore established a governance system that enables quicker and more professional decision-making.

Dong-A Socio Holdings has nine entities subject to consolidation as of the end of 2015, operated in various business units such as pharmaceuticals, logistics, bottle glass, and others. Dong-A Socio Holdings creates the overall organizational structure and helps the subsidiaries to strengthen their business capabilities, in an effort to create synergy, based on which it identifies measures to achieve joint growth.

Dong-A  
Socio Holdings

## PHARMACEUTICALS

Dong-A Pharmaceutical (100.00%)  
ST Pharm (19.99%)

## LOGISTICS

Yong-Ma Logis (100.00%)

## BOTTLE GLASS

Soo Seok (100.00%)

## OTHERS

Soo Seok Nong San  
DA Information  
Induspark  
Chul Geun E&C  
DONGCHEONSU

\* Based on companies subject to consolidation

(Unit: KRW billion)	BUSINESS AREAS	ESTABLISHMENT	SALES	OPERATING PROFIT MARGIN (%)	TOTAL ASSETS
Dong-A Socio Holdings <sup>1)</sup>	R&D of new innovative drug and new business investments	December 1932	704.7	9.1	1,223.5
Dong-A Pharmaceutical <sup>2)</sup>	Manufacture of OTC (Over-the-counter) drugs, quasi-drugs including Bacchus <sup>®</sup> and consumer healthcare products	March 2013	363.6	12.0	176.1
ST Pharm <sup>2)</sup>	Manufacture of APIs (Active Pharmaceutical Ingredients)	August 2008	138.1	25.0	232.4
DM Bio <sup>2) 3)</sup>	R&D and manufacture of biopharmaceuticals	April 2015	-	-	126.3
Yong-Ma Logis <sup>2)</sup>	Logistics and storage	February 1979	149.2	4.5	128.0
Soo Seok <sup>2)</sup>	Manufacture of bottle glass and PET	September 1969	79.7	6.2	137.0

<sup>1)</sup> Consolidated figures

<sup>2)</sup> Separate figures

<sup>3)</sup> DM Bio, a joint venture company formed by Dong-A Socio Holdings and Meiji Seika Pharma, was founded after the spin-off of biosimilars business from Dong-A Socio Holdings on April 1st, 2015.

\* As of December 31, 2015

## 01.2

## Company Overview

## R&amp;D INVESTMENT \*\*

37.1

KRW billion

R&D INVESTMENT  
PER SALES \*\*

5.3

Percent

\* As of December 31, 2015

\*\* Consolidated figures basis

## Business Performance

Based on consolidated financial statements, Dong-A Socio Holdings reported sales of KRW 704.7 billion and operating profits of KRW 64.4 billion in 2015. Following its transition into a holding company in 2013, its sales reached KRW 630.6 billion in 2014, up 10.5% over the previous year, followed by a year-on-year increase of 11.8% in 2015. Operating profits soared by 209.0%, up from KRW 20.8 billion in 2014. This also led to a substantial increase in the company's operating profit margin, up to 9.1%.

Despite a difficult market environment, subsidiaries including Dong-A Pharmaceutical and ST Pharm achieved strong growth and led remarkable performance improvements. Dong-A Pharmaceutical reported sales of KRW 363.6 billion and an operating profit of KRW 43.6 billion, mainly attributable to sales of more than KRW 200 billion of Bacchus<sup>®</sup>, Dong-A Pharmaceutical's flagship product. ST Pharm's sales exceeded KRW 100 billion for the first time in its history, on the back of increasing sales of hepatitis API. Yong-Ma Logis, a logistics services specialist, and Soo Seok, a manufacturer of high-quality, eco-friendly packaging materials, generated sales of KRW 149.2 billion and KRW 79.7 billion, respectively, up 10.2% and 8.3% over the previous year.

Dong-A Socio Holdings is expected to maintain stable growth in 2016 as its subsidiaries will likely continue to grow. What is encouraging is that there has been balanced growth among all major subsidiaries, and they also have bright outlooks. Furthermore, their diversified business portfolio will help profitability to grow continuously.

## Research &amp; Development

The Research Center of Dong-A Socio Holdings focuses on global R&D for the development of first-in-class new medicines under the motto of 'The First'. It has selected specific major research areas, including cancer, dementia, and biosimilars, to enhance research efficiency and strengthen pipeline. These research centers, such as the Innovative Drug Discovery Research Laboratories, the Bio-pharmaceutical Research Laboratories, and the Dong-A Dementia Center, are backbone and future growth driver of Dong-A Socio Holdings.

The Innovative Drug Discovery Research Laboratories develops new mechanism-based cancer treatments. It identifies and conducts research on drug discovery, which can be licensed out to global pharmaceutical companies in the initial stage of development. In 2015, it developed a drug with a new anti-cancer target mechanism, and validated the effects in animal testing. It is now looking to form a strategic partnership with a major global pharmaceutical company through overseas conferences and other means. The Laboratories has also developed the underlying technologies for the discovery and verification of additional new drug targets, helped by active joint research with universities and research institutes in Korea and abroad via open innovation.

The Bio-pharmaceutical Research Laboratories concentrates on developing biosimilars and new antibody therapeutics that are unique, based on expertise and experiences it has accumulated in the process of developing first-generation bio-pharmaceuticals. In order to strengthen its presence in the global biosimilar market, Dong-A Socio Holdings initiated joint development of DMB-3111, a biosimilar of Herceptin<sup>®</sup> for breast cancer, with Japan's Meiji Seika Pharma in 2011, and a phase I clinical trial has been successfully completed in Japan. A pre-clinical study has also been completed for DMB-3113, a biosimilar of Humira<sup>®</sup> for rheumatoid arthritis, and it is waiting to enter a clinical trial in Japan. The Laboratories is also in the process of developing new antibody therapeutics development, including DA-3131, a new therapeutic biologics for age-related macular degeneration. DA-3131 has been chosen as a government supported project by the Ministry of Health and Welfare in 2015, in recognition of its distinctiveness.

Founded in 2013, the Dong-A Dementia Center is the first dementia-focused research center to be established by a Korean pharmaceutical company, and is acting as a hub to discover dementia treatments. Together with government-funded research institutes and university hospitals, the Center engages in the development of diverse dementia treatments, including new mechanism-based chemical drugs, stem cell treatments, and technology of related medical devices. In 2015, it participated in a government research project sponsored by the Ministry of Health and Welfare.

## 02

## SUBSIDIARIES

.....  
Pharmaceuticals

## 02.1

## Dong-A Pharmaceutical

Dong-A Pharmaceutical aims to become a respected healthcare specialist by improving its product quality and introducing unique marketing campaigns.

Dong-A Pharmaceutical is a company specializing in Over-the-counter (OTC) drugs, and a 100%-owned subsidiary of Dong-A Socio Holdings. Its main business areas are OTC products, which can be bought without a prescription, as well as health functional foods and quasi-drugs such as Bacchus<sup>®</sup>. It focuses its research capabilities on preventative medicine and new functional products to enhance quality of life, rather than on post-disease treatment. Dong-A Pharmaceutical has grown into Korea's top healthcare company by upholding the founding spirit of Dong-A Socio Group, to 'contribute to the health of the nation by creating medicines that will help people live better lives'. In order to achieve its goal to become a global healthcare company, Dong-A Pharmaceutical puts forth intensive efforts to develop medicines that can be trusted by people across the globe.

## Business Performance

In 2015, Dong-A Pharmaceutical generated KRW 363.6 billion of sales, KRW 43.6 billion of operating profits, and 12.0% operating profit margin. This was the result of growth in Dong-A Pharmaceutical's flagship products, including Bacchus<sup>®</sup>, a tonic, Morning Care<sup>®</sup>, a hangover drink, and Garglin<sup>®</sup>, a mouthwash. Bacchus<sup>®</sup> accounts for 55% of the total sales, and has become the first individual product in the Korean pharmaceutical industry to reach annual sales of more than KRW 200 billion.

A new version of Garglin<sup>®</sup> was released in August 2015 – total of eight versions with different colored packaging were unveiled, and the overall packaging was designed to remind of a tooth. Dong-A Pharmaceutical introduced Morning Care<sup>®</sup> Turmeric

in November, on the tenth anniversary of the launch of the Morning Care<sup>®</sup>. This new product offers improved relief from hangovers, and, along with Dong-A Pharmaceutical's other new products, has been well received by consumers, contributing to the company's growth. Four contraceptive pills acquired by Dong-A Pharmaceutical in May 2015 from Bayer have also been a success – Myvlar<sup>®</sup>, Meliane<sup>®</sup>, Minivlar<sup>®</sup>, and Triquilar<sup>®</sup> have strengthened our OTC business, especially the product portfolio for women, building the foundations to enter a new market.

## KEY FIGURES

(Unit: KRW billion)

TOTAL ASSETS

176.1

SALES

363.6

OPERATING PROFIT

43.6

OPERATING PROFIT MARGIN

12.0%

\* As of December 31, 2015



**Bacchus Unit**

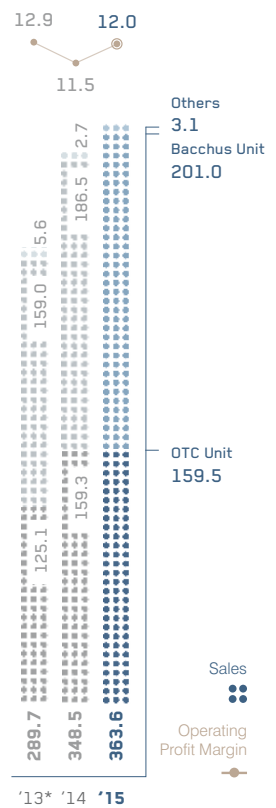
Bacchus® is the leading product in the domestic tonic drink market, and has enjoyed continued popularity since its launch in 1963. The Bacchus Unit is in charge of the distribution of Bacchus® in Korea, and consists of nine branches, two sales offices, and 22 teams. Dong-A Pharmaceutical has implemented a dual distribution strategy by providing Bacchus®-D for pharmacies and Bacchus®-F for general distribution channel, such as convenience stores and supermarkets. As a result of consistently implementing this strategy, market dominance of Bacchus® has been increased. Bacchus®-D

is supplied directly to around 20,000 pharmacies across the nation by 150 sales people, using 75 vehicles. This Route Sales System enables the timely supply of products, as well as thorough inventory control and cash flow management.

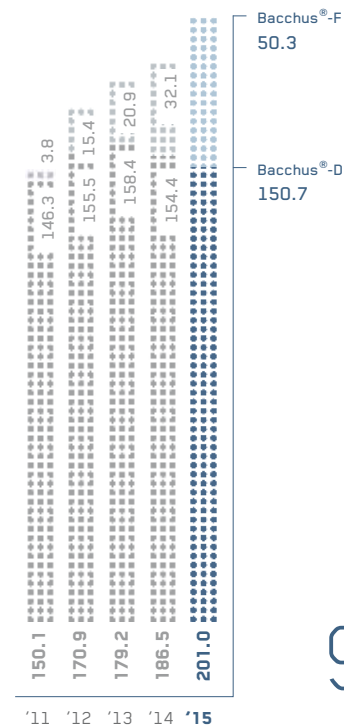
Dong-A Pharmaceutical will continue the growth of Bacchus® based on outstanding product competitiveness, efficient operational management, and distinctive marketing strategies. The success of Bacchus® has been contributing to the growth of Dong-A Pharmaceutical, and moreover, it will lead Dong-A Socio Group to become a global healthcare group.



**SALES & OPERATING PROFIT MARGIN**  
(Unit: KRW billion, %)



**BACCHUS® SALES**  
(Unit: KRW billion)



\* Mar.-Dec.

SPECIAL FEATURE



As of the end of 2015, total Bacchus® sales recorded 19.2 billion bottles, enough to go around the Earth more than 57 times.

Another New Record of Bacchus®  
Annual sales exceed KRW 200 billion

Bacchus® is truly an iconic brand of many firsts in the domestic tonic drink market, and it reached new record in 2015. Bacchus® sales in the domestic market rose by 7.7% from the previous year, to KRW 201 billion, the first time a single product sold by a pharmaceutical company in Korea has achieved annual sales of KRW 200 billion. This accomplishment was made 20 years after its sales exceeded KRW 100 billion in 1994.

This was mainly from the stabilized dual distribution system, which began to be implemented in 2011 when Bacchus® was reclassified from an OTC drug to a quasi-drug. By adding new revenues from Bacchus®-F to target general distribution channels to the already established, stable growth of Bacchus®-D for pharmacy sales only, Dong-A Pharmaceutical was able to achieve continued and robust growth in Bacchus®.

Dong-A Pharmaceutical's distinctive marketing is also contributing to the popularity of Bacchus®. Its marketing targets younger people, and reaches out to all customers through content such as TV ad campaigns that customers can truly identify with. Rather than simply delivering product information, ad campaigns for Bacchus® reflect trends and tell stories of daily life that relate to an individual's health. These campaigns have been well received by the market and customers – in 2015, Dong-A Pharmaceutical won the 'Special Jury Award' in the TV category at the 2015 Korea Advertising Awards. Moreover, the company hosts the Tour Korea for College Students every year, in an effort to communicate with young generations.

Bacchus® has been a consumers' favorite for more than half a century in Korea, and now Dong-A Pharmaceutical is aiming to make Bacchus® a favorite tonic drink around the world.

History of Bacchus®

					
<u>1961</u> First released in tablet form	<u>1962</u> Changed to ampoule form	<u>1963</u> Changed to drink form, and released as Bacchus®-D (Drink)	<u>1991</u> Renewed to Bacchus®-F (Forte)	<u>2005</u> Renewed to Bacchus®-D (Double), and launched Bacchus® Decafe with zero caffeine	<u>2011</u> Launched Bacchus®-F

### OTC Unit

Dong-A Pharmaceutical supplies OTC products, health functional foods, and quasi-drugs to pharmacies and through general distribution channels. Its outstanding operations and field management enable around 130 salespeople to supply approximately 70 types of OTC products to roughly 20,000 pharmacies. They also supply quasi-drugs and health functional foods to large discount stores, convenience stores, and supermarkets across the country. The company has dedicated OTC marketers and branches for OTC products that can only be sold to pharmacies. These OTC products are supplied directly to pharmacies across the nation, and they are also supplied through around 90 wholesalers.

In 2015, Dong-A Pharmaceutical marketed Benachio®, a phyto digestive medicine, through various channels, including TV advertising and SNS, to target the digestive medicine market. The company launched the 'Please Take Care of Digestion' campaign, a parody of a well-known Korean television entertainment program, and the campaign was a huge success. Dong-A Pharmaceutical was also active in digital marketing to publicize its new product, Morning Care® Turmeric, which led to 10 million views on online channels. In addition, the brand awareness of Mylvar®, an oral contraceptive pill, was raised by having a well-known celebrity as its model.



Thanks to an excellent sales organization, top quality products, and trend-leading marketing, the OTC Unit achieved sales of KRW 159.5 billion in 2015. Sales of Benachio®, in particular, grew 50% over the previous year, to exceed KRW 4.7 billion.

### Future Plans

The consumer healthcare market has become more challenging as the growth in the domestic OTC market is slowing down and customers are demanding better quality health functional foods. Growing number of one-person households and an aging population worldwide also influence pharmaceutical industry. Dong-A Pharmaceutical is aware of that these changing market environments and social trends will play a decisive role in shaping the future of healthcare market, and will strive to make challenging circumstances into opportunities.

Dong-A Pharmaceutical will make utmost efforts to earn customer trust by seeking OTC products with clinical effects that are equal to those of ETC drugs, and targeting both domestic and overseas markets throughout the entire process from product development to release. The company will also develop customized medicines for individuals, and diversify distribution channels so that it can continue to increase the number of consumer contact points. In addition to building the foundations for continued growth, it will concentrate on increasing profitability, while enhancing its expertise and efficiency to grow into a global healthcare company.

.....  
Pharmaceuticals

02.2  
ST Pharm

ST Pharm will expand its presence in the global market, based on high value-added products, technological excellence, accumulated expertise and in-depth client partnership.

Founded in 2008, ST Pharm became a member of Dong-A Socio Group in 2010. Specializing in Active Pharmaceutical Ingredients (APIs) and intermediates, its hepatitis B drug was designated as a world-leading product in 2011, and ST Pharm became the only API company to be recognized as an innovative pharmaceutical company by the Ministry of Health and Welfare in 2012. ST Pharm was also designated as an outstanding technology research center by the Korean Ministry of Trade, Industry & Energy in 2013, and it was re-certified as an innovative pharmaceutical company in 2015 for the first time among Korean API companies. Based on such government support and brand awareness of the company, ST Pharm has been achieving continued and stable growth.

Business Performance

ST Pharm generated sales of KRW 138.1 billion in 2015, a year-on-year increase of 43.0%, and the first time its sales had exceeded KRW 100 billion. While sales have risen by double digit percentages for the last three years, operating profits also rose by 254.3% from the previous year, to reach KRW 34.5 billion in 2015.

The remarkable growth that ST Pharm achieved in 2015 stems from its outstanding products and strong business partnerships. ST Pharm's major products are hepatitis and AIDS treatment APIs, and major customers include multinational pharmaceutical companies such as Bristol-Myers Squibb and Glaxo SmithKline. In 2015, sales were boosted by increased hepatitis treatment sales to major customers.

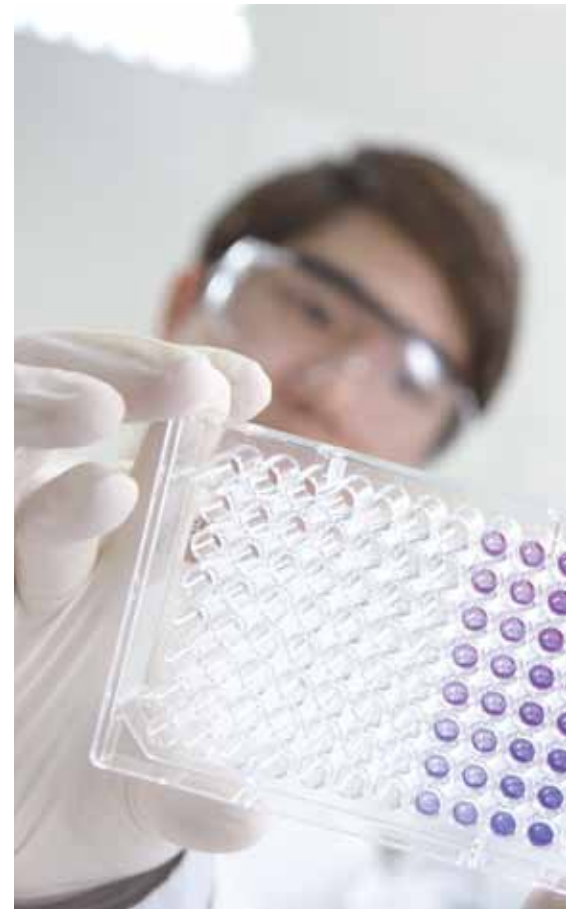
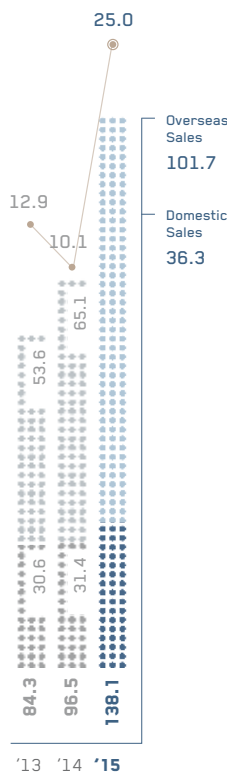
In November 2015, ST Pharm took over Dong-A ST's Banwol API Plant, in line with Dong-A Socio Group's decision to focus on the areas in which each member of the Group excels and has a proven track record of success, such as API business in which ST Pharm specializes. This business transfer is expected to help both companies improve effi-

ciency and generate synergy, thereby fueling growth at the Group level.

Due to such internal and external factors, ST Pharm's exports continued upwards, and as a result, the company was awarded the 'USD 70 Million Export Tower' at the 52nd Trade Day ceremony held by the Korea International Trade Association in December 2015. This was in recognition of the company's exports exceeding USD 70 million over the period from July 1st 2014 through June 30th 2015, and its exports grew more than 60% year-on-year.

ST Pharm will continue to grow in 2016 through the supply of top quality APIs, especially for hepatitis treatments. It will also play a central role in the future growth of Dong-A Socio Group by building on its expertise in API business.

SALES & OPERATING PROFIT MARGIN  
(Unit: KRW billion, %)



### Core Strengths

Since developing a synthesis technique for Zidovudine, an HIV treatment, ST Pharm has focused on developing APIs and intermediates for nucleoside antiviral drugs. The company has signed long-term supply contracts with major global pharmaceutical companies to supply them with APIs. It is also taking part in the initial stages of the new drug development processes of global pharmaceutical companies, which will in turn earn ST Pharm the right to supply the relevant APIs.

ST Pharm's production plants have officially received both domestic and overseas quality certifications. The Shihwa Plant operates an international quality system that has received current Good Manufacturing Practice (cGMP) certification from the US Food and Drug Administration (FDA), as well as certifi-

cations from relevant organizations in Korea and abroad, including the Pharmaceuticals and Medical Devices Agency (PMDA) in Japan, the Therapeutic Goods Administration (TGA) in Australia, and the World Health Organization (WHO). Construction of the Banwol Plant began in February 2014 and was completed in May 2015. With a site area of 8,800 m<sup>2</sup> and total floor area of 7,400 m<sup>2</sup>, this plant has the capacity to produce 102,000 liters of APIs annually. The plant also received Bulk Goods Manufacturing Practice (BGMP) approval from the Ministry of Food and Drug Safety in September 2015. Backed by these outstanding production capacity and quality management system, ST Pharm is expected to double its sales in five years by producing quality APIs, including hepatitis and tuberculosis treatments, at the Banwol Plant.

ST Pharm's strategy is to investigate promising candidates for new drug substances in the development and clinical stages, aimed at building long-term partnerships with customers. The company actively participates in the early clinical phase by providing services such as process optimization and scale-up. Once a new drug is released, ST Pharm becomes the primary supplier of the materials necessary for commercialization, which leads the company to build a long-term mass supply system.

ST Pharm has also set up an RNA interference (RNAi) drugs business. RNAi is a promising, fast-growing area of new drug development, and was the subject of research that won the Nobel Prize for Medicine in 2006. In 2014, ST Pharm signed an agreement with the Korea Drug Development Fund to develop 'STP02-3725', an oral anti-coagulant drug that uses a new concept of bile acid derivatives. The company is now undertaking efficacy research, process development, and pharmacokinetic/pharmacodynamic evaluations in order to obtain the FDA's Investigational New Drug (IND) application and approval.

ST Pharm's R&D activities are focused on the development of generic API production technology, the scale-up of new drug candidate substances, and research on process improvements. Its R&D investment totaled KRW 10.3 billion in 2015, a year-on-year increase of 52.5%, and about 7.5% of the company's total sales.

#### KEY FIGURES

(Unit: KRW billion)

TOTAL ASSETS

232.4

SALES

138.1

OPERATING PROFIT

34.5

OPERATING PROFIT MARGIN

25.0%

\* As of December 31, 2015



## 02.3

## DM Bio

DM Bio has started a new journey in contributing to improving the lives of people with its innovative bio-pharmaceutical products, guided by the belief in respecting lives.

In 2011, Dong-A Socio Holdings signed a comprehensive business alliance contract with Meiji Seika Pharma of Japan to launch a biosimilars business. Accordingly, the two companies cooperate comprehensively, from R&D to manufacturing and sales. In particular, they have agreed on biosimilar product development and sales for Herceptin<sup>®</sup>, a breast cancer treatment, Humira<sup>®</sup>, a rheumatoid arthritis treatment, and Stelara<sup>®</sup>, a psoriasis treatment, as well as discussing the potential of other treatments.

DM Bio is a joint venture company formed by Dong-A Socio Holdings and Meiji Seika Pharma, and is in charge of constructing and operating production facilities for bio-pharmaceuticals that are jointly developed by the two companies. DM Bio was officially launched as a bio-pharmaceutical company in April 2015, and began production in May. It received manufacturing business approval from the Korean Ministry of Food and Drug Safety (MFDS) in September, and full production will begin in 2016, along with Good Manufacturing Practice (GMP) certification from the Korean MFDS.

## Core Strengths

Dong-A Socio Holdings and Meiji Seika Pharma have invested around KRW 100 billion in the construction of the cGMP bio-pharmaceutical plant, completed in May 2014. The plant was designed and built in accordance with global regulations, to produce world-class bio-pharmaceutical products. It will manufacture products jointly developed by Dong-A Socio Holdings and Meiji Seika Pharma, and will also carry out Contract Manufacturing Organization (CMO) for other companies, including product manufacturing and process development services.

The plant of DM Bio covers a site spanning around 144,430 m<sup>2</sup> in the Songdo District, part of the Incheon Free Economic Zone, with a total floor space of 21,752 m<sup>2</sup>. It consists of the main three-

floor building, a waste-water treatment facility, a dangerous substances warehouse, and a security building. The plant has a total capacity of 8,000 liters, consisting of three independent 2,500 liter production lines on the second floor and a 500 liter production line on the first floor, so that several products can be produced simultaneously. DM Bio has also established a flexible and efficient production system by using a hybrid system that combines the advantages of single-use and multi-use systems for the efficient production of therapeutic biologics.

With the company aiming to export bio-pharmaceuticals to the global market, the production system was quality designed to earn certifications from major markets, including the US, Europe, and Japan. At present, the plant can produce APIs that go through mammalian cell culture and purification

## KEY FIGURES

(Unit: KRW billion)

## TOTAL ASSETS

126.3

\* As of December 31, 2015



processes. Aseptic filling and packaging facilities are being added so that the plant will also be able to produce finished pharmaceutical products from the second half of 2016. In addition, a Process Development Lab is being built which will begin operations in 2016.

DM Bio benefits from the expertise, experience, and know-how of two leading pharmaceutical companies from Korea and Japan. Because of the substantial differences in each country's pharmaceutical approval regulations, customized clinical trials are essential for entry into overseas markets. Dong-A Socio Holdings and Meiji Seika Pharma will therefore first target the Korean and Japanese markets, where they have extensive market experience and presence, before targeting other markets such as Europe and the US.

Each company will obtain sales approval in its own country, and they will work in partnership in the global market. With their milestones of success, excellence in R&D and established businesses, from the research phase to development, production, and sales, the partnership of Dong-A Socio Holdings and Meiji Seika Pharma is expected to be strong in the global market.

### Current Progress & Future Plans

Sales of HER-2, a benign breast cancer treatment, totaled around USD 5.1 billion in 2013 in the US, Japan, and five European countries (Germany, France, Italy, UK, and Spain), and demand is expected to reach USD 6.7 billion by 2020. The Herceptin<sup>®</sup> biosimilar market is forecast to be more than USD 1.4 billion, which is why DM Bio is developing DMB-3111, a biosimilar of Herceptin<sup>®</sup>. A phase I clinical trial conducted in Japan in 2014 indicated that DMB-3111 has extremely high equivalence with the original drug, and based on these results, a phase III global clinical trial is being prepared while looking at the opportunity of licensing it out globally.

Humira<sup>®</sup> is the world's leading rheumatoid arthritis treatment, with global sales of USD 12.9 billion in 2014. According to Evaluatepharma, a pharmaceutical industry analysis institution, Humira<sup>®</sup> will remain its leadership position in the global pharmaceutical industry, with sales of more than USD 13.9 billion by 2020. DMB-3113 is a biosimilar of Humira<sup>®</sup>; production of a clinical sample was completed in 2015, and preparations are now under way for a phase I clinical trial in Japan.

DM Bio is also researching biosimilars of Stelara<sup>®</sup>, a psoriasis treatment, as well as Opdivo<sup>®</sup> and Keytruda<sup>®</sup>, which are immune checkpoint inhibitors. The company plans to sign licensing-out agreements with global pharmaceutical companies for each phase of clinical development. In addition to manufacturing products jointly developed by Dong-A Socio Holdings and Meiji Seika Pharma, DM Bio will undertake CMO for other companies, with an aim to expand its business areas and advance into global markets, including Europe and the US, by leveraging the two companies' strong networks.



#### COMPETITIVENESS OF DM BIO

1. **STRATEGIC PARTNERSHIP** Synergy between the R&D and technique know-how of Dong-A Socio Holdings and Meiji Seika Pharma
2. **HYBRID SYSTEM** Maximizes capacities utilization which allows the simultaneous production of different products
3. **SEAMLESS TRANSFER** Rich experiences in eliminating gaps between R&D and manufacturing to realize the greatest value of products
4. **ONE STOP SHOP** A plant equipped with facilities of entire process from process development through production of APIs and finished products
5. **GLOBAL STANDARDS** Complies with global guidelines to produce high-quality bio-pharmaceuticals

02.4

## Yong-Ma Logis

Yong-Ma Logis provides specialized logistics services across all stages of supply chain, to ensure the best in customer satisfaction.

Established in 1983, Yong-Ma Logis is a leading provider of specialized logistics for difficult-to-handle products. The company operates a Quality Assurance organization to offer quality services, and has earned Korean Good Supplying Practices and ISO 9001/14001 certification. With 34 directly-managed networks around the nation, it quickly responds to customer requirements. It became the first Korean logistics company to adopt the Warehouse Management System, and it also uses advanced logistics information systems, such as Transportation Management System and Delivery Management System which provide freight visibility. The company is strengthening its position in e-Logistics as well, backed by its continued integration of information systems and the use of new technologies.

### Key Achievements

Sales in 2015 recorded KRW 149.2 billion, a year-on-year increase of 10.2%. This strong result was achieved by actively developing new businesses and attracting new customers. Sales in transport generated KRW 26.8 billion, down 12.4%; third party logistics went up 10.1% to KRW 43.9 billion, parcel delivery services recorded an increase of 7.3% to KRW 56.1 billion, and international logistics grew by 76.5%, to KRW 22.4 billion. This was mainly attributable to overall business improvements that benefited the company's consignors, the addition of new consignors in the electronics and automotive parts industries, and increased direct handling of dangerous article and refrigerated pharmaceutical containers, which are high value-added services.

Yong-Ma Logis is actively entering overseas markets for pharmaceutical and cosmetics logistics. In 2015, the company signed a Memorandum of Understanding (MOU) with Yamato Global Logistics Japan (YGL), resulting in sales of more than KRW 2 billion. Yong-Ma Logis is working with YGL Korea to attract large consignors, and has launched a courier business which handles 1,500 packages monthly. Plans were made to expand the overseas business



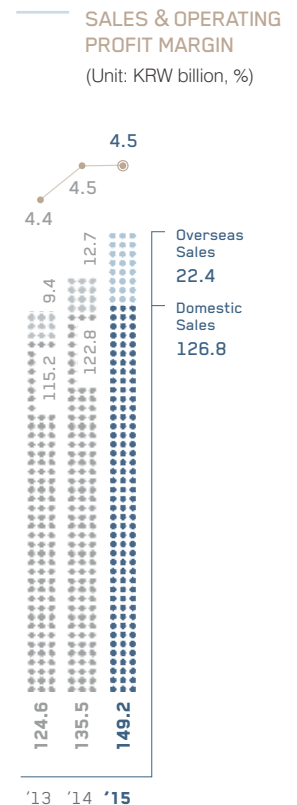
by diversifying routes based on the company's established expertise.

In 2015, Yong-Ma Logis completed the construction of its 16,376 m<sup>2</sup> Anseong Center 2. This Center goes beyond traditional warehousing functions, such as goods issuance, receipt, and storage – it reflects developing consignor needs and strengthens distribution processing functions, including labeling, packaging, and the creation of sets. The bonded zone has also been separated from the KGSP-only zone, to provide better logistics services.

In recognition of its outstanding performance achieved through continuous investments and business diversification, Yong-Ma Logis was designated as a leading company in the logistics category at the 2015 Korea Excellence Award and a customer service innovation leader at the Korea Management Awards. It has also obtained outstanding logistics warehouse company certification.

### Future Plans

Yong-Ma Logis is targeting sales of KRW 157 billion in 2016, up 5.2%. Although fiercer competition and a weaker global economy are anticipated, Yong-Ma Logis will expand into new business areas and develop new logistics services, in order to increase sales and improve profit structure. Furthermore, the company will diversify its global business by launching an overseas shopping mall and establishing more overseas infrastructure. With traffic increasing every year, Yong-Ma Logis will increase the number of its logistics centers, and use its own warehouse to optimize delivery bases and maximize operational efficiency.



## Bottle Glass

## 02.5

## Soo Seok

Soo Seok will achieve sustainable growth by producing eco-friendly and high-quality products that exceed customer expectation.

Soo Seok is a comprehensive packaging container manufacturer that produces packaging containers, such as glass bottles, aluminum caps, PET bottles, and plastic caps. Established in 1969, the company became a member of Dong-A Socio Group in 1978, and aims to be a leader in comprehensive, eco-friendly, and high-quality packaging materials. Soo Seok has been diversifying its product line-up to include not only glass bottles but also various packaging containers. Accordingly, the company consists of the Glass Unit, which produces amber and colorless bottles, the Cap Unit, which produces a wide range of caps, including STD and PEM caps, and the PP Unit, which produces NR PET, Heat-Resistant (HR) PET, Pressure-Resistant (PR) PET, and plastic caps.

## Key Achievements

In 2015, Soo Seok focused on improving stability and profitability of its established business areas, while expanding its position in new markets. After completing the construction of a plant to manufacture HR PET and PR PET bottles in 2014, Soo Seok sought to increase production and widen distribution of its HR PET and PR PET bottles in 2015. As a result, sales of HR PET and PR PET bottles rose significantly, leading to overall company sales reaching KRW 79.7 billion, a year-on-year increase of 8.3%. The company achieved an operating profit margin of 6.2%.

Soo Seok runs an industrial accident prevention campaign, based on total commitment to safety, rigorous safety policies, and the voluntary participation of its staff. The work environment is being improved by introducing automation systems in all production processes and removing accident risk factors. As a result, Soo Seok has remained accident-free from November 10th, 2006 through December 28th, 2015, a safety record that is nine times better than target. In recognition of this accomplishment, the company received a safety commendation from the Korea

Occupational Safety & Health Agency. As of the end of 2015, Soo Seok had been accident free for 3,338 days.

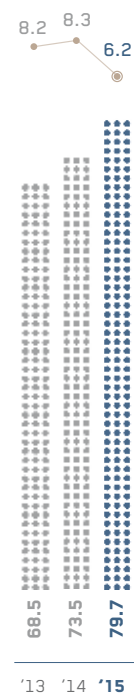
## Future Plans

Soo Seok's sales target for 2016 is KRW 88 billion, a year-on-year increase of 10%. In order to achieve the goal and expand market dominance, the company will strengthen its existing business and increase production capacity. Smelting furnace repairs and an overhaul of the bottle-forming machine at the company's glass bottle plant, which begun at the end of November 2015, have been completed, resulting in lower fuel expenses and increased production efficiency, which will further improve the company's operating profit margin.

According to an MOU signed with Dong-A Pharmaceutical in October 2015, Soo Seok will shortly move to the Hapdeok Indus Park industrial complex, located in South Chungcheong Province. Under the MOU, the companies will replace old production facilities by making new investments, enabling them to reduce distribution costs by using the geographical advantages of Hapdeok-eup, which is a major transportation hub and has an excellent logistics infrastructure. In addition, having the production facilities of Soo Seok and Dong-A Pharmaceutical in one place will generate greater synergy. And these efforts will help Soo Seok get closer to its goal of becoming a leader in comprehensive, eco-friendly, and high-quality packaging materials.

## SALES &amp; OPERATING PROFIT MARGIN

(Unit: KRW billion, %)



## KEY FIGURES

(Unit: KRW billion)

TOTAL ASSETS	137.0	OPERATING PROFIT	4.9
SALES	79.7	OPERATING PROFIT MARGIN	6.2%

\* As of December 31, 2015



## 03

## FINANCIAL REVIEW

## 03.1

## Independent Auditors' Report

Based on a report originally issued in Korean

**The Board of Directors and Shareholders  
Dong-A Socio Holdings Co., Ltd.:**

**Report on the Separate Financial Statements**

We have audited the accompanying separate financial statements of Dong-A Socio Holdings Co., Ltd. (the "Company"), which comprise the separate statements of financial position as at December 31, 2015 and 2014, the separate statements of comprehensive income, changes in equity and cash flows for the years then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

**Management's Responsibility for  
the Separate Financial Statements**

Management is responsible for the preparation and fair presentation of these separate financial statements in accordance with Korean International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of separate financial statements that are free from material misstatement, whether due to fraud or error.

**Auditors' Responsibility**

Our responsibility is to express an opinion on these separate financial statements based on our audits. We conducted our audits in accordance with Korean Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the separate financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the separate financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the separate financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the separate financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes

evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the separate financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

**Opinion**

In our opinion, the separate financial statements present fairly, in all material respects, the separated financial position as of December 31, 2015 and 2014 and its separate financial performance and its separate cash flows for the years then ended in accordance with Korean International Financial Reporting Standards.

**Emphasis of Matter**

Without qualifying our opinion, we draw attention to Note 38 to the separate financial statements which states that the Company has split into two companies through spin off its bio-similar sector on April 1, 2015, according to the plan approved at meeting of stockholders on March 20, 2015.

**Other Matter**

The procedures and practices utilized in the Republic of Korea to audit such separate financial statements may differ from those generally accepted and applied in other countries.

KPMG Samjong Accounting Corp.  
Seoul, Korea  
March 7, 2016

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This report is effective as of March 7, 2016, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying separate financial statements and notes thereto. Accordingly, the readers of the audit report should understand that the above audit report has not been updated to reflect the impact of such subsequent events or circumstances, if any.

## 03.2

## Separate Financial Statements

DONG-A SOCIO HOLDINGS CO., LTD.

As of December 31, 2015 and 2014

## Separate Statements of Financial Position

	2015	2014
(In thousands of won)		
<b>ASSETS</b>		
Cash and cash equivalents	₩ 49,978,584	97,194,090
Trade receivables	7,539,787	7,749,069
Other receivables	2,385,489	3,009,444
Other financial assets	4,951,860	2,593,143
Other current assets	609,638	596,389
Current tax assets	303,055	286,919
<b>Total current assets</b>	<b>65,768,413</b>	<b>111,429,054</b>
Long-term financial instruments	14,500	15,000
Other receivables	1,692	466,146
Other financial assets	36,358,946	7,803,352
Investments in associates and joint ventures	304,219,957	197,839,115
Investments in subsidiaries	152,112,090	124,379,345
Property, plant and equipment	47,882,620	149,816,640
Intangible assets	3,329,651	3,621,661
Investment property	8,931,702	8,584,137
Other non-current assets	144,992	287,515
Deferred tax assets	-	30,022
<b>Total non-current assets</b>	<b>552,996,150</b>	<b>492,842,933</b>
<b>Total assets</b>	<b>₩ 618,764,563</b>	<b>604,271,987</b>

As of December 31, 2015 and 2014

	2015	2014
(In thousands of won)		
<b>LIABILITIES</b>		
Other payables	₩ 7,275,760	9,077,701
Short-term borrowings	197,019,509	221,953,755
Other financial liabilities	473,303	690,123
<b>Total current liabilities</b>	<b>204,768,572</b>	<b>231,721,579</b>
Other financial liabilities	144,992	277,354
Employee benefits	6,044,339	5,043,608
Deferred tax liabilities	4,535,333	-
<b>Total non-current liabilities</b>	<b>10,724,664</b>	<b>5,320,962</b>
<b>Total liabilities</b>	<b>215,493,236</b>	<b>237,042,541</b>
<b>EQUITY</b>		
Share capital	23,333,955	22,407,955
Share premium	79,800,412	64,795,698
Capital adjustments	(193,337,293)	(193,337,293)
Other equity components	88,313,805	88,926,003
Retained earnings	405,160,448	384,437,083
<b>Total equity</b>	<b>403,271,327</b>	<b>367,229,446</b>
<b>Total liabilities and equity</b>	<b>₩ 618,764,563</b>	<b>604,271,987</b>

DONG-A SOCIO HOLDINGS CO., LTD.

For the years ended December 31, 2015 and 2014

## Separate Statements of Comprehensive Income

	2015	2014
<small>(In thousands of won, except earnings per share information)</small>		
<b>Revenue</b>	₩ 48,855,138	72,197,305
SSC and brand royalty	27,039,834	32,498,256
Dividends	20,882,802	39,233,220
Others	932,502	465,829
<b>Cost of sales</b>	19,509,809	23,926,208
SSC and brand royalty	19,383,141	23,799,338
Others	126,668	126,870
<b>Gross profit</b>	29,345,329	48,271,097
Selling, general and administrative expenses	(14,576,741)	(18,867,581)
Research and development costs	(22,101,698)	(23,961,892)
<b>Operating profit (loss)</b>	(7,333,110)	5,441,624
Other income	56,593,886	9,834,396
Other expenses	(16,328,352)	(1,015,103)
Finance income	6,599,113	4,399,543
Finance costs	(8,185,218)	(8,951,383)
<b>Profit before income tax</b>	31,346,319	9,709,077
Income tax expense	4,920,541	3,341,293
<b>Profit for the year</b>	₩ 26,425,778	6,367,784
<b>Other comprehensive income (loss)</b>		
<b>Items that will not be reclassified to profit (loss):</b>		
Defined benefit plan actuarial losses	₩ (1,220,822)	(961,769)
<b>Items that are or may be reclassified subsequently to profit (loss):</b>		
Unrealized net change in fair value of available-for-sale financial assets	(126,177)	5,709,835
<b>Other comprehensive profit (loss) for the year</b>	(1,346,999)	4,748,066
<b>Total comprehensive income for the year</b>	₩ 25,078,779	11,115,850
<b>Earnings per share</b>		
Basic earnings per share (in won)	₩ 5,777	1,459
Diluted earnings per share (in won)	₩ 5,375	1,459

DONG-A SOCIO HOLDINGS CO., LTD.

For the years ended December 31, 2015 and 2014

## Separate Statements of Changes in Equity

	Share capital	Share premium	Capital adjustments	Other equity components	Retained earnings	Total equity
(In thousands of won)						
Balance at January 1, 2014	₩ 21,698,195	45,743,138	(193,337,293)	61,072,265	405,514,610	340,690,915
<b>Total comprehensive income for the year:</b>						
Profit for the year	-	-	-	-	6,367,784	6,367,784
<b>Other comprehensive income (loss):</b>						
Change in fair value of available-for-sale financial assets	-	-	-	5,709,835	-	5,709,835
Change in classification of available-for-sale financial assets	-	-	-	22,143,903	(22,143,903)	-
Defined benefit plan actuarial losses	-	-	-	-	(961,769)	(961,769)
Total other comprehensive income	-	-	-	27,853,738	(23,105,672)	4,748,066
<b>Total comprehensive income for the year</b>	-	-	-	27,853,738	(16,737,888)	11,115,850
<b>Transactions with owners, recognized directly in equity:</b>						
Dividends	-	-	-	-	(4,339,639)	(4,339,639)
Paid-in capital increase	709,760	19,052,560	-	-	-	19,762,320
<b>Total transactions with owners</b>	709,760	19,052,560	-	-	(4,339,639)	15,422,681
Balance at December 31, 2014	₩ 22,407,955	64,795,698	(193,337,293)	88,926,003	384,437,083	367,229,446
Balance at January 1, 2015	₩ 22,407,955	64,795,698	(193,337,293)	88,926,003	384,437,083	367,229,446
<b>Total comprehensive income for the year:</b>						
Profit for the year	-	-	-	-	26,425,778	26,425,778
<b>Other comprehensive income (loss):</b>						
Change in fair value of available-for-sale financial assets	-	-	-	(126,177)	-	(126,177)
Defined benefit plan actuarial losses	-	-	-	-	(1,220,822)	(1,220,822)
Total other comprehensive income	-	-	-	(126,177)	(1,220,822)	(1,346,999)
<b>Total comprehensive income for the year</b>	-	-	-	(126,177)	25,204,956	25,078,779
<b>Transactions with owners, recognized directly in equity:</b>						
Dividends	-	-	-	-	(4,481,591)	(4,481,591)
Exercise stock warrants	876,000	14,444,977	-	(486,021)	-	14,834,956
Exercise convertible rights	50,000	559,737	-	-	-	609,737
<b>Total transactions with owners</b>	926,000	15,004,714	-	(486,021)	(4,481,591)	10,963,102
Balance at December 31, 2015	₩ 23,333,955	79,800,412	(193,337,293)	88,313,805	405,160,448	403,271,327

DONG-A SOCIO HOLDINGS CO., LTD.

For the years ended December 31, 2015 and 2014

## Separate Statements of Cash Flows

	2015	2014
<i>(In thousands of won)</i>		
<b>Cash flows from operation activities</b>		
Profit for the year	₩ 26,425,778	6,367,784
Adjustments	(47,634,006)	(22,485,701)
Changes in assets and liabilities	(2,962,757)	(15,367,705)
Dividends received	20,820,291	39,233,220
Income taxes paid	(16,135)	(1,532,308)
<b>Net cash provided by (used in) operating activities</b>	<b>(3,366,829)</b>	<b>6,215,290</b>
<b>Cash flows from investing activities</b>		
Interest received	1,961,411	2,165,725
Proceeds from collection of short term receivables from employees	5,000	90,000
Proceeds from sale of available-for-sale financial assets	30,354,191	250,386
Proceeds from sale of held-to-maturity financial assets	17,080	32,765
Decrease in long-term financial Instruments	500	-
Proceeds from sale of investments in associates	12,890,776	255,650
Proceeds from sale of investments in joint ventures	38,694,754	4,096,000
Proceeds from sale of property, plant and equipment	15,987	144,331
Proceeds from sale of intangible assets	-	405,935
Proceeds from sale of investment property	26,924	356,571
Decrease in deposits	10,300	545,000
Acquisition of available-for-sale financial assets	(10,000,000)	(37,032,610)
Acquisition of held-to-maturity financial assets	(8,700)	-
Acquisition of investments in subsidiaries	(27,732,744)	(8,000,000)
Acquisition of investments in associates	(53,898,138)	(45,940)
Acquisition of property, plant and equipment	(15,137,244)	(30,702,762)
Acquisition of intangible assets	(229,415)	(223,024)
Increase in deposits	(300)	(480,000)
<b>Net cash used in investing activities</b>	<b>₩ (23,029,618)</b>	<b>(68,141,973)</b>

For the years ended December 31, 2015 and 2014

	2015	2014
(In thousands of won)		
<b>Cash flows from financing activities</b>		
Proceeds from short term borrowings	₩ 55,000,000	30,000,000
Issuance of new stock	14,833,673	-
Interest paid	(6,275,168)	(7,801,486)
Dividends paid	(4,481,591)	(4,339,639)
Repayment of short-term borrowings	(20,000,000)	(10,000,000)
Repayment of current portion of long-term borrowings	(40,000,000)	-
Cash outflow due to split-off	(20,000,000)	-
Proceeds from issue of share capital	-	(117,680)
<b>Net cash provided by (used in) financing activities</b>	<b>(20,923,086)</b>	<b>7,741,195</b>
<b>Net decrease in cash and cash equivalents</b>	<b>(47,319,533)</b>	<b>(54,185,488)</b>
Cash and cash equivalents at January 1	97,194,090	151,344,290
Effect of exchange rate fluctuations on cash held	104,027	35,288
<b>Cash and cash equivalents at December 31</b>	<b>₩ 49,978,584</b>	<b>97,194,090</b>

## 03.3

## Independent Auditors' Report

Based on a report originally issued in Korean

### The Board of Directors and Shareholders Dong-A Socio Holdings Co., Ltd.:

#### Report on the Consolidated Financial Statements

We have audited the accompanying consolidated financial statements of Dong-A Socio Holdings Co., Ltd. and its subsidiaries (the "Group"), which comprise the consolidated statements of financial position as at December 31, 2015 and 2014, the consolidated statements of comprehensive income, changes in equity and cash flows for the years then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

#### Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with Korean International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

#### Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with Korean Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2015 and 2014 and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with Korean International Financial Reporting Standards.

#### Emphasis of Matter

Without qualifying our opinion, we draw attention to Note 43 to the consolidated financial statements which states that the Company has split into two companies through spin off its bio-similar sector on April 1, 2015, according to the plan approved at meeting of stockholders on March 20, 2015.

#### Other Matter

The procedures and practices utilized in the Republic of Korea to audit such consolidated financial statements may differ from those generally accepted and applied in other countries.

KPMG Samjong Accounting Corp.  
Seoul, Korea  
March 7, 2016

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This report is effective as of March 7, 2016, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying consolidated financial statements and notes thereto. Accordingly, the readers of the audit report should understand that the above audit report has not been updated to reflect the impact of such subsequent events or circumstances, if any.

## 03.2

## Consolidated Financial Statements

DONG-A SOCIO HOLDINGS CO., LTD. AND SUBSIDIARIES

As of December 31, 2015 and 2014

## Consolidated Statements of Financial Position

	2015	2014
(In thousands of won)		
<b>ASSETS</b>		
Cash and cash equivalents	₩ 119,992,840	134,820,810
Short-term financial instruments	2,140,000	2,110,000
Trade receivables	83,343,532	85,597,562
Other receivables	8,649,894	7,357,019
Other financial assets	1,561,490	165,891
Inventories	154,736,753	122,792,078
Other current assets	2,237,967	1,969,702
Current tax assets	384,585	1,024,953
<b>Total current assets</b>	<b>373,047,061</b>	<b>355,838,015</b>
Long-term financial instruments	33,500	397,500
Other receivables	5,619,960	10,162,424
Other financial assets	41,900,928	14,100,708
Investments in subsidiaries	330,151,376	248,989,087
Property, plant and equipment	440,834,808	428,783,684
Intangible assets	22,532,146	13,901,913
Investment property	8,854,943	8,525,820
Other non-current assets	314,857	370,510
Deffered tax assets	228,511	-
<b>Total non-current assets</b>	<b>850,471,029</b>	<b>725,231,646</b>
<b>Total assets</b>	<b>₩ 1,223,518,090</b>	<b>1,081,069,661</b>

As of December 31, 2015 and 2014

	2015	2014
(In thousands of won)		
<b>LIABILITIES</b>		
Trade payables	₩ 31,221,602	20,636,383
Other payables	81,149,443	50,653,587
Short-term borrowings	390,047,641	346,054,939
Provisions	4,558,800	3,905,879
Other financial liabilities	39,144	51,057
Other current liabilities	12,377,695	991,559
Income tax payable	16,132,683	6,241,027
<b>Total current liabilities</b>	<b>535,527,008</b>	<b>428,534,431</b>
Other payables	915,399	7,933,054
Long-term borrowings	39,722,610	74,292,760
Other financial liabilities	144,992	240,176
Employee benefits	19,862,375	16,070,458
Deferred tax liabilities	24,704,171	19,520,260
<b>Total non-current liabilities</b>	<b>85,349,547</b>	<b>118,056,708</b>
<b>Total liabilities</b>	<b>620,876,555</b>	<b>546,591,139</b>
<b>EQUITY</b>		
Share capital	23,333,955	22,407,955
Share premium	79,800,412	64,795,698
Capital adjustments	(200,008,466)	(200,008,466)
Other equity components	138,964,976	162,250,302
Retained earnings	479,510,149	436,279,924
<b>Equity attributable to owners of the Company</b>	<b>521,601,026</b>	<b>485,725,413</b>
<b>Non-controlling interests</b>	<b>81,040,509</b>	<b>48,753,109</b>
<b>Total equity</b>	<b>602,641,535</b>	<b>534,478,522</b>
<b>Total liabilities and equity</b>	<b>₩ 1,223,518,090</b>	<b>1,081,069,661</b>

DONG-A SOCIO HOLDINGS CO., LTD. AND SUBSIDIARIES

For the years ended December 31, 2015 and 2014

## Consolidated Statements of Comprehensive Income

	2015	2014
(In thousands of won)		
<b>Revenue</b>	₩ 704,734,520	630,625,194
Finished goods	443,341,694	372,789,392
Merchandise	92,069,911	99,405,266
Commissions	4,827,272	4,947,701
Others	164,495,643	153,482,835
<b>Cost of sales</b>	457,320,756	439,086,605
Finished goods	200,217,669	187,765,720
Merchandise	87,575,212	82,114,855
Others	169,527,875	169,206,030
<b>Gross profit</b>	247,413,764	191,538,589
Selling, general and administrative expenses	145,929,263	135,799,248
Research and development costs	37,125,064	34,912,403
<b>Results from operating activities</b>	64,359,437	20,826,938
Other income	49,998,731	10,816,205
Other expenses	(16,855,456)	(2,510,888)
Finance income	6,472,862	7,209,614
Finance costs	(17,337,873)	(18,897,425)
Equity Income on investments	7,441,390	7,849,077
<b>Profit from continuing operations before income tax</b>	94,079,091	25,293,521
Income tax expense	27,464,202	18,808,195
<b>Profit for the year</b>	₩ 66,614,889	6,485,326

For the years ended December 31, 2015 and 2014

	2015	2014
<small>(In thousands of won, except earnings per share information)</small>		
<b>Other comprehensive income (loss)</b>		
<b>Items that will not be reclassified to profit (loss):</b>		
Defined benefit plan actuarial losses	₩ (4,661,575)	(7,066,521)
Change in retained earnings – change in equity method accounted investments	2,766,769	(1,291,882)
<b>Items that are or may be reclassified subsequently to profit (loss):</b>		
Unrealized net change in fair value of available-for-sale financial assets	50,493	7,201,807
Capital adjustment for equity method accounted investment	(7,664,421)	441,338
<b>Other comprehensive loss for the year</b>	<b>(9,508,734)</b>	<b>(715,258)</b>
<b>Total comprehensive income (loss) for the year</b>	<b>57,106,155</b>	<b>5,770,068</b>
<b>Profit attributable to:</b>		
Owners of the Company	47,883,251	1,715,986
Non-controlling interests	18,731,638	4,769,340
<b>Profit for the year</b>	<b>66,614,889</b>	<b>6,485,326</b>
<b>Total comprehensive profit (loss) attributable to:</b>		
Owners of the Company	38,091,466	346,038
Non-controlling interests	19,014,689	5,424,030
<b>Total comprehensive profit (loss) for the year</b>	<b>₩ 57,106,155</b>	<b>5,770,068</b>
<b>Earnings per share</b>		
Basic earnings per share (won)	10,560	397
Diluted earnings per share (won)	10,143	397

DONG-A SOCIO HOLDINGS CO., LTD. AND SUBSIDIARIES

For the year ended December 31, 2014

## Consolidated Statements of Changes in Equity

	Share capital	Share premium	Capital adjustments	Other equity components	Retained earnings	Non-controlling interests	Total equity
(In thousands of won)							
Balance at January 1, 2014	₩ 21,698,195	45,743,138	(198,321,760)	131,773,083	470,698,892	43,012,784	514,604,332
<b>Total comprehensive income for the year:</b>							
Profit for the year	-	-	-	-	1,715,986	4,769,340	6,485,326
<b>Other comprehensive income (loss):</b>							
Other comprehensive income on revaluations	-	-	-	(54,027)	54,027	-	-
Change in fair value of available-for-sale financial assets	-	-	-	6,369,029	-	832,778	7,201,807
Capital adjustment for equity method accounted investment	-	-	-	276,665	-	164,673	441,338
Defined benefit plan actuarial gains (losses)	-	-	-	-	(6,723,760)	(342,761)	(7,066,521)
Change in classification of available-for-sale financial assets	-	-	-	23,833,700	(23,833,700)	-	-
Change in retained earnings-change in equity method accounted investments	-	-	-	-	(1,291,882)	-	(1,291,882)
Total other comprehensive income (loss)	-	-	-	30,425,367	(31,795,315)	654,690	(715,258)
<b>Total comprehensive income (loss) for the year</b>	-	-	-	30,425,367	(30,079,329)	5,424,030	5,770,068
<b>Transactions with owners of the Company, recognized directly in equity:</b>							
Dividends	-	-	-	-	(4,339,639)	(993,603)	(5,333,242)
Investment in kind	709,760	19,052,560	-	-	-	-	19,762,320
Issue in convertible bonds	-	-	-	51,852	-	-	51,852
Acquisition of treasury shares	-	-	(1,686,706)	-	-	-	(1,686,706)
Change in scope of consolidation	-	-	-	-	-	1,309,898	1,309,898
<b>Total transactions with owners</b>	709,760	19,052,560	(1,686,706)	51,852	(4,339,639)	316,295	14,104,122
Balance at December 31, 2014	₩ 22,407,955	64,795,698	(200,008,466)	162,250,302	436,279,924	48,753,109	534,478,522

For the year ended December 31, 2015

	Share capital	Share premium	Capital adjustments	Other equity components	Retained earnings	Non-controlling interests	Total equity
(In thousands of won)							
Balance at January 1, 2015	₩ 22,407,955	64,795,698	(200,008,466)	162,250,302	436,279,924	48,753,109	534,478,522
<b>Total comprehensive income for the year:</b>							
Profit for the year	-	-	-	-	47,883,251	18,731,638	66,614,889
<b>Other comprehensive income (loss):</b>							
Change in fair value of available-for-sale financial assets	-	-	-	50,493	-	-	50,493
Capital adjustment for equity method accounted investment	-	-	-	(7,655,480)	-	(8,941)	(7,664,421)
Defined benefit plan actuarial gains (losses)	-	-	-	-	(4,953,566)	291,991	(4,661,575)
Change in retained earnings-change in equity method accounted investments	-	-	-	-	2,766,769	-	2,766,769
Total other comprehensive income (loss)	-	-	-	(7,604,987)	(2,186,797)	283,050	(9,508,734)
<b>Total comprehensive income (loss) for the year</b>	-	-	-	(7,604,987)	45,696,454	19,014,688	57,106,155
<b>Transactions with owners of the Company, recognized directly in equity:</b>							
Dividends	-	-	-	-	(4,481,591)	(870,472)	(5,352,063)
Exercise stock warrants	876,000	14,444,977	-	(486,021)	-	-	14,834,956
Exercise convertible right	50,000	559,737	-	-	-	-	609,737
Change in scope of consolidation	-	-	-	(51,852)	2,015,363	-	1,963,511
Capital transactions with stockholder	-	-	-	(15,142,466)	-	14,143,183	(999,283)
<b>Total transactions with owners</b>	926,000	15,004,714	-	(15,680,339)	(2,466,228)	13,272,711	11,056,858
Balance at December 31, 2015	₩ 23,333,955	79,800,412	(200,008,466)	138,964,976	479,510,150	81,040,508	602,641,535

DONG-A SOCIO HOLDINGS CO., LTD. AND SUBSIDIARIES

For the years ended December 31, 2015 and 2014

## Consolidated Statements of Cash Flows

	2015	2014
(In thousands of won)		
<b>Cash flows from operation activities</b>		
Profit for the year	₩ 66,614,889	6,485,326
Adjustments	40,634,793	51,908,649
Changes in assets and liabilities	(15,982,710)	(49,468,362)
Dividends received	359,288	1,006,587
Income taxes paid	(10,689,453)	(17,847,717)
<b>Net cash provided by operating activities</b>	<b>80,936,807</b>	<b>(7,915,517)</b>
<b>Cash flows from investing activities</b>		
Interest received	2,889,138	3,382,645
Decrease in short-term financial instruments	2,110,000	4,923,507
Decrease in short-term loans	116,642	152,505
Proceeds from sale of held-to-maturity investments	17,080	31,835
Proceeds from sale of available-for-sale financial assets	29,864,811	1,404,922
Proceeds from sale of investments in subsidiaries	38,694,754	4,096,000
Proceeds from sale of investments in associates	22,343,610	-
Proceeds from sale of property, plant and equipment	435,431	326,519
Proceeds from sale of intangible asset	98,215	120,838
Proceeds from sale of investment property	26,924	1,040,080
Decrease in deposits	1,146,842	-
Decrease in long-term financial instruments	364,000	-
Changes in ownership interests in subsidiaries that do not result in loss of control	-	1,309,898
Increase in short-term financial instruments	(2,140,000)	-
Increase in short-term loans	(611,390)	-
Increase in long-term financial instruments	-	(292,000)
Acquisition of held-to-maturity financial assets	(26,830)	(54,690)
Acquisition of available-for-sale financial assets	(10,520,551)	(39,912,042)
Acquisition of property, plant and equipment	(96,877,756)	(87,098,101)
Acquisition of intangible assets	(14,395,028)	(1,112,235)
Acquisition of investments in associates	(47,249,050)	-
Increase in deposits	(7,452,659)	(4,819,261)
Cash outflow due to change in scope of consolidation	(257,885)	-
Acquisition of business	(25,500,000)	-
<b>Net cash used in investing activities</b>	<b>₩ (106,923,702)</b>	<b>(116,499,580)</b>

For the years ended December 31, 2015 and 2014

	2015	2014
(In thousands of won)		
<b>Cash flows from financing activities</b>		
Proceeds from short-term borrowings	141,748,105	87,053,396
Proceeds from long-term borrowings	35,940,000	61,000,000
Proceeds from current portion of convertible bonds	-	4,584,664
Proceeds from rental deposits received	62,740	40,210
Issuance of new stock	14,833,673	-
Interest paid	(8,288,229)	(8,369,844)
Dividends paid	(5,352,063)	(5,333,242)
Repayment of short-term borrowings	(62,121,750)	(24,381,834)
Repayment of current portion of long-term borrowings	(47,913,190)	(44,735,464)
Repayment of long-term borrowings	(8,019,500)	(2,833,240)
Repayment of current portion of convertible bonds	-	(4,197,939)
Repayment of current portion of bonds	(3,500,000)	-
Acquisition of treasury shares	-	(1,686,706)
Cash outflow due to split-off	(20,000,000)	-
Capital transactions with stockholder	(400,791)	-
Decrease in convertible redeemable preferred stocks	(25,885,200)	-
<b>Net cash provided by (used in) financing activities</b>	<b>11,103,795</b>	<b>61,140,001</b>
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>(14,883,100)</b>	<b>(63,275,096)</b>
Cash and cash equivalents at January 1	134,820,810	198,183,119
Effect of exchange rate fluctuations on cash held	55,130	(87,213)
<b>Cash and cash equivalents at end of year</b>	<b>119,992,840</b>	<b>134,820,810</b>

# DONG-A ST

Dong-A ST has remained sound despite challenging market conditions, through continuous investment in new drug development, a growing global presence, and commitment to sustainable growth. Based on these achievements, Dong-A ST will take another step toward becoming a leading global company that can generate sustainable value for our stakeholders.

## DONG-A ST

### AT A GLANCE

01

- 01.1 Organization
- 01.2 Company Overview

### BUSINESS REVIEW

02

- 02.1 ETC Unit
- 02.2 Overseas Unit
- 02.3 Medical Equipments & Diagnostics Unit
- 02.4 M.I.Tech\*

### R&D REVIEW

03

- 03.1 Research & Development
- 03.2 R&D Pipeline

### FINANCIAL REVIEW

04

- 04.1 Management's Discussion & Analysis
- 04.2 Independent Auditors' Report
- 04.3 Separate Financial Statements
- 04.4 Independent Auditors' Report
- 04.5 Consolidated Financial Statements

\* Subsidiary

# DONG-A ST

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## 01

DONG-A ST  
AT A GLANCE

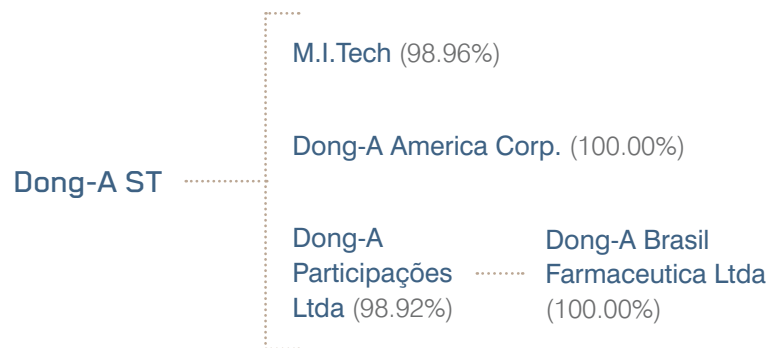
## 01.1

## Organization

Dong-A ST is an Ethical (ETC) drug specialized company within Dong-A Socio Group. Its major business areas are ETC products, overseas business, as well as medical equipments and diagnostics.

Dong-A ST has four subsidiaries, M.I.Tech, Dong-A Participações Ltda, Dong-A America Corp. and Dong-A Brasil Farmaceutica Ltda as of the end of 2015. Established in 1991, M.I.Tech develops, manufactures and markets medical equipment; in particular, it exports gastrointestinal stents to around 50 countries worldwide. It became a member of Dong-A Socio Group in 2013 in line with the plan to widen the Group's business areas and to directly manufacture medical equipment. Dong-A Participações Ltda, a subsidiary in Brazil, was established in 2013 to target new markets by formulating local investment plans and developing new business. Together with Dong-A Brasil Farmaceutica Ltda, a subsidiary company that

handles regulatory approvals, marketing, and sales, Dong-A Participações Ltda acts as head office for Dong-A ST in Latin America. Dong-A America Corp. is Dong-A ST's US sales subsidiary, handling production and sales of Bacchus® in the US.



\* Based on companies subject to consolidation

(Unit: KRW billion)	BUSINESS AREAS	ESTABLISHMENT	SALES	OPERATING PROFIT MARGIN (%)	TOTAL ASSETS
Dong-A ST <sup>1)</sup>	Manufacture of ETC drugs, overseas business, and medical equipment and diagnostics	March 2013	581.0	9.5	1,063.5
M.I.Tech <sup>2)</sup>	Production and sales of non-vascular stents	January 1991	13.1	13.9	17.5
Dong-A Participações Ltda <sup>2)</sup>	Investment and development of new business in Brazil	January 2013	-	-	0.8
Dong-A America Corp. <sup>2)</sup>	Sales of Bacchus® in North America	March 1991	0.6	-	0.6
Dong-A Brasil Farmaceutica Ltda	Investment and development of new business in Brazil	January 2013	-	-	-

<sup>1)</sup> Consolidated figures

<sup>2)</sup> Separate figures

\*As of December 31, 2015

## 01.2

## Company Overview

Dong-A ST has been expanding its presence in the global market and continuing investments into research & development, in order to become a global leader in developing highly innovative medicines.

### Key Achievements

In 2015, Dong-A ST generated sales of KRW 567.9 billion and an operating income of KRW 54.3 billion, a year-on-year increase of 12.8%. The operating margin was 9.6%, a year-on-year improvement of 1.1%p. Sales of ETC Unit declined 6.3% from the previous year to KRW 330.4 billion, mainly attributable to the Middle East Respiratory Syndrome (MERS) crisis in the first half of the year, and a price cut in Stillen®, the company's main product, due to its patent expiration in the second half of the year. However, the introduction of Acelex® to the domestic osteoarthritis market and the release of Baracle®, a blockbuster generic for hepatitis B, both got off to good starts. The company also secured the Korean Ministry of Food and Drug Safety (MFDS) approval for Sivextro®, an oxazolidinone class antibiotic, Suganon®, a diabetes treatment, and for Stillen® 2X, an Incrementally Modified Drug (IMD) of Stillen®.

In exports, 2015 sales of anti-tuberculosis drugs exceeded 2014's figure by 58.1% while Bacchus® exports outpaced by 39.1%, helping exports to grow 18.5% over the previous year, to KRW 133 billion. In the medical equipments and diagnostics business, sales recorded KRW 66.8 billion, up 1.8% from the previous year.

### Future Plans

Dong-A ST has established 'Global ST' as its vision for 2016. The pursuit of this goal means improving domestic performance and increasing overseas sales. In the domestic market, it will continue to grow sales of newly released products. Suganon® will be launched in 2016, and is expected to contribute significantly to regain the growth momentum. Acelex®, an osteoarthritis treatment, and Baracle®, a hepatitis B treatment, both of which were launched last year,

will increase their market shares, and Teribone®, an osteoporosis treatment will be released in 2016.

The Overseas Unit of the company plans to export its major products, including Bacchus®, bio-pharmaceuticals, and anti-tuberculosis drugs, to more countries, and will also develop next-generation products. Dong-A ST targets to generate KRW 1 trillion of sales by 2020, with 30% contribution from overseas business.

In R&D, each laboratory of the Dong-A ST Research Center has set different strategies. The Drug Discovery Research Laboratories carries out global R&D, while the Pharmaceutical Product Research Laboratories will concentrate on developing IMDs. R&D will pave the way to realize the company's vision of becoming a "respected and leading global company developing innovative new drugs", and 2016 will be the year to make a big step forward.

### KEY FIGURES

(Unit: KRW billion)

TOTAL ASSETS

1,059.0

OPERATING PROFIT

54.3

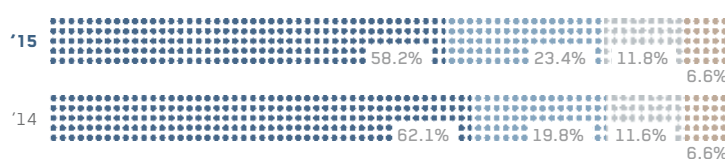
OPERATING PROFIT MARGIN

9.6%

\* As of December 31, 2015;  
Separate figures

### SALES BY BUSINESS

(Unit: KRW billion)



	2014	2015
● ETC	352.6	330.4
● Overseas	112.3	133.0
● Medical Equipments & Diagnostics	65.7	66.8
● Others*	37.5	37.6
<b>Total</b>	<b>568.1</b>	<b>567.9</b>

\* Others include milestone fees, royalty income and rental income

## 02

## BUSINESS REVIEW

## 02.1

## ETC Unit

Based on the well-established organizational structure of Dong-A Socio Group, Dong-A ST will leverage its global R&D capabilities and distinctive marketing activities, to further strengthen its reputation as a leader in the domestic ETC market.

Dong-A ST's ETC Unit supplies around 90 Ethical (ETC) drugs to approximately 1,000 hospitals and 10,000 clinics across the nation through a pharmaceutical sales system with higher efficiency and productivity than any other in the Korean pharmaceutical industry.

ETC products are categorized into in-house developed original drugs, licensed-in original drugs, biopharmaceuticals, and generic products. Having developed Stillen<sup>®</sup>, Zydene<sup>®</sup>, Motilitone<sup>®</sup>, Sivextro<sup>®</sup>, and Suganon<sup>®</sup>, Dong-A ST has maintained its leadership position in new drug development in Korea. About 500 ETC Medical Representatives (MRs) offer high-quality medical information through 12 branches and four offices around the nation, so that its products can be prescribed in the right place and at the right time.

In terms of sales strategies, Dong-A ST undertakes evidence-based marketing, leading a paradigm shift in the Korean pharmaceutical industry. As part of this effort, the company has been conducting clinical trials on generic products since 2011, in order to provide evidence on their efficacy and safety. Rather than just focusing on Post Marketing Surveillance (PMS), which relies only on reports of side effects, these trials establish non-inferior efficacy and safety in comparison with the original drugs, thus earns the trust of medical personnel.

In order to respond to changes in the pharmaceutical industry and the government's varying policies, Dong-A ST implements a strict Compliance Program (CP). Its CP Management Department is the

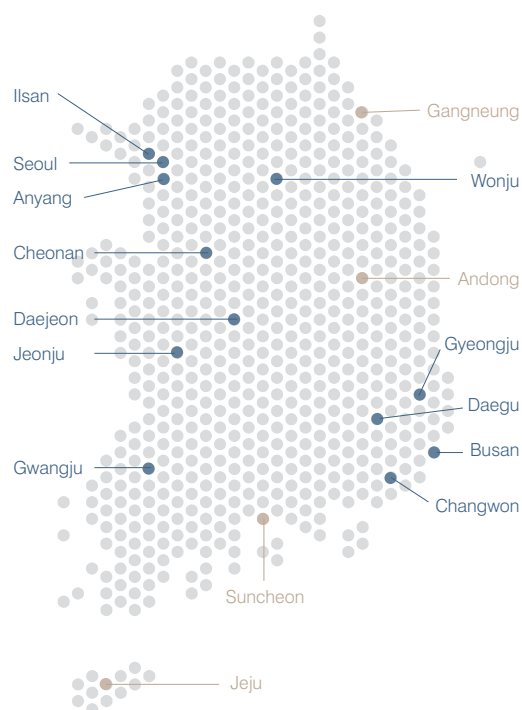
## DOMESTIC NETWORK

## ● LOCAL SALES ORGANIZATION

Seoul Branch  
Anyang Branch  
Ilsan Branch  
Busan Branch  
Daegu Branch  
Changwon Branch  
Gyeongju Branch  
Daejeon Branch  
Cheonan Branch  
Gwangju Branch  
Jeonju Branch  
Wonju Branch

## ● SALES OFFICE

Jeju Sales Office  
Andong Sales Office  
Suncheon Sales Office  
Gangneung Sales Office



largest organization among Korean pharmaceutical companies, and the CEO serves as the Compliance Chief Officer. Moreover, corporate-wide efforts are made to ensure fair trading. As a result, Dong-A ST received an 'AA' rating, the best one among domestic pharmaceutical company, on the 2015 CP Evaluation Program carried out by the Fair Trade Commission.

## Key Achievements

The Korean pharmaceutical market grew 5.1% year-on-year to reach around KRW 15,117.5 billion in 2015. The ETC drug market grew 5.4% over the previous year, despite the government's continued tightening of regulatory policies and changes in the business environment. The Korean pharma-



### PRODUCTION FACILITIES AND CAPACITY

Plant	Size (m <sup>2</sup> )	Produced Items	Major Products
Cheonan Plant	136,747	In-house developed original drugs and other capsules, tablets, injections	Zydena <sup>®</sup> , Stillen <sup>®</sup> , Motilitone <sup>®</sup>
Dalseong Plant	36,379	Bio-pharmaceuticals	Eporon <sup>®</sup> , Growsopin <sup>®</sup> , Leucostim <sup>®</sup> , Gonadopin <sup>®</sup>

ceutical industry is likely to grow continuously on a westernizing diet trend, an aging population, and greater wealth, all of which have increased demand for medical services and more active R&D from pharmaceutical companies to meet this demand.

In 2015, Dong-A ST licensed-in Acelex<sup>®</sup>, an original drug for osteoarthritis that was developed by a Korean bio venture company called Crystal Genomics. The company also unveiled Baracle<sup>®</sup>, a blockbuster generic hepatitis B treatment, Mainta<sup>®</sup>, a generic lung cancer treatment, and Mainta<sup>®</sup> liquid preparation, an IMD of Mainta<sup>®</sup>, all in an effort to strengthen the product portfolio. In addition, Dong-A ST received market release approval from the Korean MFDS for Sivextro<sup>®</sup>, Suganon<sup>®</sup> and Stillen<sup>®</sup> 2X. Teribone<sup>®</sup>, an osteoporosis treatment, of which

Dong-A ST signed a contract with Japan's Asahi Kasei Pharma for the domestic development and exclusive sales in 2014, also secured approval from the Korean MFDS, and will be launched in early 2016.

Despite these efforts, the ETC Unit generated sales of KRW 330.4 billion, a year-on-year fall of 6.3%, mainly owing to the MERS crisis in the first half of 2015 and the expiration of the patent on Stillen<sup>®</sup>, Dong-A ST's key product.

### Future Plans

In 2016, Dong-A ST plans to launch a number of in-house developed original drugs, including Stillen<sup>®</sup> 2X, Suganon<sup>®</sup>, as well as tablet and injection forms of Sivextro<sup>®</sup>. Moreover, Teribone<sup>®</sup>, a licensed-in original drug, and Sugamet<sup>®</sup>, a combination drug comprised of Suganon<sup>®</sup> and Metformin, will also be released. The company has expanded away from its previous concentration on urinary and digestive system drugs and moved into next-generation areas such as diabetes, anti-cancer, and hepatitis, in order to build a market presence and strengthen product portfolio. Dong-A ST also plans to sign more strategic alliances with global pharmaceutical companies so that it can supply the market with additional competitive products.

The new holding company structure has enhanced Dong-A ST's expertise and competitiveness, especially as it allows the company to concentrate on the ETC business. With a stable business structure, it will focus on development and successful market entry of new products in the short term, and over the mid-to long term, it will strengthen its product portfolio by developing new drugs and expanding strategic alliances. This will improve its market position, especially in in-house developed original drugs, new products, and blockbuster items.



## 02.2

## Overseas Unit

Dong-A ST is increasing its global presence by developing innovative medicines, building a global network, pioneering new markets, and fostering global talent who will take a lead in legalizing the vision of 'Global Dong-A'.

Dong-A ST's Overseas Unit is in charge of the company's overseas sales. As of the end of 2015, it exports in-house developed original drugs, including Stillen<sup>®</sup> and Zydene<sup>®</sup>, and bio-pharmaceuticals, such as Growtropin<sup>®</sup>, Eporon<sup>®</sup>, and Leucostim<sup>®</sup>, to more than 40 countries around the world, across Europe, Latin America, Asia, the Middle East, and Africa. It also exports the Active Pharmaceutical Ingredients (APIs), such as Cycloserine, Terizidone, and Atorvastatin, as well as various finished pharmaceutical products, including Closerin<sup>®</sup>. In addition, Bacchus<sup>®</sup>, Dong-A's flagship brand, is exported through the Overseas Unit.

Based on its global strategy, Dong-A ST is aiming to increase the market shares of existing products, explore new markets, develop globally competitive products, build a global network of strategic relationship with overseas companies, and undertake clinical trials abroad. It also regularly hires outstanding talent with global abilities, and runs global internships and programs to foster global experts, in addition to offering training systems, such as the Training Road Map (TRM).

### Key Achievements

Dong-A ST achieved export sales of KRW 133 billion in 2015. This increase of 18.5% over the KRW 112.3 billion recorded in 2014 was a significant accomplishment, considering the difficult business environment, with foreign exchange fluctuations in countries such as Brazil and Russia, sluggish global economic growth, and the 'G2 risk'.

Sales growth was led by Bacchus<sup>®</sup>, which is exported to Southeast Asia, Latin America, and the Middle East, and by the anti-tuberculosis products that the company supplies to the World Health Organization (WHO), despite falling bio-products sales in Brazil and Turkey. The anti-tuberculosis sector reported

year-on-year growth of 58.1%, with Closerin<sup>®</sup> generating sales of KRW 24.1 billion, up 121.4% over the previous year. In an anti-tuberculosis tender held by the WHO in 2015, Dong-A ST ranked second in the Rest of World Tender and first in the India Tender. In addition to WHO, Closerin<sup>®</sup> was released in China from the first quarter of 2015.

Dong-A ST is expanding its global network by partnering with local companies, both in advanced markets, including the US and Europe, and in emerging markets, such as Asia and Latin America. Accordingly, the company opened an office in India in 2011, and established Dong-A Participações Ltda, a Brazilian subsidiary, in 2013, as well as its subsidiary, Dong-A Brasil Farmaceutica Ltda, to act as launchpads for Indian and Latin American markets. The company also runs an overseas subsidiary in the US, Dong-A America Corp.



To generate social values, Dong-A ST donated pharmaceuticals to Liberia, Tanzania, and other countries in Africa, and provided relief goods after the earthquake in Nepal, as part of its commitment to being a responsible global corporate citizen and creating social values.

### Future Plans

In 2016, Dong-A ST will improve sales in areas where were sluggish in 2015, expand the markets for existing products, and strengthen its global network, with the target to reach KRW 300 billion in sales of the Overseas Unit by 2020.

In the short term, Dong-A ST will strive to increase sales of Bacchus<sup>®</sup> and bio-products while tapping into new markets for anti-tuberculosis drugs. The mid- to long term plan is to market anti-cancer drugs

in advanced economies, including the US and Japan, and to advance into Indonesia and the Middle East by licensing out its products. The company is also in pursuit of additional export contracts and the development of globally aligned business model, in order to increase the number of its export destinations. As part of these efforts, Dong-A ST is expanding its branch network in major overseas markets, and establishing strategic alliances with overseas companies. In addition to focus on increasing sales of existing products, the company will adopt a dual price system and diversify sources of APIs, with an aim to proactively respond to the anti-tuberculosis drug market, and will develop next-generation products, as well. Furthermore, Dong-A ST will recruit and train global experts to underpin the drive for increased global sales.



### OVERSEAS SALES TREND

(Unit: KRW billion)



\* Full year pro-forma

### MAJOR EXPORT PRODUCTS

(Unit: KRW billion)

Category	Product Name	Indication	Major Export Countries	Sales in 2014	Sales in 2015	Change (%)
Bio-pharmaceutical	Growtropin <sup>®</sup>	Human growth hormone	Brazil	32.1	26.8	(16.6)
	Eporon <sup>®</sup>	Renal anemia treatment	Turkey	4.8	4.5	(7.8)
APIs	Cycloserine	Tuberculosis treatment	Russia	7.4	5.0	(33.0)
	Terizidone	Tuberculosis treatment	South Africa	4.6	7.1	55.0
Finished products and others	Bacchus <sup>®</sup>	Tonic	Cambodia	37.2	51.7	39.1
	Closerin <sup>®</sup>	Tuberculosis treatment	Europe	10.9	24.1	121.4

## 02.3

## Medical Equipments & Diagnostics Unit

Dong-A ST will build partnerships with world-renowned companies, in order to make its own products and expand its presence in global markets, thereby achieving solid growth of the company and contributing to a healthier society.

Dong-A ST's Medical Equipments Unit operates in four areas of expertise. In the orthopedics, it handles products of Biomet and Medipost, while dealing with cardiovascular stents of Abbott in the area of cardiology. There is a sales team dedicated to the Medtronic, Biomet and Kawasumi products, and a specialist team which handles a gait training rehabilitation robot from Hyundai Heavy Industries.

The Diagnostics Unit is in charge of selling diagnostics and testing equipment, as well as reagents. It distributes the products of Becton Dickinson, DiaSorin, Thermo Fisher, Dirui, and Energium, while striving to expand product portfolio to highspeed closed tube sorter, mobile phlebotomy classification & labeling system, and molecular diagnostic testing products.

### Key Achievements

In 2015, the Medical Equipments Unit concentrated on increasing sales, and adopting and promoting new products. In orthopedics, the Unit adopted ScienceMedic's domestically-made electrically-powered equipment, in order to strengthen its competitiveness, and continued to promote Cartistem, a stem cell treatment from Medipost for the knee cartilage regeneration. In cardiology, it maintained the No. 1 position in drug-eluting stents, and expanded its product portfolio for cardiothoracic surgery. In medical equipment, it launched a non-invasive vascular screening device with price competitiveness, to expand its dominance in the mid-sized hospital market.

As a result of these efforts, the Medical Equipments Unit generated sales of around KRW 37.4 billion in 2015. Sales of Cartistem went up by KRW 12 billion to KRW 4.9 billion, and cardiothoracic surgery sales grew by KRW 3 billion to KRW 4.4 billion. OMRON equipment recorded sales of KRW 4.2 billion, up KRW 0.2 billion over the previous year.

The development of an orthopedic power tool from ScienceMedic represents part of its efforts to localize products, and the Unit plans to distribute the tool both domestically and overseas. It also leads a national project from the Ministry of Trade, Industry and Energy, using Morning Walk, a gait training rehabilitation robot from Hyundai Heavy Industries, which is scheduled to be launched in 2016.

In 2015, the Diagnostics Unit focused on top-end, high-priced products from Diasorin, and achieved stable growth in sales of Becton Dickinson's safety for blood collection & plastic blood culture media, which account for more than 70% of the domestic market. Sales of Diasorin's products grew by around 50% over the previous year. The Diagnostics Unit has built the base for a global business, including the development of a malaria control product, and is entering export markets for immuno diagnosis measuring system and rapid kit.

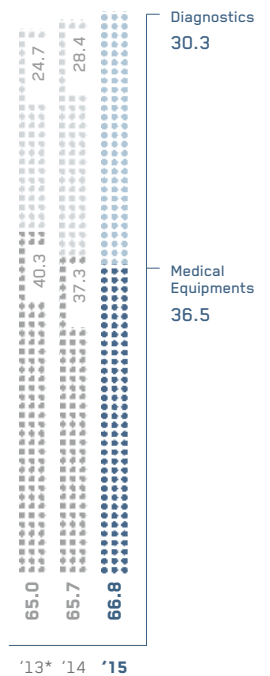
### Future Plans

The Medical Equipments Unit is actively seeking to export ScienceMedic's orthopedic power tool by completing Food and Drug Administration (FDA) and Conformity European (CE) certification in 2016, and looking for a US partner in the field of orthopedics and veterinary medicine. The Medical Equipments Unit will also continue to strengthen its line-up by adopting new products, including Biomet's Vanguard XP, Abbott's bioresorbable vascular scaffold, Medtronic's valve for young children, and OMRON's height and weight scale and ophthalmoscope.

The Diagnostics Unit will make continuous efforts to increase sales of products from Becton Dickinson and Diasorin, and will expand its global business. Exports of hepatitis diagnosis equipment along with the relevant cartridges and HBV DNA viral load equipment with its relevant cartridges will begin in 2016, to countries all around the world.

### MEDICAL EQUIPMENTS & DIAGNOSTICS UNIT SALES

(Unit: KRW billion)



\* Full year pro-forma

## 02.4 Subsidiary

## M.I.Tech

By maintaining strong growth of existing products and achieving new growth through the development of innovative products, M.I.Tech will make itself more competitive and improve people's quality of life.

M.I.Tech is a non-vascular stent manufacturer that was established in 1991, and became a subsidiary of Dong-A ST in 2013. As a leader in non-vascular stents at home and abroad, the company complies with strict global standards on quality management. Hanaro Stent<sup>®</sup> is a non-vascular stent developed by M.I.Tech, and has been recognized for its advanced technology by the US Food and Drug Administration (FDA) and Japan's Ministry of Health, Labor, and Welfare (MHLW).

M.I.Tech develops, manufactures and distributes non-vascular stents, and since becoming a member of Dong-A Socio Group, it has expanded its business to include Transcutaneous Electrical Nerve Stimulation (TENS), High Intensity Focused Ultrasound (HIFU), medical devices that use plasma, and digital x-ray equipment for whole-body scanning, thus building the foundations of a full-service medical equipment company.

### Key Achievements

In 2015, M.I.Tech reported sales of KRW 13.1 billion, up 23.6% from the 2014's figure of KRW 10.6 billion. Around 40% of sales is from exports to Europe, sales in Korea account for about 20%, and the balance is from exports to the US, Southeast Asia, the Middle East, and Turkey.

M.I.Tech made further strides into the global market in 2015. It has established an exclusive supply alliance for non-vascular stents worth USD 15 million with the Japanese branch of Boston Scientific, the world's largest stent manufacturer. The first shipment under this partnership was in December 2015. M.I.Tech provides gastrointestinal stents that are customized for patients, and is now seeking to make rapid changes to product specification, to satisfy requests from doctors



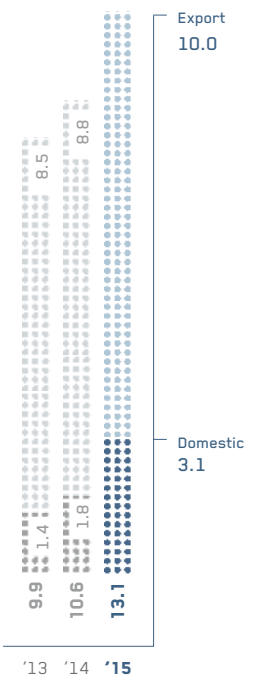
in Japan. M.I.Tech also plans to localize Korean products in Japan. Following its entry into Japan, one of the world's largest and most advanced medical markets, the company is aiming to expand its market presence in the global market.

In the TENS sector, which will be an important part of future company growth, M.I.Tech has launched HANARO Care ReJu<sup>®</sup>, a portable personal wireless TENS device. This external electronic medical device eases muscle pain, and helps prevent muscular atrophy through electrostimulation. It is designed to be used by people of all ages, including the elderly, fatigued office workers and young people involved in extreme sports. M.I.Tech plans to improve HANARO Care ReJu<sup>®</sup> by adding various convenient functions, including Bluetooth connectivity, and adding top-end models. M.I.Tech is also expanding its HIFU business, another new growth driver, by launching HIFU devices in order to proactively respond to the latest trends in the aesthetics market.

### Future Plans

M.I.Tech will resolutely pursue its strategy of continuous investment in R&D to grow into a global medical equipment company. The company is building an extensive product line-up, in addition to its existing successful gastrointestinal stent business, in an effort to build new growth foundation. The sales target for 2016 is KRW 16 billion, and the target by 2020 is for sales to have increased by 300% from current levels.

**M.I.TECH SALES**  
(Unit: KRW billion)



## 03

## R&amp;D REVIEW

## 03.1

## Research &amp; Development

Dong-A ST makes extensive investment and development activities, in order to become a truly global pharmaceutical company, based on its belief that 'development of innovative medicines is our social contributions'.

The Dong-A ST Research Center drives Dong-A ST's development into a global pharmaceutical company. Since establishing the research center in 1977, Dong-A ST has been making bold investments and focusing on research to develop new drugs. As a result, Dong-A ST has gained a reputation as Korea's best pharmaceutical company, with the greatest number of in-house developed original drugs. The company released Stillen<sup>®</sup>, its first in-house developed original drug, in 2002, followed by the successful launch of Zyderna<sup>®</sup>, the first erectile dysfunction treatment in Korea, in 2005 and Motilitone<sup>®</sup>, a functional dyspepsia treatment, in 2011. Sivextro<sup>®</sup> is an oxazolidinone class antibiotic that was licensed-out to the global market in 2007; it was launched in the US and Europe in 2014 and 2015, respectively, and received a New Drug Application (NDA) approval in Korea in 2015. Suganon<sup>®</sup>, a diabetes treatment, received an NDA approval in 2015, to be successfully added to its list of in-house developed original drugs.

The Dong-A ST Research Center consists of the Drug Discovery Research Laboratories and the Pharmaceutical Product Research Laboratories, and concentrates on identifying new pipeline items in the fields of new chemical drugs, phytomedicines, and Incrementally Modified Drugs (IMDs). The company realigned the organization of the Research Planning & Management Department, in its search to improve efficiency in R&D activities and operations, thereby accelerating the development of innovative new drugs.

## Key Achievements

To expand global R&D and bolster the competitiveness of its pipeline, in 2015 the Dong-A ST Research Center selected key areas of focus, including infectious disease, metabolic disease, and endocrine system disease, in order to maximize research efficiency.

There were several significant accomplishments in R&D in 2015, at home and abroad. Sivextro<sup>®</sup>, an oxazolidinone class antibiotic, was launched in Europe and received an NDA approval in Korea following the launch in the US last year, which made Dong-A ST the second pharmaceutical company in Korea to obtain

## R&amp;D INVESTMENT

57.4  
KRW billion

R&D INVESTMENT  
PER SALES

10.1  
Percent

\* As of December 31, 2015

\*\* Separate figures basis



US FDA approval. Our fifth in-house developed original drug, Suganon<sup>®</sup> (DA-1229, Evogliptin), is a Dipeptidyl Peptidase (DPP)-4 inhibitory mechanism diabetes treatment, and Suganon<sup>®</sup> and Sugamet<sup>®</sup> XR received an NDA approval in Korea in 2015. DA-1229 had already been licensed out to China, India, and Brazil, and, in 2015, it was also licensed out to Russia and 17 Latin American countries, with the goal of becoming a new global drug. In addition, Suganon<sup>®</sup> and Sugamet<sup>®</sup> XR, a combination drug comprised of Suganon<sup>®</sup> and Metformin, is scheduled to be launched in Korea in 2016.

The Dong-A ST Research Center pursues global R&D, performing a pivotal role in making Dong-A ST into a global R&D-focused company. The Center undertakes overseas clinical trials, such as a phase II clinical trial in the US for DA-9801, a new phytomedicine for diabetic neuropathy, which was



completed in 2015. The Dong-A ST Research Center plans to take the next step in clinical trials in 2016, and is now looking for an overseas partner for entry into global markets. The phase I clinical trial for DA-3880, a biosimilar of Aranesp<sup>®</sup>, has been completed in Europe, and it is prepared to enter a phase III clinical trial in the US and Europe. In addition, a phase II clinical trial for Motilitone<sup>®</sup> in the US is progressing well.

Based on these successes, the Dong-A ST Research Center is undertaking additional global R&D activities. It is planning on conducting global clinical trials in the US and Europe for DA-8010, an overactive bladders treatment, that is currently undergoing pre-clinical research, DA-1241, a new mechanism-based diabetes treatment, and DA-9803 and DA-9805, which are new phytomedicines for neurodegenerative diseases.

### Future Plans

The Dong-A ST Research Center is aiming to create a new global drug project that will lead to large-scale licensing agreements with global pharmaceutical companies. It is therefore analyzing global market requirements, to select a project with strong potential to be licensed out. The Center will speed the development of promising materials and new technologies through active networking, and will generate synergy at the Group level.

To underpin these activities, Dong-A ST will make an R&D investment of at least 10% of its sales in 2016. The focus will be on developing innovative new medicines, as well as recruiting and training of global talent.

## 03.2

## R&amp;D Pipeline

## Key Pipeline Items

## [DA-7218, Tedizolid; Sivextro®]

Tedizolid is a second generation oxazolidinone class antibiotic developed for both intravenous and oral administration to treat serious gram-positive infections, including those caused by Methicillin-Resistant Staphylococcus Aureus (MRSA). In 2007, Dong-A ST licensed-out Tedizolid to US-based Trius Therapeutics (acquired by Cubist, in turn acquired by MSD) for all territories except Korea. Since then, Trius has developed Tedizolid from phase I to phase III clinical trials for the indication of Acute Bacterial Skin and Skin Structure Infections (ABSSSI); these trials have demonstrated that Tedizolid, with shorter course of therapy, was statistically non-inferior to the same class market competitor in the primary and secondary efficacy endpoints. Tedizolid also showed a better safety profile than its competitor, and is expected to improve patient compliance, as it only has to be taken once daily. Cubist launched Tedizolid under the brand name Sivextro® following NDA approval from the US FDA in June 2014. In addition, marketing authorization for Sivextro® was granted by the European Medicines Agency (EMA) in the 1st half of 2015, so Sivextro® has now gone on sale in Europe, starting in the UK. There is also an on-going global phase III study for hospital-acquired/ventilator-associated bacterial pneumonia (HABP/VABP).

## [DA-1229, Evogliptin; Suganon® / Sugamet® XR]

Evogliptin is an anti-diabetic compound of the Dipeptidyl Peptidase-4 (DPP-4) inhibitor class, with high selectivity for DPP-4. A phase I clinical trial of Evogliptin showed that a single administration of Evogliptin 5mg inhibited DPP-4 activity by more than 80%, and a repeated once daily dose of Evogliptin 5mg maintained the inhibition of DPP-4 for more than 24 hours. In the phase II clinical trial, it was confirmed that Evogliptin 5mg significantly decreased HbA1C levels compared to a placebo. In phase III studies, Evogliptin 5mg showed superiority over the placebo, and non-inferiority to Sitagliptin. In addition, Evogliptin does not need dose adjustment in patients with renal impairment and showed a renal protective effect in animal studies, which would be beneficial to diabetic patients with renal disease. Suganon® (Evogliptin monotablet) and Sugamet® XR (a fixed-dose combination tablet of Evogliptin and an extended release

	CODE NAME (Brand Name)	DESCRIPTION
New Chemical Entity	DA-7218 (Sivextro®)	Oxazolidinone class antibiotic
	DA-1229 (Suganon® / Sugamet XR®)	DPP(Dipeptidyl Peptidase)-4 inhibitor
	DA-6886	5-HT (Hydroxytryptamine)4 agonist
	DA-8010	M <sub>3</sub> receptor antagonist
	DA-1241	GPR119 agonist
Phytomedicine (Botanical Drug)	DA-9701 (Motilitone®)	Herbal extract
	DA-9801	Herbal extract
	DA-9803	Herbal extract
	DA-9805	Herbal extract
Biopharmaceutical Products	DA-3801 (Gonadopin®)	Recombinant FSH (Follicle Stimulating Hormone)
	DA-3031 (Dulastin®)	PEG-G-CSF (Pegylated-Granulocyte- Colony Stimulating Factor)
	DMB-3111	Trastuzumab biosimilar
	DA-3880	Darbepoetin α biosimilar
	DMB-3113	Adalimumab biosimilar
	DA-3131	New anti-VEGF mAb

INDICATION	DEVELOPMENT STAGE			LICENSING AVAILABILITY	
	I	II	III		
Infection (ABSSSI, Acute Bacterial Skin and Skin Structure Infections)	██████████	██████████	██████████	Launched (USA, EU)	
Pneumonia (Hospital-Acquired/ Ventilator-Associated Bacterial Pneumonia)	██████████	██████████	███████	Ph III (Global)	
Type 2 diabetes	██████████	██████████	██████████	Approved (Korea)	Available for some territories
Irritable bowel syndrome-constipation	██████████	██████████	██████████	Ph I completed (Korea)	Available
Overactive bladder	██████████	██████████	██████████	Non-clinical completed (Korea)	Available
Type 2 diabetes	██████████	██████████	██████████	Non-clinical completed (Korea)	Available
Functional dyspepsia	██████████	██████████	██████████	Launched (Korea)	Available
	██████████	███████	██████████	Ph II (USA)	
Diabetic neuropathy	██████████	██████████	██████████	Ph II completed (USA)	Available
Alzheimer's disease	██████████	██████████	██████████	Non-clinical (Korea)	Available
Parkinson's disease	██████████	██████████	██████████	Non-clinical (Korea)	Available
COH (Controlled Ovarian Hyper-stimulation) in ART	██████████	██████████	██████████	Launched (Korea)	Available for some territories
Ovulation induction in anovulatory women	██████████	██████████	██████████	Launched (Korea)	
Neutropenia	██████████	██████████	██████████	Launched (Korea)	Available
Breast cancer	██████████	██████████	██████████	Ph I completed (Japan)	Available except Korea and Japan
Anemia	██████████	██████████	██████████	Ph I completed (EU)	Available except Korea and Japan
	███████	██████████	██████████	Ph I (Japan)	
Rheumatoid arthritis	██████████	██████████	██████████	Non-clinical completed (USA)	Available except Korea and Japan
Age-related macular degeneration	██████████	██████████	██████████	Non-clinical (Korea)	Available

form of Metformin) were approved by Korean Ministry of Food and Drug Safety (MFDS) in 2015, and will be launched in Korea in 2016.

For the global markets, with strong points of Evogliptin, Dong-A signed licensing-out agreements with Luye Pharma Group for China, Alkem Laboratories for India and Nepal, respectively, in 2012. Dong-A also made a license-out agreement with Eurofarma Laboratórios for the territory of Brazil in 2014 and signed an additional license-out agreement for 17 countries in Latin America in 2015. Also, Evogliptin was licensed to Geropharm for the Russian and other CIS markets (Ukraine, Kazakhstan) in 2015.

#### [DA-9801]

DA-9801 is a botanical drug, mixture of *Dioscorea Rhizome* and *Dioscoreae Nipponicae Rhizoma* in tablet form for pain associated with diabetic neuropathy. Its main mechanism is considered to be the increase of NGF (Nerve Growth Factor) level to normal level which leads to nerve regeneration. DA-9801's efficacy on pain reduction and nerve regeneration was confirmed in various nonclinical animal disease models.

A 12-week phase II study in the US was successfully completed. DA-9801 300 mg and 600 mg groups showed a statistically significant reduction of more than 2 points in mean pain scores at week 12, in comparison with their respective baseline scores. Also, improvements of 50% or more were achieved in 46.9% of patients on 300 mg, 50% on 600 mg and 43.8% in 900mg, respectively.

As approved drugs for diabetic neuropathy are CNS drugs or anti-depressants, their side effects like dizziness and somnolence are demanding a new, safe treatment on the market. It is believed that DA-9801 will be a new treatment option for diabetic neuropathic pain with its comparable efficacy and favorable safety profile.

#### [DA-1241]

DA-1241 is a novel small molecule of GPR 119 agonist under development for type 2 diabetes. DA-1241 showed higher potency and efficacy than its competitors in in vitro and in vivo studies, and these improvements were sustained over 10 weeks in the

diabetic mice model. Pre-clinical efficacy and safety studies were successfully completed in October 2015, and no toxicology issues were reported. In addition, based on its PK profile in animals, DA-1241 has the feasibility for once-daily dosing in human.

#### [DA-3880]

DA-3880 is a biosimilar of darbepoetin-alfa which stimulates erythropoiesis (increases red blood cell levels), and is used to treat anemia associated with chronic renal failure and cancer chemotherapy. Darbepoetin alfa has a longer half-life than erythropoietin, resulting in less frequent administrations. Due to the complex glycosylation, development of a darbepoetin alfa biosimilar is known to be difficult. However, a high similarity of DA-3880 to the reference product was demonstrated through non-clinical and European phase I clinical studies. In January 2014, Dong-A ST signed a licensing agreement with Sanwa Kagaku Kenkyusho (SKK) of Japan for DA-3880, and the company is currently preparing a phase III clinical trial with global scope.

#### [DMB-3111]

DMB-3111 is a biosimilar of Trastuzumab, which is a monoclonal antibody that interferes with the HER2 receptor. Its main use is to treat for metastatic/early breast cancer and metastatic gastric cancer. DMB-3111 is one of the assets in co-development with Meiji Seika Pharma of Japan, and the results of the Japanese phase I clinical trial showed high similarity with the reference product. Based on these results, Dong-A ST is in active discussions with partnering candidates for the global and regional development and commercialization of DMB-3111.

#### [DMB-3113]

Dong-A and Meiji Seika Pharma are also cooperating on another monoclonal antibody biosimilar, DMB-3113, a biosimilar of Adalimumab. Adalimumab is a TNF inhibitor approved for the treatment of rheumatoid arthritis, chronic plaque psoriasis, Crohn's disease, ankylosing spondylitis, psoriatic arthritis, and polyarticular juvenile idiopathic arthritis. A non-clinical study of DMB-3113 has been completed, and the phase I clinical trial will take place in Japan in 2016.

## 04

## FINANCIAL REVIEW

## 04.1

## Management's Discussion &amp; Analysis

## I. Outline

Dong-A ST was established in March 2013 following the conversion of Dong-A Pharmaceutical into a holding company structure under Dong-A Socio Group. Its range of businesses includes (Ethical) ETC drugs, medical equipments & diagnostics, and overseas business.

This Management's Discussion & Analysis (MD&A) is based on separate financial statements, produced in compliance with Korean IFRS, covering the financial performance and cash flows of Dong-A ST for the fiscal years of 2014 and 2015, both ending December 31. The company neither makes any claims nor provides any guarantees regarding the accuracy and integrity of the forward-looking information included in this MD&A. In particular, comments on the company's business prospects and other forecasts, including business objectives, are based on its own analysis of business, economic and market environments; therefore, conjecture and subject to change under the influence of unforeseen factors. Because of these uncertainties, the forecasts included in this MD&A may prove substantially different from actual results of the future.

#### The Economy and the Pharmaceutical Market in 2015

According to the World Bank, the global economy grew by about 3.1% in 2015, slightly less than in 2014, as emerging and developing economies continued to slow down, commodity prices remained weak, and capital movement and international trade stagnated. The Korean economy also contracted, from 3.3% in 2014 to 2.6%; the decrease can be attributed to falling oil prices and a sputtering export engine in the face of a weak recovery in global economies, including China and emerging markets.

In 2015, the world's top pharmaceutical companies actively took restructuring measures to overcome difficulties from lower drug prices and intense competition, especially in biosimilars. They sought to

strengthen their core businesses through M&A and to improve their overall competitiveness by either selling off or trading their under-performing operations. As a result, the number of corporate finance contracts signed in the global pharmaceutical industry reached a record high in 2015. In addition, according to IMS Health Data, growth among pharmerging\* countries was particularly remarkable in 2015. Pharmaceutical business in Brazil and China grew 28.1% and 14.2%, respectively, leading growth in pharmerging countries. Russia and India are also forecast to grow by a double digit in the near future.

\* Pharmerging: This newly-coined word refers to emerging pharmaceutical markets in 17 countries, including the BRICs countries, as well as Thailand, Egypt, South Africa, and others.

In 2015, according to IMS Health Data, the Korean pharmaceutical market grew 5.1% to about KRW 15,117.5 billion. In detail, the ETC and Over-the-counter (OTC) drug markets grew 5.4% and 3.4%, respectively. The ETC market has continued to grow since the government's blanket price cuts in 2012. The signing of large licensing-out agreement by a specific Korean pharmaceutical company in 2015 has shifted market attention to the potential value of R&D, and induced the government to develop more policy support for pharmaceutical R&D. As a result, R&D in the pharmaceutical industry is expected to accelerate in speed and scope. Moreover, the industry is likely to grow continuously on a westernizing diet trend, an aging population, and greater wealth, all of which have increased demand for medical services and more active R&D from pharmaceutical companies to meet this demand.

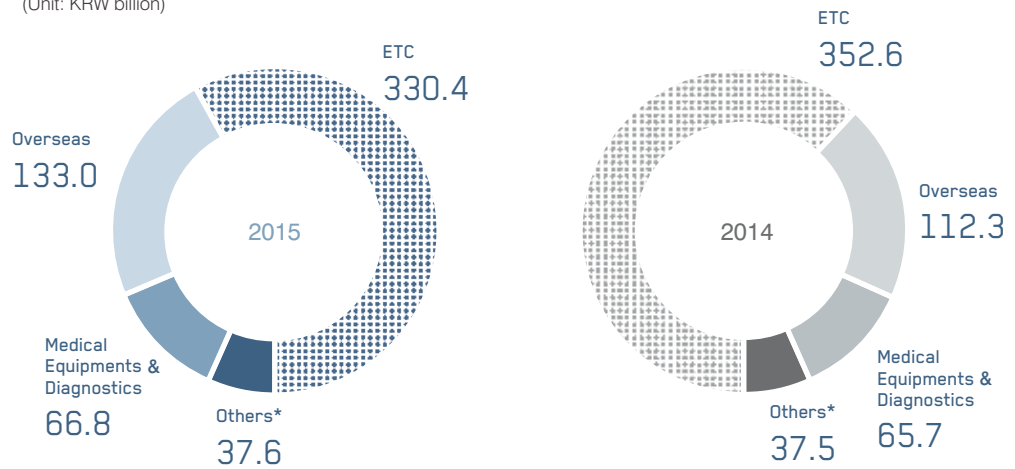
## II. Major Business Performance

### 1. Sales

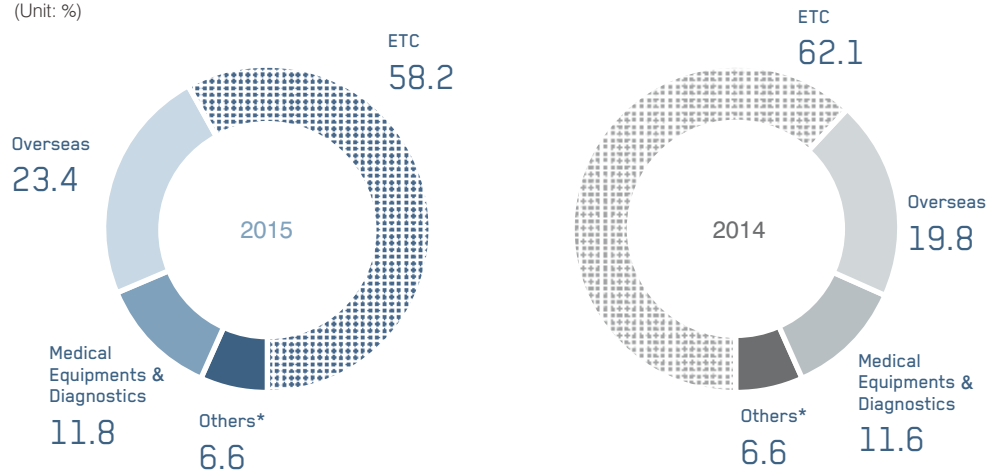
In 2015, Dong-A ST recorded KRW 567.9 billion in sales, comparable to the previous year's figure. Sales of the ETC Unit dropped 6.3% year-on-year, while sales of the Overseas Unit, Medical Equipments & Diagnostics Unit, and other sectors increased 18.5%, 1.8%, and 0.3%, respectively. Sales of the Overseas Unit has continued to increase thanks to the robust growth of Bacchus<sup>®</sup> exports and the anti-tuberculosis drug Closerin<sup>®</sup> since its 2013 supply contract with the World Health Organization (WHO).

In proportion, sales of the ETC Unit declined by 3.9% points, from 62.1% in 2014 to 58.2% in 2015. The Overseas Unit grew by 3.6% points, from 19.8% to 23.4%, and the Medical Equipments & Diagnostics Unit increased 0.2% points, from 11.6% to 11.8% in 2015. Other sectors remained unchanged at 6.6%.

SALES BY UNIT  
(Unit: KRW billion)



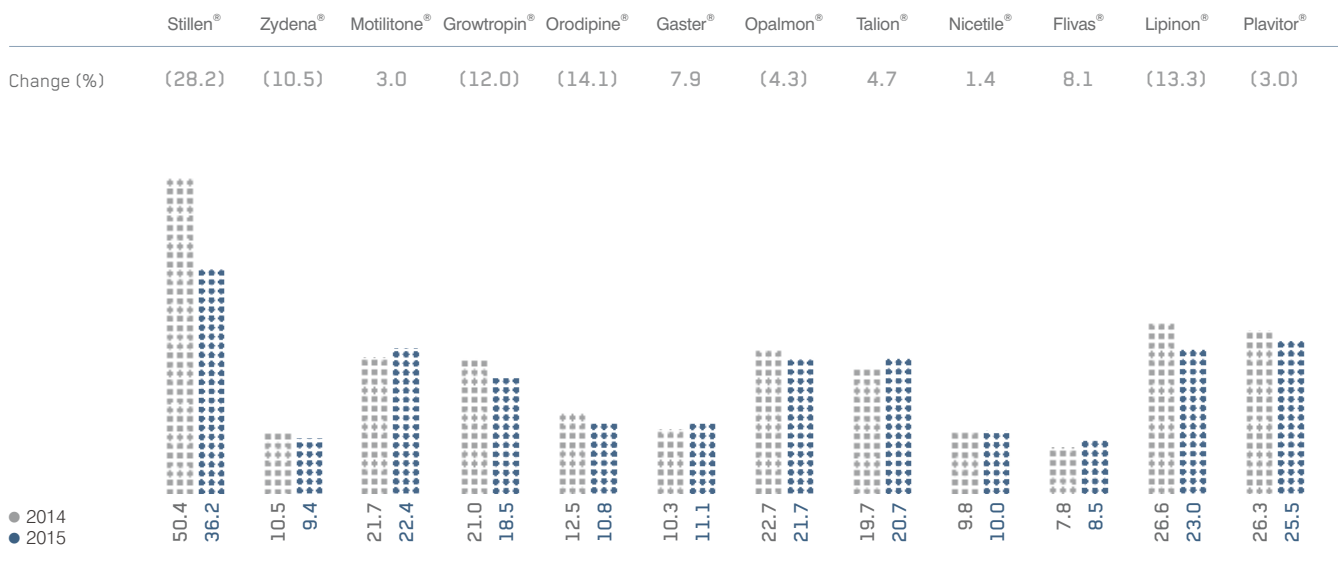
PROPORTION OF SALES BY UNIT  
(Unit: %)



\* Others include milestone fees, and royalty and rental incomes

SALES OF MAJOR ETC PRODUCTS

(Unit: KRW billion)



1A. ETC Unit

Sales of the ETC Unit recorded KRW 330.4 billion, down by 6.3% from the previous year, mainly attributable to the Middle East Respiratory Syndrome (MERS) crisis in the first half of the year, and a price cut in Stillen®, the company's main product, due to its patent expiration in the second half of the year. However, the introduction of Acelex® to the domestic osteoarthritis market and the release of Baracle®, a blockbuster generic for hepatitis B, both got off to good starts, laying the foundation to recover growth momentum for the Unit. In addition, backed by corporate-wide efforts to strengthen its Compliance Program (CP), Dong-A ST received an 'AA' rating, the industry's top rating, on the 2015 CP Evaluation Program carried out by the Fair Trade Commission.

In 2016, Dong-A ST is scheduled to release a number of drugs, including Suganon®, its fifth in-house developed original drug, Stillen® 2X, an Incrementally Modified Drug (IMD) of Stillen®, and Teribone®, an osteoporosis treatment. As such, Dong-A ST is focused on developing new drugs as well as making successful market entries of new products in the short term, and for the mid- to long term, it will strengthen its product portfolio, in order to recover sales growth in the domestic market.

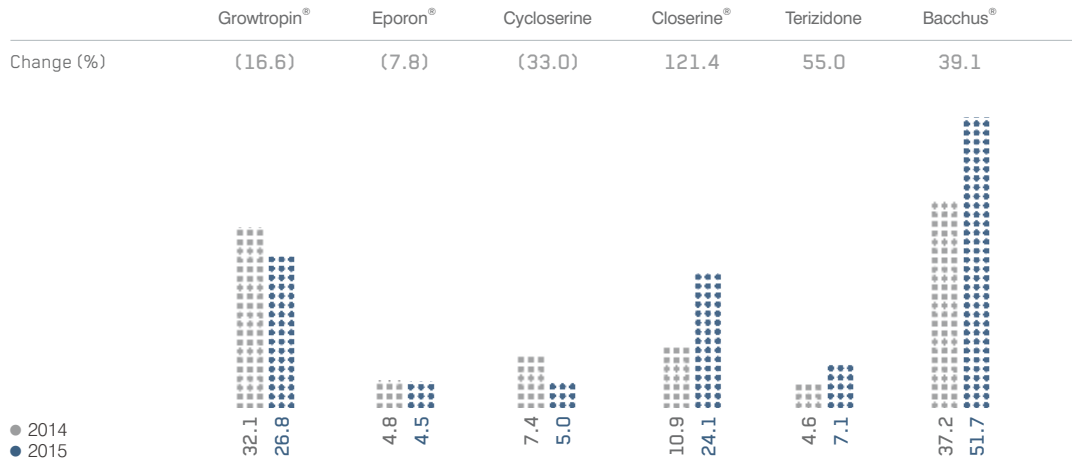
1B. Overseas Unit

Dong-A ST actively pursues overseas sales to become a global pharmaceutical company and has made impressive progress over the years. The Overseas Unit has grown steadily since 2008, when export sales began in earnest. Sales from the Unit increased 18.5% year-on-year in 2015, to reach KRW 133 billion. 2015 sales of anti-tuberculosis drugs, including Closerin<sup>®</sup>, exceeded 2014's figure by 58.1% while Bacchus<sup>®</sup> exports outpaced by 39.1%. The export of Gwotropin<sup>®</sup> and Eporon<sup>®</sup>, the

company's major export items, dipped in the first half of 2015 due to the relocation of a bio-plant; but stabilized in the second half; and is expected to regain the growth momentum in 2016. The Overseas Unit's plan for 2016 is to increase the number of export markets for major products, develop next-generation products for sale in advanced markets, and diversify the overseas business. The long-term objective is to generate over 30% of the company's total sales from overseas operations.

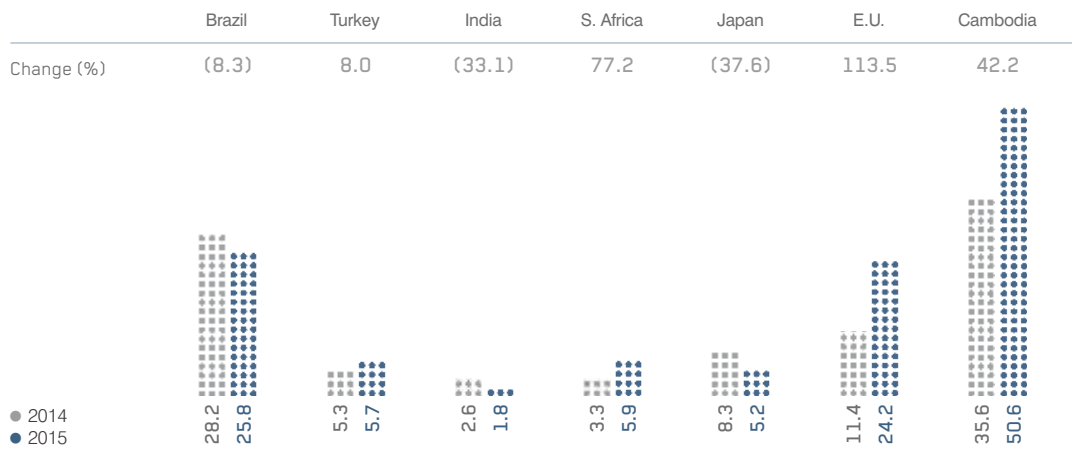
EXPORT SALES BY PRODUCT

(Unit: KRW billion)



EXPORT SALES BY REGION

(Unit: KRW billion)



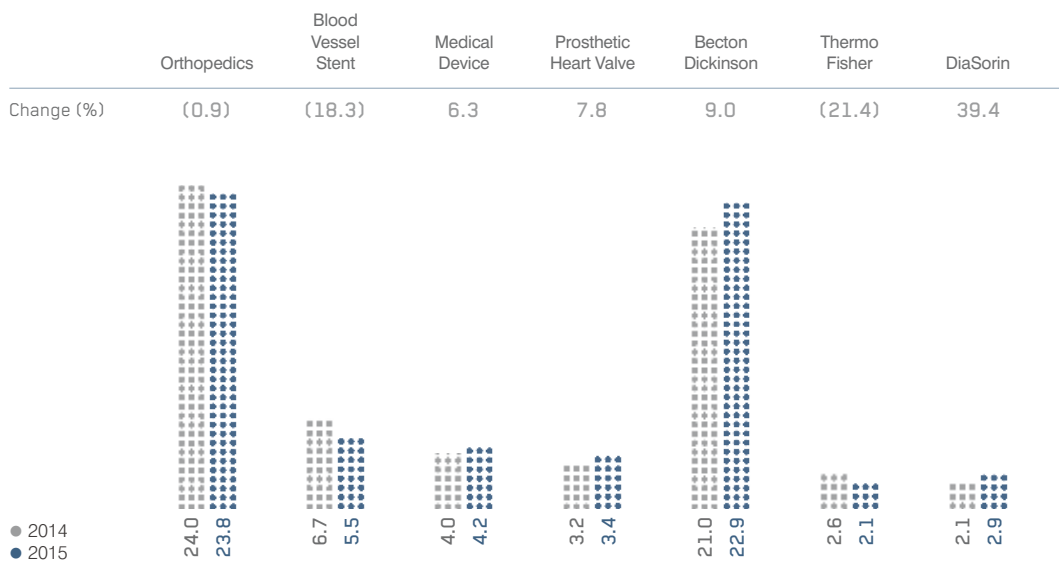
### 1C. Medical Equipments & Diagnostics Unit and Others

Sales of the Medical Equipments & Diagnostics Unit amounted to KRW 66.8 billion, a year-on-year rise of 1.8%. Medical equipment sales decreased 2.2% year-on-year to KRW 36.5 billion, due to reduced sales of stents. In contrast, diagnostic sales grew 7.0% to KRW 30.3 billion, mainly attributable to rising sales of immuno diagnosis measuring system and rapid kit of DiaSorin, and other new products. The Medical Equipments and Diagnostics Unit plans to increase sales in 2016 by licensing-in new products; and in the mid- to long-term, Dong-A ST will undertake joint R&D with M.I.Tech, its medical equipment

subsidiary, to go beyond the limit of distributing licensed-in products, and improve profitability by selling products of its own development.

Other sales hardly changed, ending the year at KRW 37.6 billion. This includes milestone inflows from the licensing-out of pipelines under development as well as royalty income from released products. It also includes outsourced research fees and rental earnings from Dong-A Socio Holdings and Dong-A Pharmaceutical after the demerger.

SALES OF MEDICAL EQUIPMENTS & DIAGNOSTICS UNIT AND OTHERS  
(Unit: KRW billion)



## 2. Profit and Loss

In 2015, Dong-A ST recorded KRW 567.9 billion in sales, similar to the previous year's. Operating profit rose 12.8% from the previous year to reach KRW 54.3 billion, while net profit increased 39.8% to KRW 48 billion, which was attributable to the company's concerted efforts to better manage expenses.

In detail, other income increased from research assistance, other expenses accrued from the selling of the Banwol Plant, and finance income rose from the sale of ST Pharm's shares, an affiliate company of Dong-A ST. The cost of goods sold ratio went up 1.7% points from the previous year to post 48.2%, while the SG&A expenses ratio dropped 1.9% points year-on-year to 32.1%. The R&D expenses ratio was similar to the previous year at 10.1%. The effective income tax rate in 2015 slightly went up from the previous year to post 23.8%. The profit before income tax rate and the net profit margin both grew from the previous year to record 11.1% and 8.4%, respectively.

## 3. Financial Position

Dong-A ST's total assets decreased 1.8% over the year to KRW 1,059 billion. Current assets rose 9.2% to KRW 519.1 billion, while non-current assets dropped 10.4% to KRW 540 billion, mainly due to the transfer of the Banwol Plant to ST Pharm, an affiliate of Dong-A ST, in November 2015.

Total liabilities declined 14.1% from the end of the previous year to KRW 507.7 billion. A major cause is repayment of KRW 70 billion with the maturity of corporate bonds in September 2015. Accordingly, the debt-to-equity ratio and borrowings ratio went down 29.3% points and 24.6% points, respectively.

Total year-end shareholders' equity rose 13.2%, from KRW 486.8 billion in 2014 to KRW 551.3 billion in 2015. This was attributable to the issuance of 333,869 common shares through the assertion of preemptive rights, and from net income.

### SUMMARIZED SEPARATE STATEMENTS OF COMPREHENSIVE INCOME

(Unit: KRW billion)

	2015	2014
Sales	567.9	568.1
Cost of goods sold	273.8	264.0
Cost of goods sold ratio	48.2%	46.5%
Gross profit	294.1	304.1
SG&A expenses	182.4	193.2
SG&A expenses ratio	32.1%	34.0%
R&D expenses	57.4	62.7
R&D expense ratio	10.1%	11.0%
Operating profit	54.3	48.2
Operating profit margin	9.6%	8.5%
Other income	10.6	5.2
Other expenses	14.3	4.2
Finance income	33.1	14.0
Finance expenses	20.7	19.1
Interest expenses	15.4	14.0
Profit before income tax	63.0	44.2
Income tax	15.0	9.9
Effective income tax rate	23.8%	22.3%
Net profit	48.0	34.3
Net profit margin	8.4%	6.0%

### SUMMARIZED SEPARATE STATEMENTS OF FINANCIAL POSITION

(Unit: KRW billion)

	DEC. 31, 2015	Dec. 31, 2014	Change (%)
Total assets	1,059.0	1,078.0	(1.8)
Current assets	519.1	475.5	9.2
Cash and cash equivalents	295.4	281.6	4.9
Trade receivables	94.4	86.3	9.4
Inventories	93.1	84.6	10.0
Other current assets	36.2	23.0	57.4
Non-current assets	540.0	602.5	(10.4)
Total liabilities	507.7	591.1	(14.1)
Current liabilities	236.6	222.2	6.5
Non-current liabilities	271.2	369.0	(26.5)
Total shareholders' equity	551.3	486.8	13.2
Borrowings	372.6	448.7	(17.0)
Net debt	77.2	167.1	(53.8)

## KEY RATIOS

(Unit: %)

	DEC. 31, 2015	Dec. 31, 2014	Change (%p)
<b>Debt-to-equity ratio</b> (Total liabilities/Total shareholders' equity)	92.1	121.4	(29.3)
<b>Borrowings ratio</b> (Total borrowings/Total shareholders' equity)	67.6	92.2	(24.6)
<b>Net gearing ratio</b> (Total borrowings - cash/Total shareholders' equity)	14.0	34.3	(20.3)
<b>Current ratio</b> (Current assets/Current liabilities)	219.4	214.0	5.4

## 4. Stock Performance

The KOSPI index began 2015 at 1,926.44 points, and ended the year at 1,961.31 points, an improvement of 34.87 points. The index reached a yearly high of 2,173.41 points and touched a low of 1,829.81 points, a trading gap of 18.8%.

The pharmaceutical index began the year at 4,464.08 points, rising as high as 10,011.73 points by early July and fluctuating modestly afterwards, ending the year at 8,448.15 points, an increase of 3,984.07 points from the start. The trading range for the year was 125.2%, with a high of 10,011.73 points and a low of 4,445.84 points. The robust performance of the index mirrored a growing investor interest in the pharmaceutical industry which resulted from large-size licensing-out agreement by another company.

Dong-A ST's stock price began 2015 at KRW 88,400 and ended the year at KRW 147,000. The fluctuation range was 109.2%, with a high of KRW 172,000 and a low of KRW 82,200. The stock price was supported throughout the year by R&D successes, including Sivextro<sup>®</sup> and Suganon<sup>®</sup>, a growing interest in the value of new pipeline drugs, and the steady growth of overseas sales.

## III. Major Business Issues

Dong-A ST's global R&D and active overseas business efforts led to tangible results in 2015. Sivextro<sup>®</sup> is an oxazolidinone class antibiotic that secured approval from the US Food and Drug Administration (FDA) in 2014. It also received European Medicines Agency (EMA) approval in 2015. As of the end of 2015, Sivextro<sup>®</sup> was launched



in ten European countries, including the UK, and is extending its reach in the European market. In addition, a phase II clinical trial was successfully completed in the US for DA-9801, which is a diabetic neuropathy treatment. DA-1229 (Evogliptin), which is a treatment for diabetes, was licensed out to India and China in 2012, Brazil in 2014, and 17 Latin American countries, Russia, Ukraine, and Kazakhstan in 2015.

In Korea, Suganon<sup>®</sup>, the fifth new drug developed in-house by Dong-A ST, received sales approval from the Korean Ministry of Food and Drug Safety (MFDS). Dong-A ST is maintaining its reputation as a company with the greatest number of in-house developed original drugs among domestic pharmaceutical companies. To increase its dominance in the domestic market, Dong-A ST released generic products with high marketability

and new licensed-in medicines. In May, it launched Mainta<sup>®</sup>, a generic drug for lung cancer treatment; in July, obtained an exclusive rights in Korea to distribute Acelex<sup>®</sup>, an anti-inflammatory painkiller for arthritis; and in September, unveiled Baracle<sup>®</sup>, a generic drug for hepatitis B, and a liquid form of Mainta<sup>®</sup>, an IMD.

In November, Dong-A ST sold its Banwol Plant producing Active Pharmaceutical Ingredients (APIs), to ST Pharm, an API manufacturer, to enhance efficiency at the Dong-A Socio Group level. This will make both companies more focused on their respective businesses, and will also reduce costs. In addition, Dong-A ST sold 1,399,200 shares in ST Pharm to Dong-A Socio Holdings for KRW 25.9 billion, in order to satisfy regulatory requirements placed on holding companies.

#### IV. Economic Outlook and Management Strategies for 2016

The World Bank projects that in 2016 the world economy will grow 3.6% on a stronger economic recovery in advanced economies, stabilizing commodity prices, a gradual economic reform in China, and hikes in international interest rates. The Korean economy is expected to see growth of around 3.0%, overcoming sluggish exports with a gradual increase in domestic consumption.

2016 will be a year of both challenges and opportunities, with structural changes in the pharmaceutical industry coming against the backdrop of the prolonged global economic downturn, and continuing stock market interest in the Korean pharmaceutical industry. Dong-A ST, therefore, plans on implementing the following strategic tasks in 2016 in order to respond to these changes and build new growth momentum.

First, the company will continue to lead the domestic ETC market by launching competitive new products. Having released Acelex<sup>®</sup> and Baracle<sup>®</sup> in the second half of 2015, and will launch Stillen<sup>®</sup> 2X and Sukanon<sup>®</sup> in early 2016, the company will take every step possible toward establishing these new products firmly

rooted in their respective market, while continuing to focus on releasing new products such as Teribone<sup>®</sup> and Sugamet<sup>®</sup>, a combination drug. The company will also increase sales in the domestic market by forming strategic alliances with global pharmaceutical companies and licensing-in their outstanding products, and by developing extension products of its in-house developed original drugs. In addition, Dong-A ST will develop distinctive IMDs with proven clinical effects, and secure exclusive sales rights to distribute major generic products.

Second, the company will continue to grow overseas sales. Dong-A ST will expand export market and concentrate on increasing sales for Bacchus<sup>®</sup>, which recorded sales of KRW 51.7 billion in 2015, as well as for major products as bio-products and anti-tuberculosis drugs. The company will also step up efforts to sign licensing-out agreements, as part of its drive to establish a global business network, and will foster global talent, all in efforts to lay a firm foundation to grow into a global pharmaceutical company.

Third, Dong-A ST will continue to invest in R&D by defining a strategy for each research area. The Drug Discovery Research Laboratories will handle global R&D, while the Pharmaceutical Product Research Laboratories will focus on developing IMDs. The company will also develop new drugs and biosimilars that target large global markets, and expand overseas clinical trials of major new drug projects. Particular attention will be paid to develop global R&D competitiveness and pipelines in antibiotics, the metabolic and endocrine systems, anti-cancer drugs, and coagulase-negative staphylococci.

Dong-A ST's goal is to become a global pharmaceutical company by 2020, with sales of KRW 1 trillion and overseas sales accounting for 30% of the total. The company will achieve these objectives by developing new innovative drugs, building a global network, increasing market share in overseas markets, and pioneering new markets. Dong-A ST will conduct advanced R&D activities based on the responsible management system we have solidified with the stable implementation of the holding company structure. Taking a step further, the company will also maximize shareholder value and pursue sustainable growth through transparent and ethical management.

## 04.2

## Independent Auditors' Report

Based on a report originally issued in Korean

### The Board of Directors and Shareholders DONG-A ST CO., LTD.:

We have audited the accompanying separate financial statements of Dong-A ST Co., Ltd. (the "Company"), which comprise the separate statements of financial position as at December 31, 2015 and 2014, the separate statements of comprehensive income, changes in equity and cash flows for the years then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

#### Management's Responsibility for the Separate Financial Statements

Management is responsible for the preparation and fair presentation of these separate financial statements in accordance with Korean International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of separate financial statements that are free from material misstatement, whether due to fraud or error.

#### Auditors' Responsibility

Our responsibility is to express an opinion on these separate financial statements based on our audits. We conducted our audits in accordance with Korean Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the separate financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the separate financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the separate financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the separate financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the separate financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### Opinion

In our opinion, the separate financial statements present fairly, in all material respects, the separate financial position of the Company as of December 31, 2015 and 2014 and its separate financial performance and its separate cash flows for the years then ended in accordance with Korean International Financial Reporting Standards.

#### Other Matter

The procedures and practices utilized in the Republic of Korea to audit such separate financial statements may differ from those generally accepted and applied in other countries.

KPMG Samjong Accounting Corp.  
Seoul, Korea  
March 7, 2016

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This report is effective as of March 7, 2016, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying separate financial statements and notes thereto. Accordingly, the readers of the audit report should understand that the above audit report has not been updated to reflect the impact of such subsequent events or circumstances, if any.

## 04.3

## Separate Financial Statements

DONG-A ST CO., LTD.

As of December 31, 2015 and 2014

## Separate Statements of Financial Position

	2015	2014
(In thousands of won)		
<b>ASSETS</b>		
Cash and cash equivalents	₩ 295,358,193	281,578,610
Trade receivables	94,367,429	86,261,732
Other receivables	31,621,536	5,113,147
Other financial assets	2,653,222	16,131,932
Inventories	93,058,449	84,578,716
Other current assets	1,999,909	1,795,995
<b>Total current assets</b>	<b>519,058,738</b>	<b>475,460,132</b>
Long-term financial instruments	6,500	7,500
Other receivables	924,031	1,135,780
Other financial assets	16,859,067	10,130,863
Property, plant and equipment	406,982,469	456,809,875
Intangible assets	16,999,809	11,500,296
Investment property	82,749,003	92,911,580
Investments in subsidiaries	15,222,093	29,668,343
Other non-current assets	227,847	346,062
<b>Total non-current assets</b>	<b>539,970,819</b>	<b>602,510,299</b>
<b>Total assets</b>	<b>₩ 1,059,029,557</b>	<b>1,077,970,431</b>

As of December 31, 2015 and 2014

	2015	2014
(In thousands of won)		
<b>LIABILITIES</b>		
Trade payables	₩ 31,792,489	28,007,081
Other payables	41,600,890	52,171,439
Short-term borrowings	144,457,344	127,706,203
Other financial liabilities	-	186,339
Provisions	3,814,123	4,951,707
Other current liabilities	4,808,514	3,282,623
Income tax payable	10,107,479	5,850,959
<b>Current liabilities</b>	<b>236,580,839</b>	<b>222,156,351</b>
Other payables	9,282,625	11,341,256
Long-term borrowings	228,115,788	321,019,244
Other financial liabilities	220,065	340,493
Employee benefits	15,533,828	13,271,656
Other non-current liabilities	894,126	2,216,711
Deferred tax liabilities	17,120,176	20,794,065
<b>Non-current liabilities</b>	<b>271,166,608</b>	<b>368,983,425</b>
<b>Total liabilities</b>	<b>507,747,447</b>	<b>591,139,776</b>
<b>EQUITY</b>		
Share capital	40,179,025	38,509,680
Share premium	252,832,635	225,306,255
Capital adjustment	(640,880)	(606,444)
Other equity components	162,176,994	183,879,261
Retained earnings	96,734,336	39,741,903
<b>Total equity</b>	<b>551,282,110</b>	<b>486,830,655</b>
<b>Total liabilities and equity</b>	<b>₩ 1,059,029,557</b>	<b>1,077,970,431</b>

DONG-A ST CO., LTD.

For the years ended December 31, 2015 and 2014

## Separate Statements of Comprehensive Income

	2015	2014
<i>(In thousands of won, except per share information)</i>		
Revenue	₩ 567,910,907	568,093,687
Cost of sales	(273,783,341)	(263,991,486)
<b>Gross profit</b>	<b>294,127,566</b>	<b>304,102,201</b>
Selling and administrative expenses	(182,415,621)	(193,230,395)
Research and development expenses	(57,365,564)	(62,676,298)
<b>Operating profit</b>	<b>54,346,381</b>	<b>48,195,508</b>
Other income	10,551,000	5,178,359
Other expenses	(14,301,599)	(4,176,292)
Finance income	33,054,833	14,047,424
Finance costs	(20,697,174)	(19,084,737)
<b>Profit before income tax</b>	<b>62,953,441</b>	<b>44,160,262</b>
Income tax expense	(15,001,773)	(9,868,916)
<b>Profit</b>	<b>47,951,668</b>	<b>34,291,346</b>
<b>Other comprehensive income (loss)</b>		
<b>Items that will never be reclassified to profit or loss</b>		
Defined benefit plan actuarial losses	(4,860,446)	(4,915,977)
<b>Items that are or may be reclassified to profit or loss</b>		
Available-for-sale financial assets – net change in fair value	(1,614,949)	(1,762,633)
Cash flow hedges – effective portion of changes in fair value	513,462	(475,671)
Gain on revaluation of land	-	(601,382)
Liquidation of subsidiaries	-	651,690
<b>Other comprehensive loss for the year, net of income tax</b>	<b>(5,961,933)</b>	<b>(7,103,973)</b>
<b>Total comprehensive income for the year</b>	<b>₩ 41,989,735</b>	<b>27,187,373</b>
<b>Earnings per share</b>		
Basic earnings per share (won)	₩ 6,114	4,551
Diluted earnings per share (won)	5,948	4,286

DONG-A ST CO., LTD.

For the year ended December 31, 2014

## Separate Statements of Changes in Equity

	Share capital	Share premium	Treasury shares	Other equity components	Retained earnings (accumulated deficit)	Total equity
(In thousands of won)						
Balance at January 1, 2014	₩ 36,754,580	276,482,886	(606,444)	186,067,257	(59,296,758)	439,401,521
<b>Total comprehensive income (loss):</b>						
Profit	-	-	-	-	34,291,346	34,291,346
<b>Other comprehensive income (loss):</b>						
Change in fair value of available-for-sale financial assets	-	-	-	(1,762,633)	-	(1,762,633)
Defined benefit plan actuarial losses	-	-	-	-	(4,915,977)	(4,915,977)
Effective portion of cash flow hedges	-	-	-	(475,671)	-	(475,671)
Revaluation reserve	-	-	-	(601,382)	-	(601,382)
Liquidation of subsidiaries	-	-	-	651,690	-	651,690
Total other comprehensive income (loss)				(2,187,996)	(4,915,977)	(7,103,973)
<b>Total comprehensive income (loss)</b>				(2,187,996)	29,375,369	27,187,373
<b>Transactions with owners of the Company, recognized directly in equity:</b>						
Cash dividends	-	-	-	-	(1,836,708)	(1,836,708)
Transfer from share premium	-	(71,500,000)	-	-	71,500,000	-
Conversion of convertible redeemable preferred stocks	1,755,100	20,323,369	-	-	-	22,078,469
<b>Total transactions with owners of the Company</b>	1,755,100	(51,176,631)	-	-	69,663,292	20,241,761
Balance at December 31, 2014	₩ 38,509,680	225,306,255	(606,444)	183,879,261	39,741,903	486,830,655

For the year ended December 31, 2015

	Share capital	Share premium	Treasury shares	Other equity components	Retained earnings	Total equity
(In thousands of won)						
Balance at January 1, 2015	₩ 38,509,680	225,306,255	(606,444)	183,879,261	39,741,903	486,830,655
Total comprehensive income (loss):						
Profit	-	-	-	-	47,951,668	47,951,668
Other comprehensive income (loss):						
Change in fair value of available-for-sale financial assets	-	-	-	(1,614,949)	-	(1,614,949)
Defined benefit plan actuarial losses	-	-	-	-	(4,860,446)	(4,860,446)
Effective portion of cash flow hedges	-	-	-	513,462	-	513,462
Revaluation reserve	-	-	-	(19,674,600)	19,674,600	-
Total other comprehensive income (loss)	-	-	-	(20,776,087)	14,814,154	(5,961,933)
Total comprehensive income (loss)	-	-	-	(20,776,087)	62,765,822	41,989,735
Transactions with owners of the Company, recognized directly in equity:						
Cash dividends	-	-	-	-	(5,773,389)	(5,773,389)
Acquisition of treasury shares	-	-	(34,436)	-	-	(34,436)
Exersice of stock warrants	1,669,345	27,526,380	-	(926,180)	-	28,269,545
Total transactions with owners of the Company	1,669,345	27,526,380	(34,436)	(926,180)	(5,773,389)	22,461,720
Balance at December 31, 2015	₩ 40,179,025	252,832,635	(640,880)	162,176,994	96,734,336	551,282,110

DONG-A ST CO., LTD.

For the years ended December 31, 2015 and 2014

## Separate Statements of Cash Flows

	2015	2014
(In thousands of won)		
<b>Cash flows from operating activities</b>		
Profit	₩ 47,951,668	34,291,346
Adjustments	48,843,135	47,037,891
Changes in assets and liabilities	(40,636,554)	12,329,604
Income taxes paid	(12,557,015)	(10,423,224)
<b>Net cash from operating activities</b>	<b>43,601,234</b>	<b>83,235,617</b>
<b>Cash flows from investing activities</b>		
Interest received	2,063,958	1,833,224
Dividends received	271,000	291,399
Decrease in long-term financial assets	1,000	-
Disposal of available-for-sale financial assets	40,204,002	5,002,678
Decrease in investments in subsidiaries	15,000,000	-
Disposal of property, plant and equipment	27,985	297,224
Disposal of intangible assets	-	380,000
Decrease in deposits	418,268	1,706,420
Disposal of disposal group	25,494,318	-
Acquisition of available-for-sale financial assets	(20,896,246)	(1,001,979)
Acquisition of held-to-maturity financial assets	-	(4,180)
Acquisition of investments in subsidiaries	(553,750)	(895,255)
Acquisition of property, plant and equipment	(27,286,421)	(28,872,490)
Acquisition of intangible assets	(3,547,407)	(1,542,147)
Increase in deposits	(416,000)	(213,000)
<b>Net cash from (used in) investing activities</b>	<b>₩ 30,780,707</b>	<b>(23,018,106)</b>

For the years ended December 31, 2015 and 2014

	2015	2014
(In thousands of won)		
<b>Cash flows from financing activities</b>		
Proceeds from short-term borrowings	₩ 19,497,234	18,527,487
Rental deposits received	1,984,365	5,361,184
Proceeds from long-term borrowings	-	40,000,000
Proceeds from bonds	-	70,000,000
Exercise of stock warrants	28,269,545	-
Interest paid	(11,575,629)	(11,340,316)
Dividends paid	(5,773,389)	(1,836,708)
Repayment of short-term borrowings	(28,527,487)	(16,668,875)
Repayment of current portion of bonds	(70,000,000)	-
Repayment of current portion of long-term borrowings	-	(2,000,000)
Repayment of long-term borrowings	(4,300,000)	-
Decrease in rental deposits	-	(1,059,239)
<b>Net cash from (used in) financing activities</b>	<b>(70,425,361)</b>	<b>100,983,533</b>
<b>Net increase in cash and cash equivalents</b>	<b>3,956,580</b>	<b>161,201,044</b>
Cash and cash equivalents at beginning	281,578,610	115,746,113
Effect of exchange rate fluctuations on cash held	9,823,003	4,631,453
<b>Cash and cash equivalents at end of year</b>	<b>₩ 295,358,193</b>	<b>281,578,610</b>

## 04.4

## Independent Auditors' Report

Based on a report originally issued in Korean

### The Board of Directors and Shareholders DONG-A ST CO., LTD.:

We have audited the accompanying consolidated financial statements of Dong-A ST Co., Ltd. and its subsidiaries (the "Group"), which comprise the consolidated statements of financial position as at December 31, 2015 and 2014, the consolidated statements of comprehensive income, changes in equity and cash flows for the years then ended, and notes, comprising a summary of significant accounting policies and other explanatory information.

#### Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with Korean International Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

#### Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with Korean Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as of December 31, 2015 and 2014 and its consolidated financial performance and its consolidated cash flows for the years then ended in accordance with Korean International Financial Reporting Standards.

#### Other Matter

The procedures and practices utilized in the Republic of Korea to audit such consolidated financial statements may differ from those generally accepted and applied in other countries.

KPMG Samjong Accounting Corp.  
Seoul, Korea  
March 7, 2016

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This report is effective as of March 7, 2016, the audit report date. Certain subsequent events or circumstances, which may occur between the audit report date and the time of reading this report, could have a material impact on the accompanying consolidated financial statements and notes thereto. Accordingly, the readers of the audit report should understand that the above audit report has not been updated to reflect the impact of such subsequent events or circumstances, if any.

## 04.5

## Consolidated Financial Statements

DONG-A ST CO., LTD. AND SUBSIDIARIES

As of December 31, 2015 and 2014

## Consolidated Statements of Financial Position

	2015	2014
(In thousands of won)		
<b>ASSETS</b>		
Cash and cash equivalents	₩ 296,167,212	293,438,922
Short-term financial instruments	2,200,000	8,096,500
Trade receivables	97,742,512	87,616,974
Other receivables	31,774,081	5,239,029
Other financial assets	2,653,222	16,160,511
Inventories	96,623,081	86,662,577
Other current assets	2,463,225	2,479,239
Income tax receivable	9,012	16,970
<b>Current assets</b>	<b>529,632,345</b>	<b>499,710,722</b>
Long-term financial instruments	6,500	7,500
Other receivables	1,073,322	1,335,029
Other financial assets	16,949,067	10,220,863
Property, plant and equipment	411,524,884	461,090,521
Intangible assets	20,062,974	14,470,447
Investment property	82,749,003	92,911,580
Other non-current assets	227,847	346,061
Deferred tax assets	1,312,981	1,765,520
<b>Non-current assets</b>	<b>533,906,578</b>	<b>582,147,521</b>
<b>Total assets</b>	<b>₩ 1,063,538,923</b>	<b>1,081,858,243</b>

As of December 31, 2015 and 2014

	2015	2014
(In thousands of won)		
<b>LIABILITIES</b>		
Trade payables	₩ 32,222,799	28,525,448
Other payables	42,837,030	53,254,978
Short-term borrowings	144,457,344	127,706,203
Other financial liabilities	-	186,339
Provisions	3,814,123	4,951,707
Other current liabilities	4,845,906	3,497,362
Income tax payable	10,111,845	5,861,282
<b>Current liabilities</b>	<b>238,289,047</b>	<b>223,983,319</b>
Other payables	9,282,625	11,346,395
Long-term borrowings	228,115,788	321,019,244
Other financial liabilities	220,065	340,493
Employee benefits	15,843,656	13,821,203
Other non-current liabilities	894,126	2,216,711
Deferred tax liabilities	17,120,176	20,794,065
<b>Non-current liabilities</b>	<b>271,476,436</b>	<b>369,538,111</b>
<b>Total liabilities</b>	<b>509,765,483</b>	<b>593,521,430</b>
<b>EQUITY</b>		
Share capital	40,179,025	38,509,680
Share premium	252,832,635	225,306,255
Capital adjustment	(640,880)	(606,444)
Other equity components	161,210,512	182,917,559
Retained earnings	100,032,164	41,946,312
<b>Equity attributable to owners of the Company</b>	<b>553,613,456</b>	<b>488,073,362</b>
<b>Non-controlling interests</b>	<b>159,984</b>	<b>263,451</b>
<b>Total equity</b>	<b>553,773,440</b>	<b>488,336,813</b>
<b>Total liabilities and equity</b>	<b>₩ 1,063,538,923</b>	<b>1,081,858,243</b>

DONG-A ST CO., LTD. AND SUBSIDIARIES

For the years ended December 31, 2015 and 2014

## Consolidated Statements of Comprehensive Income

	2015	2014
(In thousands of won, except per share information)		
Revenue	₩ 580,996,640	578,640,115
Cost of sales	(279,074,088)	(268,511,844)
<b>Gross profit</b>	<b>301,922,552</b>	<b>310,128,271</b>
Selling and administrative expense	187,648,262	197,156,659
Research and development expenses	58,886,826	63,602,209
<b>Operating profit</b>	<b>55,387,464</b>	<b>49,369,403</b>
Other income	10,608,514	6,000,853
Other costs	(14,518,381)	(4,273,832)
Finance income	33,303,918	14,273,096
Finance costs	(20,891,514)	(19,638,769)
<b>Profit before income tax</b>	<b>63,890,001</b>	<b>45,730,751</b>
Income tax expense	15,316,685	(8,180,931)
<b>Profit</b>	<b>48,573,316</b>	<b>37,549,820</b>
<b>Other comprehensive income (loss)</b>		
<b>Items that will never be reclassified to profit or loss</b>		
Defined benefit plan actuarial gains (losses)	(4,372,496)	(5,427,814)
<b>Items that are or may be reclassified to profit or loss</b>		
Available-for-sale financial assets – net change in fair value	(1,614,949)	(1,762,633)
Cash flow hedges – effective portion of changes in fair value	513,461	(475,671)
Foreign operations – foreign currency translation differences	(95,696)	(29,635)
Revaluation of property, plant and equipment	-	(601,382)
<b>Other comprehensive income for the year, net of income tax</b>	<b>(5,569,680)</b>	<b>(8,297,135)</b>
<b>Total comprehensive profit</b>	<b>₩ 43,003,636</b>	<b>29,252,685</b>

For the years ended December 31, 2015 and 2014

	2015	2014
(In thousands of won, except per share information)		
<b>Profit attributable to:</b>		
Owners of the Company	₩ 48,562,212	37,412,355
Non-controlling interests	11,104	137,465
<b>Profit</b>	<b>48,573,316</b>	<b>37,549,820</b>
<b>Total comprehensive income attributable to:</b>		
Owners of the Company	42,987,458	29,132,724
Non-controlling interests	16,178	119,961
<b>Total comprehensive income</b>	<b>₩ 43,003,636</b>	<b>29,252,685</b>
<b>Profit per share</b>		
Basic earnings per share (won)	6,192	4,966
Diluted earnings per share (won)	6,024	4,673

DONG-A ST CO., LTD. AND SUBSIDIARIES

For the year ended December 31, 2014

## Consolidated Statements of Changes in Equity

	Attributable to owners of the Company					Non-controlling interests	Total equity
	Share capital	Share premium	Treasury shares	Other equity components	Retained earnings		
(In thousands of won)							
Balance at January 1, 2014	₩ 36,754,580	276,482,886	(606,444)	185,914,396	(59,718,560)	533,644	439,360,502
<b>Total comprehensive income:</b>							
Profit	-	-	-	-	37,412,355	137,465	37,549,820
<b>Other comprehensive income (loss):</b>							
Change in fair value of available-for-sale financial assets	-	-	-	(1,762,633)	-	-	(1,762,633)
Defined benefit plan actuarial losses	-	-	-	-	(5,410,775)	(17,039)	(5,427,814)
Effective portion of cash flow hedges	-	-	-	(475,671)	-	-	(475,671)
Changes in fair value of exchange differences on translating from foreign operations	-	-	-	(29,170)	-	(465)	(29,635)
Revaluation reserve	-	-	-	(601,382)	-	-	(601,382)
Total other comprehensive income (loss)				(2,868,856)	(5,410,775)	(17,504)	(8,297,135)
<b>Total comprehensive income (loss)</b>				(2,868,856)	32,001,580	119,961	29,252,685
<b>Transactions with owners of the Company, recognized directly in equity:</b>							
Cash dividends	-	-	-	-	(1,836,708)	-	(1,836,708)
Liquidation dividends	-	-	-	-	-	(377,715)	(377,715)
Transfer from share premium	-	(71,500,000)	-	-	71,500,000	-	-
Conversion of convertible redeemable preferred stocks	1,755,100	20,323,369	-	-	-	-	22,078,469
Capital increase	-	-	-	(7,719)	-	7,719	-
Changes in scope of consolidation	-	-	-	(120,262)	-	(20,158)	(140,420)
<b>Total transactions with owners of the Company</b>	1,755,100	(51,176,631)	-	(127,981)	69,663,292	(390,154)	19,723,626
Balance at December 31, 2014	₩ 38,509,680	225,306,255	(606,444)	182,917,559	41,946,312	263,451	488,336,813

For the year ended December 31, 2015

	Attributable to owners of the Company						
	Share capital	Share premium	Treasury shares	Other equity components	Retained earnings	Non-controlling interests	Total equity
(In thousands of won)							
Balance at January 1, 2015	₩ 38,509,680	225,306,255	(606,444)	182,917,559	41,946,312	263,451	488,336,813
Total comprehensive income (loss):							
Profit	-	-	-	-	48,562,212	11,104	48,573,316
Other comprehensive income (loss):							
Change in fair value of available-for-sale financial assets	-	-	-	(1,614,949)	-	-	(1,614,949)
Defined benefit plan actuarial losses	-	-	-	-	(4,377,570)	5,074	(4,372,496)
Effective portion of cash flow hedges	-	-	-	513,461	-	-	513,461
Changes in fair value of exchange differences on translating from foreign operations	-	-	-	(95,696)	-	-	(95,696)
Revaluation reserve	-	-	-	(19,674,599)	19,674,599	-	-
Total other comprehensive income (loss)	-	-	-	(20,871,783)	15,297,029	5,074	(5,569,680)
Total comprehensive income (loss)	-	-	-	(20,871,783)	63,859,241	16,178	43,003,636
Transactions with owners of the Company, recognized directly in equity:							
Cash dividends	-	-	-	-	(5,773,389)	-	(5,773,389)
Acquisition of treasury shares	-	-	(34,436)	-	-	-	(34,436)
Exercise of stock warrants	1,669,345	27,526,380	-	(926,180)	-	-	28,269,545
Others	-	-	-	90,916	-	(119,645)	(28,729)
Total transactions with owners of the Company	1,669,345	27,526,380	(34,436)	(835,264)	(5,773,389)	(119,645)	22,432,991
Balance at December 31, 2015	₩ 40,179,025	252,832,635	(640,880)	161,210,512	100,032,164	159,984	553,773,440

DONG-A ST CO., LTD. AND SUBSIDIARIES

For the years ended December 31, 2015 and 2014

## Consolidated Statements of Cash Flows

	2015	2014
(In thousands of won)		
<b>Cash flows from operating activities</b>		
Profit	₩ 48,573,316	37,549,820
Adjustments	50,647,218	46,099,067
Changes in assets and liabilities	(44,268,083)	11,525,903
Income taxes paid	(12,560,280)	(10,428,981)
Income tax refund	5,216	19
<b>Net cash from operating activities</b>	<b>42,397,387</b>	<b>84,745,828</b>
<b>Cash flows from investing activities</b>		
Interest received	2,119,502	1,938,020
Dividends received	271,000	291,399
Decrease in short-term financial instruments	9,600,000	15,800,000
Decrease in long-term financial instruments	1,000	-
Disposal of available-for-sale financial assets	40,204,002	5,002,678
Disposal of subsidiaries	4,896,500	-
Disposal of property, plant and equipment	38,865	341,427
Disposal of intangible assets	64,545	380,000
Decrease in deposits	535,052	1,953,552
Disposal of disposal group	25,494,318	-
Increase in short-term financial instruments	(8,600,000)	(20,396,500)
Acquisition of available-for-sale financial assets	(20,896,246)	(1,001,979)
Acquisition of held-to-maturity financial assets	-	(4,180)
Acquisition of property, plant and equipment	(28,276,039)	(29,556,580)
Acquisition of intangible assets	(3,950,711)	(2,675,347)
Increase in deposits	(482,825)	(369,943)
<b>Net cash from (used in) investing activities</b>	<b>₩ 21,018,963</b>	<b>(28,297,453)</b>

For the years ended December 31, 2015 and 2014

	2015	2014
(In thousands of won)		
<b>Cash flows from financing activities</b>		
Proceeds from short-term borrowings	₩ 19,497,234	18,527,487
Proceeds from long-term borrowings	-	40,000,000
Proceeds from bonds	-	70,000,000
Rental deposits received	1,984,365	5,361,184
Exercise of stock warrants	28,269,545	-
Interest paid	(11,576,708)	(11,471,733)
Dividends paid	(5,773,389)	(2,214,423)
Repayment of short-term borrowings	(28,527,487)	(16,668,875)
Repayment of current portion of bonds	(70,000,000)	-
Repayment of current portion of long-term borrowings	-	(2,000,000)
Repayment of long-term borrowings	(4,300,000)	-
Decrease in rental deposits	-	(1,059,239)
<b>Net cash from (used in) financing activities</b>	<b>(70,426,440)</b>	<b>100,474,401</b>
<b>Net decrease in cash and cash equivalents</b>	<b>(7,010,090)</b>	<b>156,922,776</b>
Cash and cash equivalents at beginning	293,438,922	132,263,800
Effect of exchange rate fluctuations on cash held	9,738,380	4,344,257
Changes in ownership interests in subsidiaries that do not result in loss of control	-	(91,911)
<b>Cash and cash equivalents at end of year</b>	<b>₩ 296,167,212</b>	<b>293,438,922</b>



## PRODUCT PORTFOLIO

01

### ETHICAL DRUGS

- 01.1 In-house Developed Original Drugs
- 01.2 Incrementally Modified Drugs
- 01.3 Biological Products
- 01.4 Licensed-in Original Drugs
- 01.5 Generic Drugs

02

### OTC & HEALTHCARE PRODUCTS

- 02.1 Over-the-counter Drugs
- 02.2 Quasi-drugs
- 02.3 Health Functional Foods
- 02.4 Drinks

03

### ACTIVE PHARMACEUTICAL INGREDIENTS

- 03.1 Generic APIs
- 03.2 Fine Chemicals
- 03.3 Bio

## 01

## ETHICAL DRUGS

**Overview**

Dong-A ST has five in-house developed original drugs, including Stillen<sup>®</sup>, as well as Zydena<sup>®</sup>, Motilitone<sup>®</sup>, Sivextro<sup>®</sup>, and Suganon<sup>®</sup>. They have all been commercial successes, thanks to their outstanding efficacy, safety and convenience, and they also cover various fields, ranging from new phytomedicines to next-generation antibiotics.

By adhering to the belief, 'Our social contribution is to develop innovative medicines', Dong-A ST initiated new drug development in the early 1990s and expanded its infrastructure, base technologies, and personnel. In the early days of new drug development, the company focused on researching new drugs for digestive system and urinary system, which led to the successful development of Stillen<sup>®</sup>, a gastritis treatment, in 2002, Zydena<sup>®</sup>, an erectile dysfunction treatment, in 2005, and Motiliton<sup>®</sup>, a functional dyspepsia treatment, in 2011.

Dong-A ST expanded its research areas to include antibiotics as well as the metabolic and endocrine systems, and implemented a full program of global R&D. In 2014, Sivextro<sup>®</sup> (DA-7218, Tedizolid), an oxazolidinone class antibiotic, became Dong-A's first in-house developed original drug to receive US Food and Drug Administration (FDA) approval, which was followed by sales in the US, which made Sivextro<sup>®</sup> the first product in Korean pharmaceutical industry to be launched overseas prior to domestic release. In October 2015, Suganon<sup>®</sup>, a diabetes treatment, received sales approval from the Korean Ministry of Food and Drug Safety (MFDS), and it will be released in Korea in early 2016.

Dong-A ST has a corporate culture in which its members are encouraged not to fear failure, and to try their best. This corporate culture has had a significant role in Dong-A ST's development of original drugs, and its position as a leading R&D specialist. The company is determined to develop outstanding new medicines that are recognized in global markets, which is why Dong-A ST concentrates on fostering R&D experts with global capabilities. In line with its goal to make the medicines of tomorrow a reality, Dong-A ST is in global collaborations with world-renowned pharmaceutical companies, hospitals, and research institutes.

The company will focus on improving global R&D capabilities and identifying global market trends, all in efforts to develop innovative new medicines and therapeutic solutions in unexplored fields where there are no existing competitor products, thus fulfilling its responsibilities as a respected pharmaceutical company.

**Drug Development Success Story****Suganon<sup>®</sup> (DA-1229, Evogliptin)**

Dong-A ST forecasted the increasing importance of dipeptidyl eptidase-4 (DPP-4) inhibitors, and began development of a new diabetes treatment in 2005, based on expertise and experiences in the relevant area. The company chose a drug that it determined as being the best of several candidates, and carried out screening work to find a compound that would increase efficacy and reduce side effects. After extensive research, it identified Evogliptin, and a preliminary pre-clinical study revealed outstanding results in both medicinal efficacy and lack of toxicity.

Since Evogliptin is very effective but low in toxicity, the sample used for toxicity tests is relatively large, which required an efficient process to manufacture an affordable sample. Dong-A ST therefore produced around 7 kilograms of pre-clinical samples, and undertook extensive research on optimizing the production process. After this, various animal models were used to test for medicinal effects at the Dong-A ST Research Center, leading to confirmation of Evogliptin's excellent effects. The Korea Institute of Toxicology examined the toxicity test results, and confirmed the excellent degree of safety. A phase I clinical trial was conducted on a healthy male subject, which confirmed the drug's safety and easy tolerance. A phase II clinical trial was conducted on type 2 diabetes patients with inadequate glucose control, and this trial confirmed effectiveness and safety for oral administration.

Based on this proven efficacy and safety, Evogliptin acquired sales approval from the Korean MFDS at the end of 2015. This resulted in the birth of Suganon<sup>®</sup>, Dong-A's fifth in-house developed original drug and Korea's 26th new drug.

## 01.1

## In-house Developed Original Drugs

**Stillen® Tab.**

Gastritis Treatment



Stillen® was Dong-A ST's first in-house developed original drug, and is a treatment for gastritis with main ingredients of eupatilin and jaceosidin, extracted from the herb Artemisia. Developed in 2002, as a Korea's first independently developed cytoprotectant drug, it has proven its outstanding efficacy and safety and led the Korean cytoprotectant drug market while maintaining the highest market share. Stillen® recorded sales of KRW 36.2 billion in 2015, indicating a slowdown in growth. However, in 2016 the launch of Stillen® 2X, a sustained release Incrementally Modified Drug (IMD) of Stillen®, is anticipated to bring new resilience to Stillen®.

**Zydena® Tab.**

Erectile Dysfunction Treatment



Zydena® was the first oral erectile dysfunction drug in Korea, and the fourth worldwide. It was developed by Dong-A ST in 2005, and achieved sales in its first year of more than KRW 10 billion. It was launched in Russia in 2008, and is now also available in Turkey, Malaysia, India and Brazil. By 2017, Dong-A ST aims to export Zydena® to 19 countries, including the US and China. Research on various other indications, including pulmonary arterial hypertension and dementia, is being conducted.

**Motilitone® Tab.**

Functional Dyspepsia Treatment



Motilitone® was the third in-house developed original drug of Dong-A ST. Launched in 2011 as a new phytomedicine, its main ingredients are extracts of corydaline and pharbitis. It is the only functional dyspepsia treatment that offers a triple action – 5-HT4 agonist, D2 antagonist, and 5-HT1 agonist. Motilitone® ranked No. 1 in market share in the Korean functional dyspepsia market in only 19 months after its release. Sales in 2015 were KRW 22.4 billion, a year-on-year rise of 3.2%.

**Sivextro® Tab./Inj.**

Oxazolidinone Class Antibiotic



Sivextro® is an antibiotic that Dong-A ST has licensed out for development. It received US FDA approval in June 2014, and European Medicines Agency (EMA) approval in March 2015. In Korea, its tablet and injection forms received approval in April 2015. It has demonstrated outstanding efficacy for Acute Bacterial Skin and Skin Structure Infections (ABSSSI) in clinical trials, and also shown an excellent safety record compared to competitor products. A global multi-center phase III clinical trial is under way to verify additional effects for the treatment of pneumonia.

**Suganon® Tab.**

Diabetes Treatment



Suganon® is a DPP-4 inhibitor developed by Dong-A ST. It is an oral diabetes treatment, and has been assessed as having the best potency of any current DPP-4 inhibitor. Its dosage therefore does not have to be adjusted, even for patients with renal disease. As part of efforts to develop Suganon® into an innovative drug recognized worldwide, the company has signed licensing-out agreements for 24 countries around the world, starting from the clinical development phase. Research and development is also under way for combination drug to treat multiple chronic diseases, especially for patients with metabolic syndrome. Suganon® will be launched in Korea in March 2016, and a combination drug with Metformin® will be released in May.

## 01.2

## Incrementally Modified Drugs

**Stillen® 2X Tab.**

Gastritis Treatment



Stillen® 2X, scheduled to be released in January 2016, is an IMD of Stillen®. Dong-A ST used floating technology, which extends gastric emptying time, to increase the drug retention. This enables Stillen® 2X to offer the same efficacy and effects as Stillen® with fewer administrations – twice a day, not the previous three times. The floating sustained release technology received the Main Prize for Medication Technology from the Korean Society of Pharmaceutical Sciences and Technology in 2015. Dong-A ST aims to expand its dominance in the cytoprotectant agent market by increasing patient compliance and providing wider treatment options through Stillen® and Stillen® 2X.

**Orodipine® Tab.**

Hypertension Treatment



Orodipine® is an IMD of Amlodipine®. It is a Calcium Channel Blocker (CCB) and an oral hypertension treatment with amlodipine orotate as its main ingredient, which has an outstanding safety record. Sales of Orodipine® have grown steadily since its launch in 2006, and its sales reached a record high of KRW 28.5 billion in 2010. As of the end of 2015, it recorded fourth highest sales in the Korean amlodipine market. Based on its outstanding safety that was proven through clinical trials and equivalence with the original drug, Dong-A ST will increase its market dominance, while maintaining its status as a blockbuster product.

**Orosartan® Tab.**

Hypertension Treatment



Orosartan® is an IMD of Exforge®. This oral hypertension treatment is a combination drug consisting of an Angiotensin II Receptor Blocker (ARB) and a CCB. Dong-A ST has increased patient convenience by reducing hygroscopicity of the previous ARB/CCB combination drug. As a result, sales exceeded KRW 3 billion in 2013, the year it was launched, and continue to grow. A phase IV clinical trial is under way for comparison with an ARB/diuretic combination drug, and plans are made to expand its market dominance by conducting clinical trials of the ARB/CCB combination drug, thus proving its excellence. Dong-A ST is targeting sales of KRW 8 billion especially given the recent growth in the Korean ARB/CCB combination drug market.

## 01.3

## Biological Products

**Growtropin II® Inj.**

Human Growth Hormone



Growtropin® is a human growth hormone that was developed in-house by Dong-A ST based on its cutting-edge gene recombination technologies. It has outstanding efficacy in treating low height and Idiopathic Short Stature (ISS) in young children, and is available in various forms for patient convenience, including 4, 12, and 16 IU vial forms and a 30 IU cartridge. The company developed a pen device for the 30 IU cartridge, making administration even simpler and more precise. These strengths have enabled Growtropin® to record sales of KRW 18.5 billion in Korea in 2015, and exports of KRW 26.8 billion, mainly in Latin America.

**Leucostim® Inj.**

Neutropenia Treatment



Leucostim® is a neutropenia treatment, the main ingredient of which is filgrastim. It was developed in-house by Dong-A ST, and has been produced and sold since 1999. The launch of the Leucostim® Prefilled Syringe in November 2014 resulted in more choice for medical professionals. It is currently prescribed at around 70 general hospitals, at a price that is as much as 47% lower than the market leader, thereby reducing the financial burden of patients.

**Dulastin® Inj.**

Neutropenia Treatment



Dulastin® Prefilled Syringe is a neutropenia treatment, and its main ingredient is tripegfilgrastim. It was Korea's first in-house developed PEG-G-CSF medication, and was launched in February 2015. PEG has been combined with Leucostim® for long-lasting medicinal effects. Only one administration per chemotherapy cycle is needed, resulting in increased injection convenience for medical staff and enhanced patient compliance. The price is 28% cheaper than the previous PEG-G-CSF medication, lowering the financial burden of patients. It passed Drug Committee scrutiny, available to be prescribed at around 20 general hospitals.

## 01.4

## Licensed-in Original Drugs

**Acelex<sup>®</sup> Cap.**

Ostarthritis Treatment



Acelex<sup>®</sup> received approval from the Korean MFDS in February 2015 as Korea's 22nd new drug, and was released the following September. The main ingredient of this selective cyclooxygenase-2 (COX-2) inhibitor is polmacoxib. Of all the cyclooxygenases that act to form prostaglandin, only COX-2 is selectively inhibited for anti-inflammatory effects. There were improvements in avoiding gastrointestinal side effects compared to previous Nonsteroidal Anti-Inflammatory Drugs (NSAID). A phase III clinical trial indicated rapid treatment effects compared to competitor products. Acelex<sup>®</sup> has a high affinity with carbonic anhydrases, which are widely distributed in the cardiovascular system, and so it has the mechanism to overcome cardiovascular system side effects caused by inhibiting COX-2.

**Flivas<sup>®</sup> Tab.**

Benign Prostatic Hyperplasia Treatment



Flivas<sup>®</sup> is an alpha-blocker, and is the first alpha-blocker to have high selectivity for the  $\alpha_{1d}$  receptor. It has positive treatment effects for patients with dysuria symptoms of prostatic hyperplasia, and has outstanding treatment effects compared to Tamsulosin-type products for storage disorder symptoms, including nycturia. It has high prostate and urethra selectivity, making it safe with regard to low orthostatic and ejaculation disorder side effects. It is available in various forms, including 25 mg, 50 mg, and 75 mg, with the dosage controlled based on symptoms.

**Opalmon<sup>®</sup> Tab.**

Lumbar Spinal Stenosis Treatment



Opalmon<sup>®</sup> is an oral prostaglandin E1 derivative. It improves blood flow disorders by increasing blood flow in the cauda equina tissue, and eases difficulties in walking caused by lower leg pain, lower leg numbness, and intermittent claudication. It is therefore suitable for elderly stenosis patients for whom surgery is difficult, and it also ensures more safety with fewer major side effects. Opalmon<sup>®</sup> was developed by Ono Pharmaceutical of Japan, and has been prescribed for spinal stenosis for more than a decade, while being well received by patients due to its safety with few side effects. Sales recorded KRW 21.7 billion in 2015.

**Talion<sup>®</sup> Tab.**

Allergic Rhinitis, Urticaria, Pruritus Treatment



Talion<sup>®</sup> is a second-generation anti-histamine, the main ingredient of which is bepotastine besilate. It was originally developed by Japan's Mitsubishi Tanabe. There is almost no migration to the brain, resulting in minimal drowsiness, and it has the most rapid manifestation of effects of any second-generation anti-histamine. It has multiple indications, including allergic rhinitis, hives, and pruritus, which is why it is prescribed by almost all medical departments, including dermatology and otolaryngology. Materials from clinical trials conducted by the original developer in Japan every year are retained as base materials. New forms are being developed, as are marketing strategies ahead of patent expiration in December 2017. Talion<sup>®</sup> recorded sales of KRW 20.7 billion in 2015, taking the number one position in the domestic anti-histamine market.

**Teribone<sup>®</sup> Inj.**

Osteoporosis Treatment



Teribone<sup>®</sup> hypodermic injection 56.5µg is a PTH medication. It is an osteoporosis treatment for post-menopausal women, who are at high risk of bone fracture. It promotes osteogenesis, in contrast to existing treatments that can inhibit osteolysis. Teribone<sup>®</sup> treats fractures caused by osteoporosis, and increases bone strength to prevent future fractures. It was originally developed by Asahi Kasei Pharma of Japan, where it has been a blockbuster drug, generating sales of more than KRW 200 billion in 2015. Dong-A ST signed a development and exclusive sales agreement for the Korean market in December 2014, received approval from the Korean MFDS in November 2015, and plans to release Teribone<sup>®</sup> in Korea in March 2016.

## 01.5

## Generic Drugs

**Baracle® Tab.**

Hepatitis Treatment



Baracle® is a generic of Baraclude®, a hepatitis B treatment, the patent for which expired in 2015. It uses a high-purity, high-quality Active Pharmaceutical Ingredient (API) produced by ST Pharm, which manufactures and exports APIs of hepatitis treatments, through strict quality control based on the Quality by Design (QbD). A non-inferiority clinical trial was conducted on naive patients, resulting Baracle® being recognized for its safety and equivalence with the original product. It has a strong position in the domestic market, and has formed the foundation of a hepatitis treatment line-up ahead of the release of DA-2802 (Tenofovir) in 2017. Dong-A ST plans to increase its dominance in the hepatitis treatment market.

**Lipinon® Tab.**

Hyperlipidemia Treatment



Lipinon® is an anti-hyperlipidemia agent, and its main ingredient is atorvastatin. Launched in 2008, this leading generic product of Dong-A ST has recorded cumulative sales of KRW 240 billion by the end of 2015. Product quality was proven by a phase IV clinical trial in Korea, which is why it has the highest market share of any generic hyperlipidemia treatment used at general hospitals, and is expected to expand its market dominance at clinics. As an API for Lipinon® that is internally synthesized has been proven effective, it is therefore exported to Japan. Given the growth potential of Lipinon® and its API, they are expected to contribute to accelerating the growth of Dong-A ST.

**Cresnon® Tab.**

Hyperlipidemia Treatment



Cresnon® is a hyperlipidemia treatment, the main ingredient of which is rosuvastatin. Released in 2014, cumulative sales by the end of 2015 were KRW 5.2 billion. Because the strong efficacy of LDL-C reduction is an important trend in the treatment of hyperlipidemia, the market for Cresnon® is expected to expand. Dong-A ST therefore plans to develop it into a leading generic product by emphasizing its efficacy, as shown in a phase IV clinical trial in Korea, a medication patent, and its internally synthesized API.

**Cozartan® Tab.**

Hypertension Treatment



As a generic of Cozaar®, Cozartan® is an Angiotensin II Receptor Blocker (ARB) type oral hypertension treatment. Released in 2008, its sales reached a record high at KRW 18.8 billion in 2010. Its main ingredient is losartan which was the first ARB and maintains the highest market share thanks to its proven safety. Cozartan® is currently recording fourth highest sales in the domestic losartan market. Dong-A ST has released various ARB products, including Cozartan®, Orosartan®, Aptan®, and Olsartan®, and plans to increase its dominance of the domestic hypertension market based on these products.

**Plavitor® Tab.**

Platelet Aggregation Inhibitor



Plavitor® was the first generic product introduced to the market of platelet aggregation inhibitors. It selectively inhibits ADP(Adenosine Diphosphate)-induced platelet aggregation, and also blocks ADP-mediated amplification mechanism, resulting in strong inhibition of platelet aggregation. Dong-A ST is conducting continuous large-scale, multi-organization clinical trials to prove these effects. A recent comparative clinical study with the original Plavix® revealed equivalent anti-platelet aggregation effects as the original product.

**Celbesta® Tab.**

Ostarthritis Treatment



Celbesta® is a selective COX-2 inhibitor released in June 2015, and the main ingredient is celecoxib. Because it selectively inhibits COX-2, it reduces the gastrointestinal troubles that previous NSAIDs caused by inhibiting COX-1 in the cardiovascular system. Celbesta® delivers the same effects as the original Celebrex®, but the price is around 25% cheaper, helping to ease the financial burden of patients.

## 02

## OTC &amp; HEALTHCARE PRODUCTS

**Overview**

Dong-A Pharmaceutical produces high-quality Over-the-counter (OTC) drugs through continuous investment and R&D, and aims to get closer to consumers by implementing distinctive marketing strategies. Its many hit brands include Bacchus<sup>®</sup>, Korea's favorite tonic drink, as well as Panpyrin<sup>®</sup>, Morning Care<sup>®</sup>, Benachio<sup>®</sup>, and Garglin<sup>®</sup>.

Dong-A Pharmaceutical continues to make substantial investments and undertake robust R&D to become a leading total healthcare company, with the best product portfolio. The company strives to develop products with outstanding effectiveness in maintaining health, preventing disease, and treating illnesses. Its R&D efforts in this regard focus on the areas of global OTC drugs, new functional natural products, and innovative consumer healthcare products.

**Brand Success Story****Garglin<sup>®</sup>**

Launched in 1982, Garglin<sup>®</sup> was the first oral health mouthwash to be developed in Korea. It began as a product with sodium fluoride for cavity prevention, and it has now evolved to additionally include cetylpyridinium chloride for destroying even tiny germs that are invisible to the naked eye through continuous research and development.

The line-up of Garglin<sup>®</sup> has been expanded to satisfy a wide range of consumer requirements, including Garglin<sup>®</sup> for children, Gum Guard, a liquid toothpaste for periodontal disease patients, as well as a spray, a diluted solution, and pouch forms for consumer convenience. In 2015, the company launched new versions of Garglin<sup>®</sup> Original, Zero, Strong, Clean Care, and a product for children. It also released Garglin<sup>®</sup> Gum Care, Natural Herb, and Total Care. In addition, the company renewed the brand through new packaging, which reminds of teeth and gums in order to make sure that the Garglin<sup>®</sup> brand is for mouthwash, and the each packaging of seven products is color-coded so that consumers can easily identify which product they want to use.

Dong-A Pharmaceutical will continue to strengthen the leading position of Garglin<sup>®</sup> as Korea's number one mouthwash brand by developing forms that identify and satisfy varying consumer needs, while making intensive efforts to advance into global markets.

**Morning Care<sup>®</sup>**

Morning Care<sup>®</sup> eases the symptoms of hangovers. Released in 2005, it contains rice soybean extract, which promotes the metabolism of alcohol and has a reviving taste and scent. Morning Care<sup>®</sup> remains a customer favorite, with cumulative sales in the decade since launch reaching KRW 100 billion.

Dong-A Pharmaceutical continues to release new Morning Care<sup>®</sup> products to satisfy consumer requirements through improved functionality. In 2011, the company renewed the product into the Goodbye Alcohol Morning Care<sup>®</sup>, which doubled the strength of the main ingredient, and in 2013, the company developed Morning Care<sup>®</sup> Plus, an individually recognized health functional food containing lactic acid-fermented kelp extracts, recognized by the Korean MFDS as a material that helps protect the liver from damage caused by alcohol. The company also has launched Morning Care<sup>®</sup> Lady, and in 2015, it unveiled Morning Care<sup>®</sup> Turmeric on the occasion of the tenth anniversary of the release of Morning Care<sup>®</sup>.

Dong-A Pharmaceutical raises product quality by researching alcohol decomposition, delay in absorption, the causes of hangovers and hangover symptoms, and by conducting various efficacy and clinical evaluations. In addition, the company maintains a strong presence in the hangover drink market by communicating with consumers through differentiated advertising and marketing activities.

## 02.1

## Over-the-counter Drugs

**Panpyrin®-Q**Anti-inflammatory, Antipyretic,  
Analgesic Drug

Panpyrin®-Q is a cold medicine in liquid form released in 2007. It is effective for colds, aches, and headaches, as well as for coughs and phlegm, and delivers outstanding effects in the initial phase of a cold. As Dong-A Pharmaceutical's flagship OTC product, it recorded sales of KRW 25.9 billion and a 65% market share in 2015, reinforcing its leading position in the domestic liquid cold medicine market.

**Panpyrin®-T**Anti-inflammatory, Antipyretic,  
Analgesic Drug

Released in 1956, Panpyrin®-T is a cold medicine tablet that is effective in treating colds, aches and headaches, and particularly effective in the initial phase of a cold. It is available in two packages – 300 tablets and 3 tablets. The three tablet product was nominated as one of eleven safe household drugs determined by a government selection process that began in 2012, and is available at 24-hour convenience stores. Sales in 2015 recorded KRW 2 billion.

**Benachio®**

Dyspepsia Treatment



Released in 2009 as a functional dyspepsia treatment, Benachio® is effective for general indigestion as well as loss of appetite, epigastric distension, nausea, and vomiting. In 2015, Benachio® became Korea's first liquid digestive medicine to show proven effects of functional dyspepsia improvement through a clinical trial. This phytomedicine contains no carbonic acid and indicates low irritation levels. Its marketing campaign is based on the concept of 'Please take care of your digestion', emphasizing how Benachio® promotes gastric movement. Dong-A Pharmaceutical is expanding the line-up by launching the Benachio® Fine Granules in 2015, followed by a tablet form and a product for children in 2016, with a goal to develop this product into a leading brand of digestive medicine. Sales in 2015 were KRW 4.7 billion.

**Myvlar® Tab.**

Contraceptive Medicine



Dong-A Pharmaceutical acquired four oral contraceptive medicines from Bayer Korea in 2015, including Myvlar®, which has given the company the foundation to enter the contraceptive medicine market. Myvlar® is a third-generation contraceptive medicine that contains gestoden, which delivers outstanding menstrual cycle management with few side effects. It is currently number two in market share in Korea. Meliane® is a contraceptive medicine for women who have not taken contraceptive medicines before. It contains gestoden, and has a reduced estrogen content. Minivlar® and Triquilar® contain levonorgestrel, and so have a low risk of thrombosis. Total sales of these four contraceptive medicines reached KRW 7.6 billion in 2015.

## 02.2

## Quasi-drugs

**Bacchus®**

Tonic



Since its launch in 1963, Bacchus® has grown in popularity across a wide range of consumers, and has propelled the growth of Dong-A Pharmaceutical and Dong-A Socio Group as well. After it was reclassified from an OTC drug to a quasi-drug in 2011, Dong-A Pharmaceutical adopted a dual distribution strategy – Bacchus®-F for new types of distribution channels and Bacchus®-D for pharmacies only. In 2015, Bacchus® recorded sales of KRW 201 billion in the domestic market, and Bacchus®-F, in particular, grew 56.7% from the previous year, continuing its double-digit growth. Bacchus®-F is 20ml larger and contains DL-carnitine which improves digestive functions. It is sold at convenience stores and supermarkets. Bacchus® for exports is available as a canned product, and Dong-A ST is in charge of its sales.

**Garglin®**

Mouthwash



Garglin® is effective in cavity prevention and oral care that cannot be achieved by brushing alone. It kills 99.9% of S. mutans, which causes cavities. Garglin® is the number one mouthwash brand in Korea, and is offered in different forms, including a disposable stick-type product and a dispenser for adults and children. Dong-A Pharmaceutical expanded the line-up by releasing new products in 2015, including Gum Care to help healthy gums, Natural Herb with herb ingredients to leave the inside of the mouth feeling smooth and refreshed, and Total Care which kills cavity-causing germs and other harmful germs inside the mouth. Sales reached KRW 22.4 billion in 2015.

**Tempo®**

Tampon



Released in 1977 by Dong-A Pharmaceutical, Tempo® is Korea's first domestic tampon. It is completely safe to use, even for sensitive skin, as it is manufactured from an absorbent material made of pure cotton. In addition, unlike menstrual pads, it is comfortable because it does not cause skin irritation and does not leak. In 2014 Tempo Eco Natural, which uses 100% pure organic cotton, was launched as well. Sales in 2015 reached KRW 7.4 billion.

**Bigen®**

Hair Color Product



Bigen® has been a long-time market leader in the highly competitive hair color product market, thanks to its high level of customer awareness and proven product quality, based on the tradition of more than 100 years. Bigen® was launched as a powder form in 1957, followed by the release of the Bigen® Cream Tone in 1991, the Bigen® Cream Foam in 2011, and the Bigen® Cream Tone Speedy in 2015, in order to satisfy different consumer needs. It generated sales of KRW 13.4 billion in 2015.

## 02.3

## Health Functional Foods

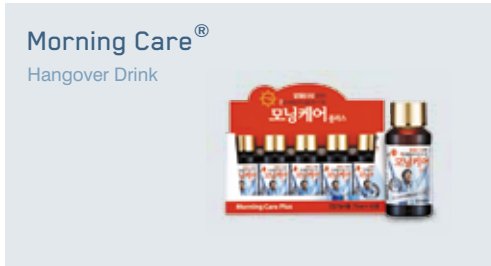


**D.C. Daily®**  
Immune Booster

D.C. Daily® is a premium health functional food containing cordyceps militaris. It was the first product in Korea containing cordyceps militaris to receive certification other functional claim, 2nd grade for its immunity support function. It offers high functionality in enhancing immunity, since it contains a great amount of cordycepin, a natural antibiotic and immune system-enhancer, which activates natural killer cells in the body and promotes the secretion of lymphocytes and cytokines – immune cells. Made of brown rice cordyceps militaris, it is rich in protein and minerals. The process of creating this eco-friendly product, from the production of the API to manufacture, takes place entirely in Korea. D.C. Daily® is provided in tablet form for convenient consumption.

## 02.4

## Drinks



**Morning Care®**  
Hangover Drink

Released in 2005, Morning Care® is a drink that eases the symptoms of hangovers, and helps to protect the liver from the damage caused by alcohol. Dong-A Pharmaceutical has been expanding its product line-up by releasing Morning Care® Plus, which was recognized its function as a health functional food, and Morning Care® Lady for women, which contains hyaluronic acid and collagen to maintain skin health and prevent swelling after hangovers. Morning Care® has further strengthened its market dominance by releasing Morning Care® Turmeric in 2015 which contains turmeric, water chestnut, and rice soybean extract (RSE). It recorded the industry's top stock keeping unit, and reached sales of KRW 12 billion in 2015.

## 03

## ACTIVE PHARMACEUTICAL INGREDIENTS

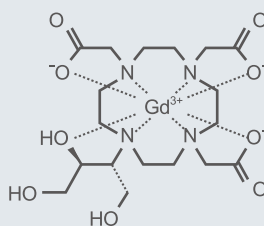
## 03.1

## Generic APIs

## Overview

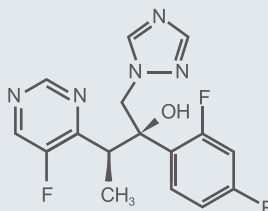
After becoming a member of Dong-A Socio Group in 2010, ST Pharm launched its generic API business, to supply APIs for finished pharmaceuticals to the Group. It manufactures high-purity, high-quality APIs and intermediates in economically-efficient ways. Furthermore, the company invests in research and development to achieve the goal of localizing APIs and advancing into global markets. ST Pharm pursues quality and price differentiation, under the strategy of being fully ready before the expiration of patents.

## Gadobutrol



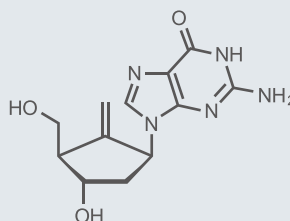
Gadobutrol is a generic API of Bayer's original drug Gadavist, an MRI contrast media. Thus far, no generic has been released worldwide, enabling ST Pharm to build a niche market. Gadobutrol is expected to contribute to sales growth in the future.

## Voriconazole



Voriconazole is a generic anti-fungal agent that was developed for entry into the Japanese market. An independently developed synthesis technique was used for this IMD, to avoid patents. It is the company's main product for entry into the Japanese market, with commercial quantities of supply being available in 2016.

## Entecavir



Entecavir is a hepatitis B treatment developed for release in Korea. As the patent on the original product will soon expire, ST Pharm plans to drive forward the supply of Entecavir to the multinational pharmaceutical company which developed the original product.

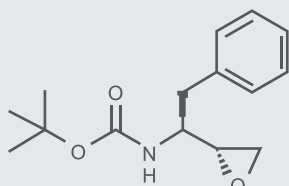
## 03.2

## Fine Chemicals

## Overview

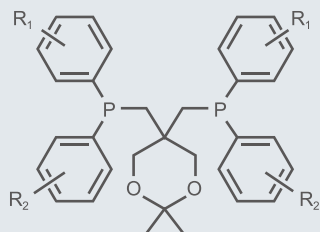
ST Pharm has been involved in fine chemicals since 2013, based on its proprietary synthesis technique. Fine chemicals is a technology-intensive high value-added business that involves developing and supplying customized specialist technologies for the chemical materials and products used in the electronics, textiles, resins, and medical treatment industries. The company is expanding its business scope to include electronic materials, such as secondary batteries, engineering plastics, materials for cosmetics, biomass materials, and additives, by applying techniques that the company has developed from pharmaceutical synthesis.

## RBEP



RBEP is an intermediate in the production of Atazanavir, an AIDS treatment from Bristol-Myers Squibb (BMS), and has been supplied to BMS since 2007. ST Pharm is also working on supplying the API of Atazanavir, and when this is achieved, it will be the foundation of an API supply business.

## HKC-200



ST Pharm supplies plastic catalysts for polymerization, which are used by Hyosung in the production of a new material called polyketone, a type of high-performance engineering plastic. Increased production of polyketone offers the opportunity of increased supply of HKC-200 to Hyosung.

## 03.3

## Bio

## Overview

Research into the treatment of disease at the gene level through the use of synthetic genes is a major part of current pharmaceutical research. ST Pharm is leading the development of nucleic acid therapies, a new area of treatment. The company runs the only oligo synthesis facility in Korea that satisfies Good Manufacturing Practice (GMP) regulations, which enables the company to supply various oligo drugs and candidate substances to researchers in Korea and abroad.

## siEbola-3

siEbola-3 is a drug to treat the Ebola virus. ST Pharm is carrying out joint research with a US-based pharmaceutical company to develop a treatment for the Ebola virus, which became a global issue in 2015.

# Corporate & IR Information

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### Date of Establishment

Dong-A Socio Holdings December 1932

Dong-A ST March 2013

Dong-A Pharmaceutical March 2013

### Securities Listing

#### Dong-A Socio Holdings

Korea Stock Exchange A000640

#### Dong-A ST

Korea Stock Exchange A170900

### Annual General Meeting

March 18, 2016

### @ Dong-A

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