



1st Half of Fiscal 2017 Financial Results

October 31, 2017

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President and CEO



Solving Social Issues to Accomplish Sustainable Growth

2. Maximizing Growth Drivers to Address Societal Needs -Contributing to a more vigorous society-

1. 1st Half FY2017 Financial Results and FY2017 Financial Forecasts

- Exceed original FY2017
Revenue and Profit Targets
- Growth with New Products

3. Addressing further societal needs to Accomplish Sustainable Growth

● Beyond SGS2020

- Prepare for the Further
Sustainable Growth of
the Shionogi Group

● Toward Achievement of Updated SGS2020

- Growth Drivers Providing Revenue Base
 - ✓ HIV franchise
- Next Growth Drivers
 - ✓ S-033188, Cefiderocol,
Cymbalta[®], and ADHD franchise

1. 1st Half FY2017 Financial Results and FY2017 Financial Forecasts

1. 1st Half FY2017 Financial Results
2. FY2017 Financial Forecasts

Summary of 1H FY2017: Growth in Sales by New Products

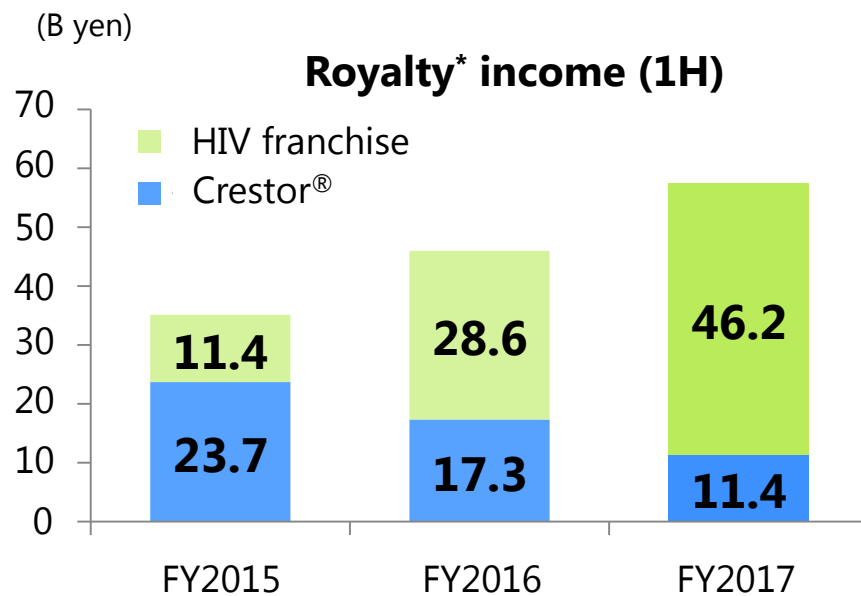
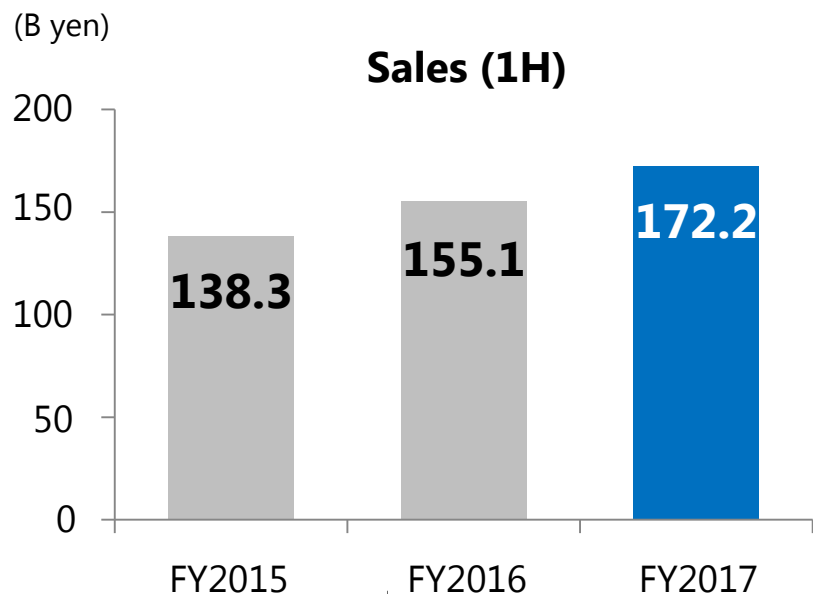


◆ Net Sales : **172.2 B yen** ^{vs 1H FY2016} (+11.0%)

**3 consecutive years
growth in sales**

◆ Royalty* income : **57.6 B yen** ^{vs 1H FY2016} (+25.2%)

(Target significantly exceeded due to HIV franchise sales expansion)



Summary of 1H FY2017: All Categories of Profit Reached Record Highs



◆ Operating income: **55.8 B yen** (+25.9%) vs 1H FY2016

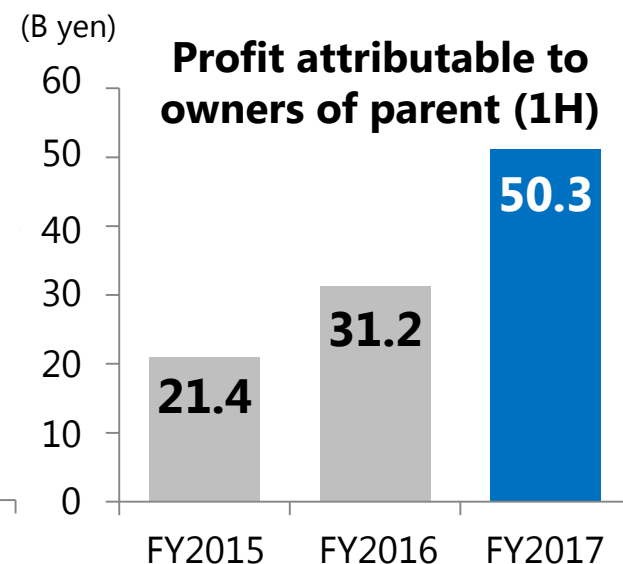
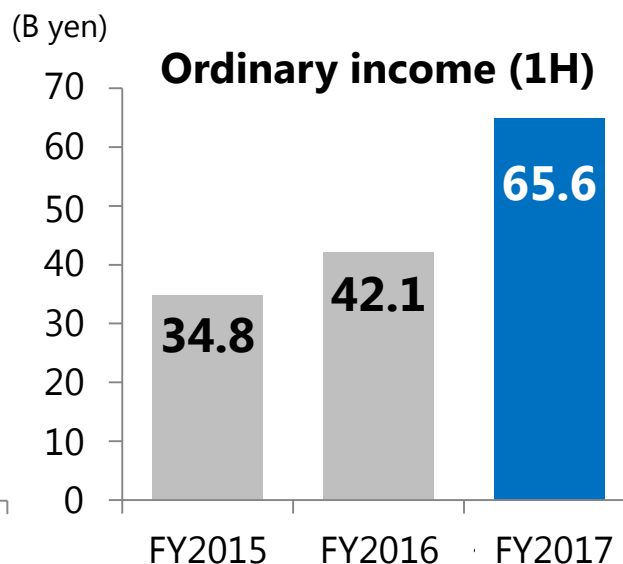
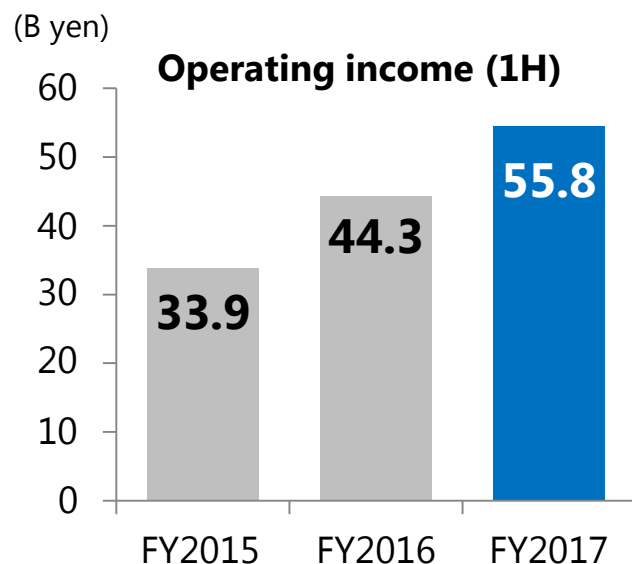
**Record-high levels
for 3 consecutive
years**

◆ Ordinary income: **65.6 B yen** (+55.6%) vs 1H FY2016

**Record-high levels
for 6 consecutive
years**

◆ Profit attributable to owners of parent: **50.3 B yen** (+61.3%) vs 1H FY2016

**Record-high levels
for 3 consecutive
years**



Financial Results (Consolidated)



(Unit: B yen)

	FY2017				FY2016	Y on Y	
	Full year Forecasts	1H Forecasts*	1H Results	Progress vs 1H Forecasts (%)	1H Results	Change (%)	Change (B yen)
Sales	340.0	162.5	172.2	106.0	155.1	11.0	17.1
Operating income	112.5	46.0	55.8	121.2	44.3	25.9	11.5
Ordinary income	123.5	51.5	65.6	127.4	42.1	55.6	23.4
Profit attributable to owners of parent	92.0	38.5	50.3	130.7	31.2	61.3	19.1

Exchange Rate (average)	FY2017 Forecasts	FY2017 1H Results
USD (\$) – JPY (¥)	110.0	111.06
GBP (£) – JPY (¥)	140.0	143.59
EUR (€) – JPY (¥)	120.0	126.34

Statements of Income (Consolidated)



(Unit: B yen)

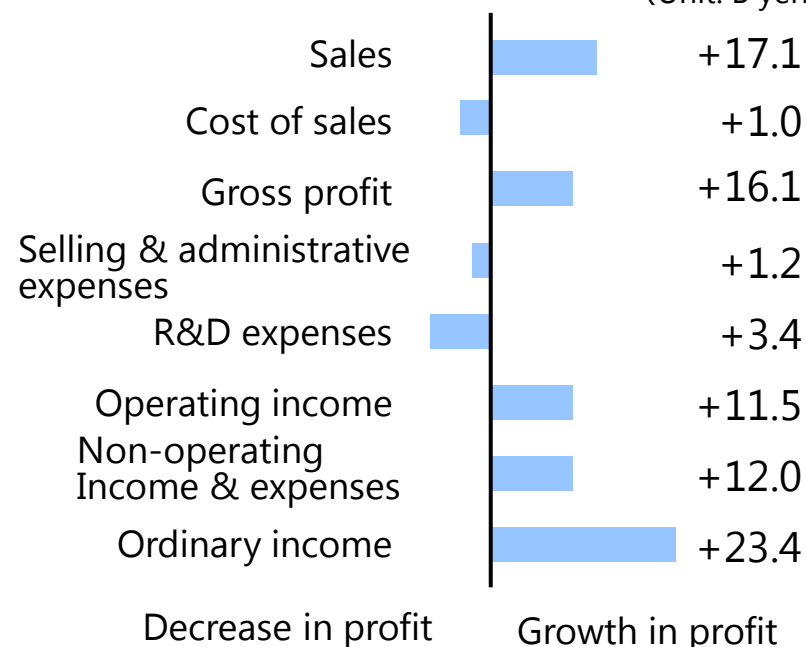
	FY2017			Progress vs 1H Forecasts (%)	FY2016	Y on Y	
	Full year Forecasts	1H Forecasts**	1H Results		1H Results	Change (%)	Change (B yen)
Sales	340.0	162.5	172.2	106.0	155.1	11.0	17.1
(Royalty* income)	125.0	56.4	57.6	102.1	46.0	25.2	11.6
	22.5 [35.6]	24.9 [38.2]	23.0 [34.6]		25.0 [35.5]		
Cost of sales	76.5	40.5	39.7	98.0	38.7	2.5	1.0
Gross profit	263.5	122.0	132.5	108.6	116.4	13.8	16.1
	44.4	46.8	44.6		46.5		
SG&A expenses	151.0	76.0	76.7	101.0	72.1	6.4	4.6
Selling & administrative expenses	29.1 99.0	29.8 48.5	27.1 46.6	96.2	29.3 45.4	2.6	1.2
	15.3	16.9	17.5		17.2		
R&D expenses	52.0	27.5	30.1	109.5	26.7	12.9	3.4
	33.1	28.3	32.4		28.6		
Operating income	112.5	46.0	55.8	121.2	44.3	25.9	11.5
Non-operating income & expenses	P11.0	P5.5	P9.8	178.8	L2.1	-	12.0
	36.3	31.7	38.1		27.2		
Ordinary income	123.5	51.5	65.6	127.4	42.1	55.6	23.4

Y on Y Comparison and Main Variation Factors (Statements of Income)

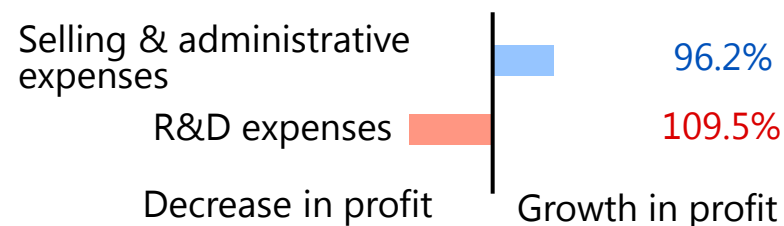


Y on Y comparison

(Unit: B yen)



Progress vs 1H Forecasts**



Main Variation Factors (Y on Y)

- Sales
 - Strong sales growth of strategic products
 - Increase of royalty income of HIV franchise from ViiV
 - Received payments* from Roche regarding S-033188
- SG&A expenses :
 - Selling & administrative expenses : +1.2 B yen
 - › Advance investment for new products
 - R&D expenses : +3.4 B yen
 - › Investment for global development of S-033188
- Non-operating income & expenses
 - Received dividend: Global sales growth of HIV franchise and dividend payment in accordance with the revised contract with ViiV

Main Variation Factors (vs 1H Forecasts**)

- Cost of sales
 - Cost of sales ratio
 - › Improved by 1.9%: Increase in royalty income
 - Cost of sales ratio excluding royalty income***
 - › Improved by 3.6%: Received payments* from Roche regarding S-033188
- SG&A expenses: Total cost management
 - Selling & administrative expenses : (1.9) B yen
 - R&D expenses : +2.6 B yen
 - › Investment for global development of S-033188

Sales by Segments (Consolidated)



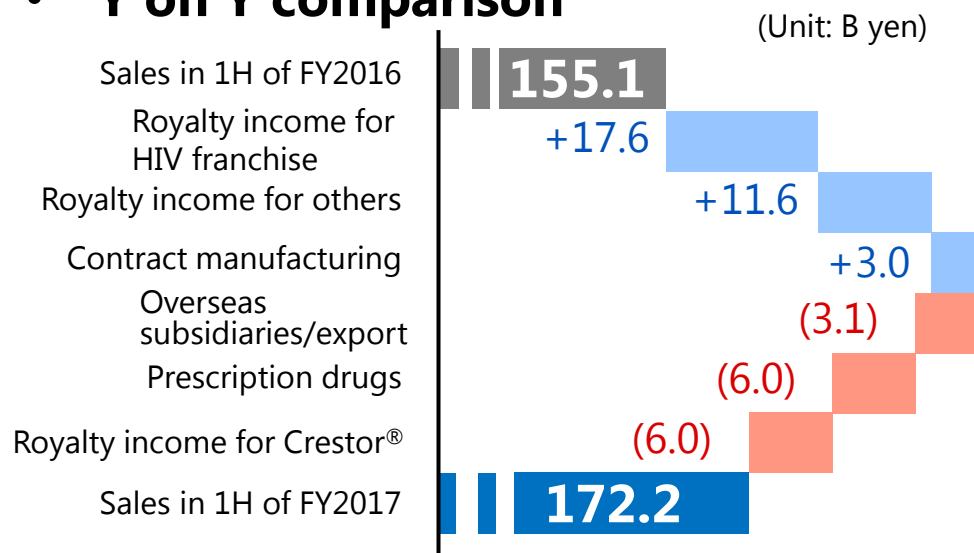
(Unit: B yen)

	FY2017				FY2016	Y on Y	
	Full year Forecasts	1H Forecasts*	1H Results	Progress vs. 1H forecasts (%)	1H Results	Change (%)	Change (B yen)
Prescription drugs	143.9	75.2	73.2	97.3	79.2	(7.6)	(6.0)
Overseas	25.4	12.3	12.2	99.0	15.3	(20.2)	(3.1)
Shionogi Inc.	12.0	6.0	6.0	101.3	9.1	(33.6)	(3.1)
Osphena®	4.6	2.2	2.0	89.3	2.0	(0.7)	(0.0)
Contract manufacturing	15.3	7.9	8.4	107.0	5.4	56.1	3.0
OTC and quasi-drugs	7.5	3.4	3.4	98.1	3.4	(1.5)	(0.1)
Royalty income	145.0	62.3	73.8	118.5	50.6	45.7	23.2
Royalty income for the sales of HIV franchise and Crestor®	125.0	56.4	57.6	102.1	46.0	25.2	11.6
HIV franchise	103.0	45.4	46.2	101.8	28.6	61.3	17.6
Crestor®	22.0	11.0	11.4	103.3	17.3	(34.4)	(6.0)
Others	2.9	1.4	1.2	86.4	1.2	1.2	0.0
Total	340.0	162.5	172.2	106.0	155.1	11.0	17.1

Y on Y Comparison and Main Variation Factors (Sales by Segments)

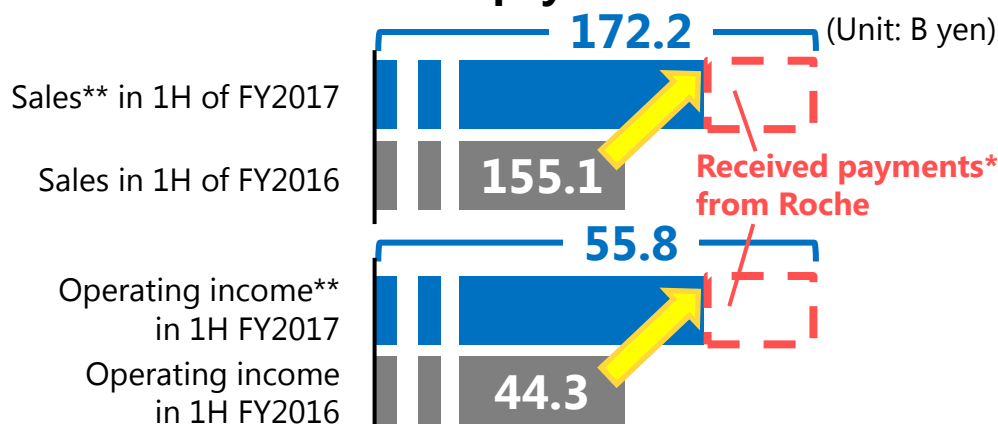


Y on Y comparison



Y on Y comparison

– Effect of received payments* from Roche –



Main Variation Factors

(Y on Y change: + 17.1 B yen, +11.0 %)

- Prescription drugs
 - Sales growth of strategic products
 - Decrease sales due to transfer of marketing rights of long-listed drugs
- Overseas subsidiaries/export
 - Decrease in royalty for authorized generic in the US
- Contract manufacturing
 - Increase in API for dolutegravir
- Royalty income
 - Global sales growth of HIV franchise
 - Received payments* from Roche regarding S-033188 (ca. 10.0 billion yen)

In case of excluding received payments* from Roche

- Sales and Operating income excluding received payments* from Roche
 - Achieved increase in sales and profits vs. 1H FY2016



Negotiated with Roche after obtaining positive results of OwH* study

Revised the original financial scheme to a new one, with a milestone structure that includes payments both for development progression events and for obtaining successful results

More stable financial scheme for both companies which comprehensively takes into consideration the impacts to the fiscal period of each company

- **In this 1H, Shionogi received the first payment (ca. 10.0 B yen) from Roche ahead of schedule**



Maximizing the value of S-033188 globally through a stronger collaboration with Roche

Sales of Prescription Drugs in Japan



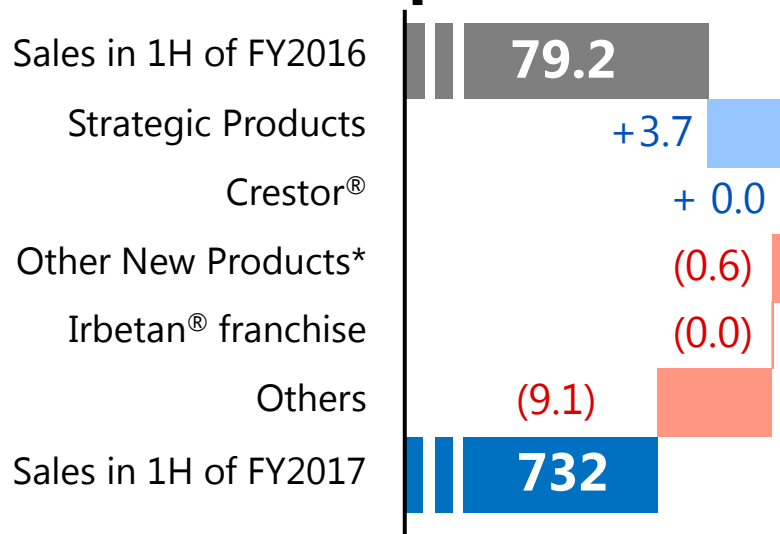
(Unit: B yen)

	FY2017			Progress vs. 1H forecasts (%)	FY2016	Y on Y	
	Full year Forecasts	1H Forecasts*	1H Results		1H Results	Change (%)	Change (B yen)
Cymbalta®	25.3	11.1	11.7	105.5	8.9	31.8	2.8
Intuniv®	0.62	0.29	0.69	238.2	-	-	0.69
Symproic®	0.38	0.08	0.16	203.6	-	-	0.16
Total of Strategic products	26.3	11.5	12.6	109.5	8.9	41.4	3.7
Actair®	0.13	0.05	0.05	111.8	0.03	82.4	0.02
Mulpleta®	0.17	0.08	0.08	99.7	0.06	38.1	0.02
Pirespa®	6.0	3.1	3.1	101.7	3.0	3.3	0.10
OxyContin® franchise	8.9	4.6	4.6	98.0	5.0	(9.3)	(0.47)
Rapiacta®	2.8	0.14	0.07	52.5	0.12	(39.2)	(0.05)
Brightpoc® Flu	0.93	0.09	0.14	145.6	0.09	44.3	0.04
Glashvista®	0.69	0.34	0.15	42.7	0.41	(64.8)	(0.27)
Total of New Products	45.8	19.9	20.7	104.2	17.6	17.5	3.1
Crestor®	36.4	24.7	22.0	89.1	21.9	0.2	0.04
Irbetan® franchise	14.8	7.6	7.8	102.1	7.8	(0.6)	(0.05)
Others	46.9	23.0	22.7	98.6	31.8	(28.6)	(9.1)
Prescription drugs	143.9	75.2	73.2	97.3	79.2	(7.6)	(6.0)

Y on Y Comparison and Main Variation Factors (Sales of Prescription Drugs in Japan)



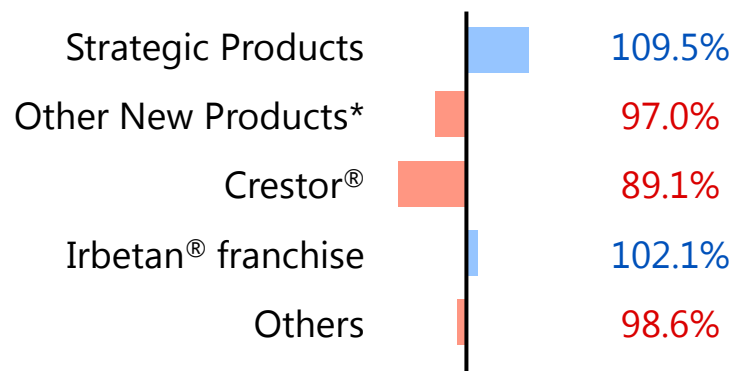
• Y on Y comparison (Unit: B yen)



Main Variation Factors (Y on Y change: (6.0) B yen, (7.6)%)

- Strategic Products
 - Cymbalta®: Sales growth mainly in the pain area
 - Smooth launch of new products such as Intuniv® and Symproic®
 - Intuniv®: Already achieved the sales forecast for full year
- Others
 - Decreased sales due to transfer of marketing rights of long-listed drugs

• Progress vs. 1H forecast**



Main Variation Factors (Y on Y change: (2.0) B yen, (2.7)%)

- Strategic Products
 - Cymbalta®: Exceeded the sales forecast for 1H
 - Intuniv®: Already achieved the sales forecast for full year
 - Symproic®: Exceeded the sales forecast for 1H
- Crestor®
 - Uptake of the authorized generic of Crestor® earlier than expected

Sales Expansion of New Drugs and Negative Impact of First Generic Entries for our Main Products



(Unit: B yen)

New drugs	Full year Forecast	1H Forecast*	1H Results
Growth of new drugs including Cymbalta®	+6.7	+2.2	+3.1
Launch of generics for Crestor® and Irbetan®	(7.2)	+2.5	(0.0)
Long-listed drugs, etc.	Full year Forecast	1H Forecast*	1H Results
Decreased sales of long-listed drugs including Flomox® Decreased stockpiling of Rapiacta®	(8.7)	(5.0)	(5.3)
Transferring the marketing rights for long-listed 24 drugs	(4.9)	(3.8)	(3.8)
Prescription drugs	(14.1)	(4.0)	(6.0)

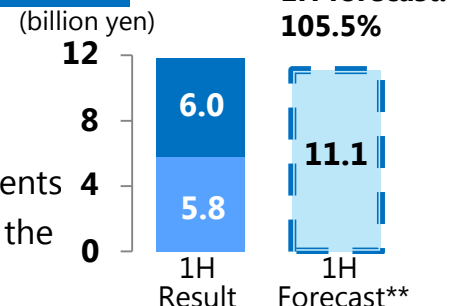
- **New Products: Sales growth led by strategic products**
- **Crestor®: Lower than our forecast due to early uptake of Crestor® AG**
- **Long-listed drugs: On track**

Sales Growth of New Products



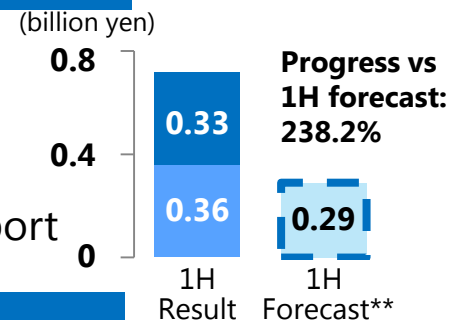
Sales* growth of Cymbalta® in the pain area

- Sales growth in the pain area from the orthopedics and internal medicine departments
 - Positive perception by orthopedists especially in OA
 - Sales growth in CLBP from both the orthopedics and internal medicine departments
 - Smooth accumulation of its long-term safety data in the departments including the psychiatry departments



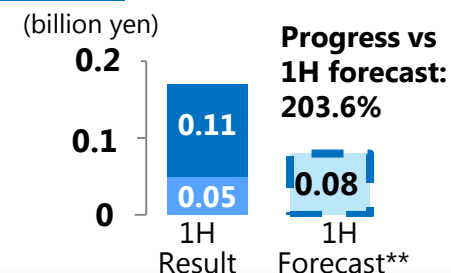
Smooth launch and sales growth of Intuniv® (launched on May 26, 2017) → Already achieved the full year sales forecast

- Strong sales growth as a new treatment option for ADHD
 - Allocation of sales forces with high level of expertise in each region
 - Co-promotion with our partner Shire Japan
- Maximizing overall beneficial impact with complementary social support

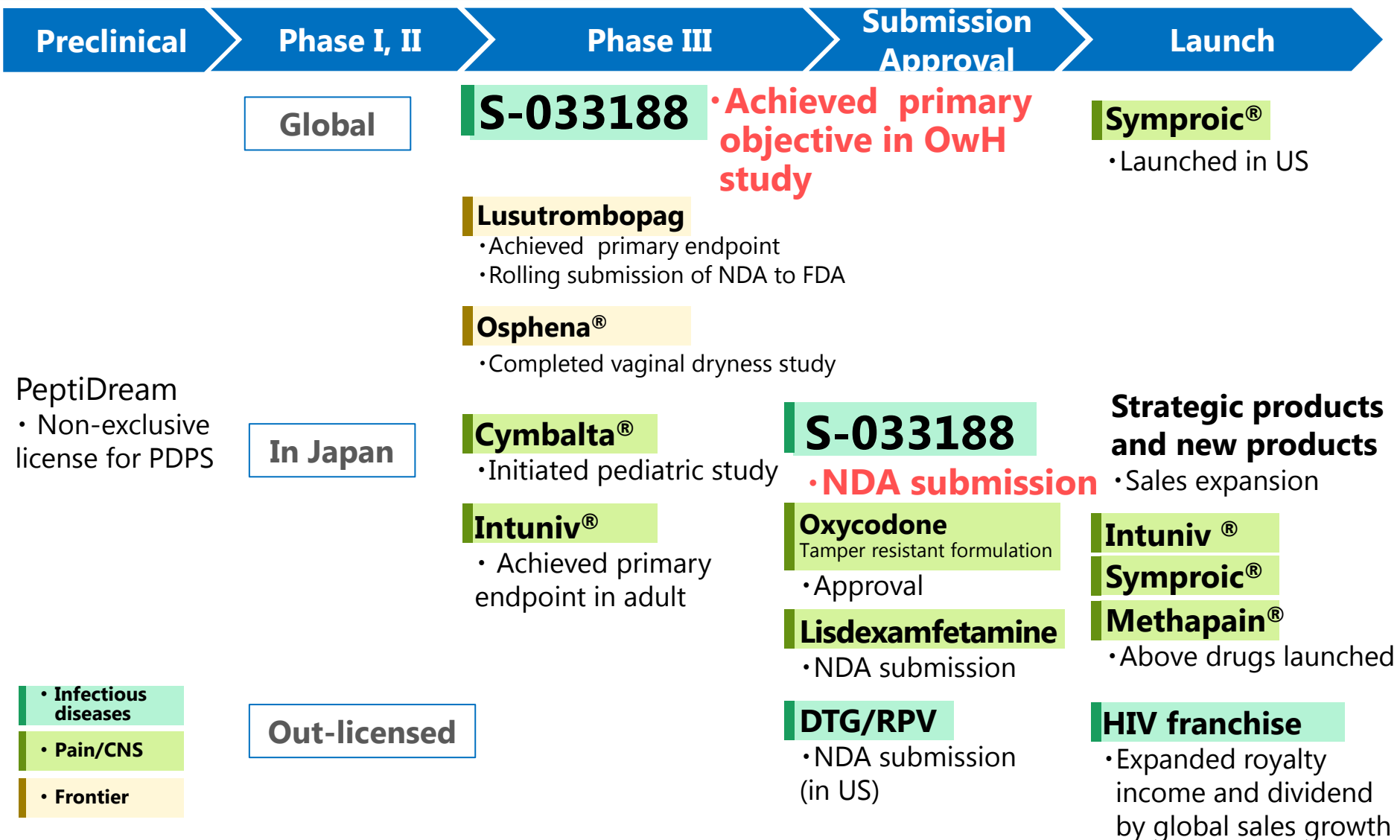


Strengthen our product lineup in the Oxycontin® Family

- Launched Methapain® (Apr. 11, 2017) and Symproic® (Jun. 7, 2017) on schedule
- Symproic® is adopted by nearly 80% of the designated hospitals for cancer in Japan
- Approval of oxycodone tamper resistant formulation



Progress in 1H FY2017*



1. 1st Half FY2017 Financial Results and FY2017 Financial Forecasts

1. 1st Half FY2017 Financial Results
2. FY2017 Financial Forecasts

Shionogi's Business Environment Change and Basic Strategy in FY2017



Shionogi's Business Environment Change in FY2017

- **Sales in Japan**
 - Launches of generic versions of Crestor® and Irbetan®
 - Some reduction in sales since the marketing rights for long-listed drugs have been transferred
- **Cost of sales**
 - No immediate advantage from reduction in sales of long-listed drugs
- **Royalty income**
 - Reduced royalty income from Crestor® from AstraZeneca
- **Total Cost**
 - Increase in pre-launch and marketing costs related to launch of multiple new products

Basic Strategy in FY2017

- While flexibly responding to a challenging business environment, achieve revenue and profit targets by ***strengthening and enhancing the growth trajectory of new products***
- Continue to make strong progress in global R&D to advance new growth drivers and maintain sustainable growth

- **Sales in Japan**

- Crestor®: Lower than our forecast due to launch of Crestor® generics
- Oxycodone: Approval of tamper resistant formulation
- S-033188: NDA submission under *Sakigake fast-track review**

- **Overseas Business**

- Osphena®: Completion of vaginal dryness study
- Symproic®: Launch in US (Oct. 12, 2017)
- Lusutrombopag: Rolling submission of NDA in US (first part Sep. 25, 2017)

- **Total Cost**

- New Financial Scheme with Roche on S-033188
 - > Received the first payment (ca. 10.0 B yen) from Roche ahead of schedule

Key Actions in Response to Shionogi's Business Environmental Changes in 2H FY2017 -1-



- **Sales in Japan**

- Maintaining sales growth of new products
 - > Cymbalta®: Maximizing the value in the pain area
 - > Intuniv®: Providing more information of ADHD and Intuniv® to support further uptake
 - > Oxycontin® family: Preparation for launch of tamper resistant formulation
- Maximizing the value of our anti-flu drugs
 - > S-033188: Preparation for launch
 - > Rapiacta®: Collecting efficacy and safety data in repeat-dose study of patients with underlying respiratory disease

- **Overseas Business**

- Osphena®: Maximizing the value of Osphena® in collaboration with Duchesnay Inc. and preparation for the NDA for vaginal dryness to FDA
- Symproic®: Collaboration with Purdue Pharma L.P. for a smooth launch
- Developing the marketing strategy to maximize the value of cefiderocol and lusutrombopag in hospital/highly-specialized markets

Key Actions in Response to Shionogi's Business Environmental Changes in 2H FY2017 -2-

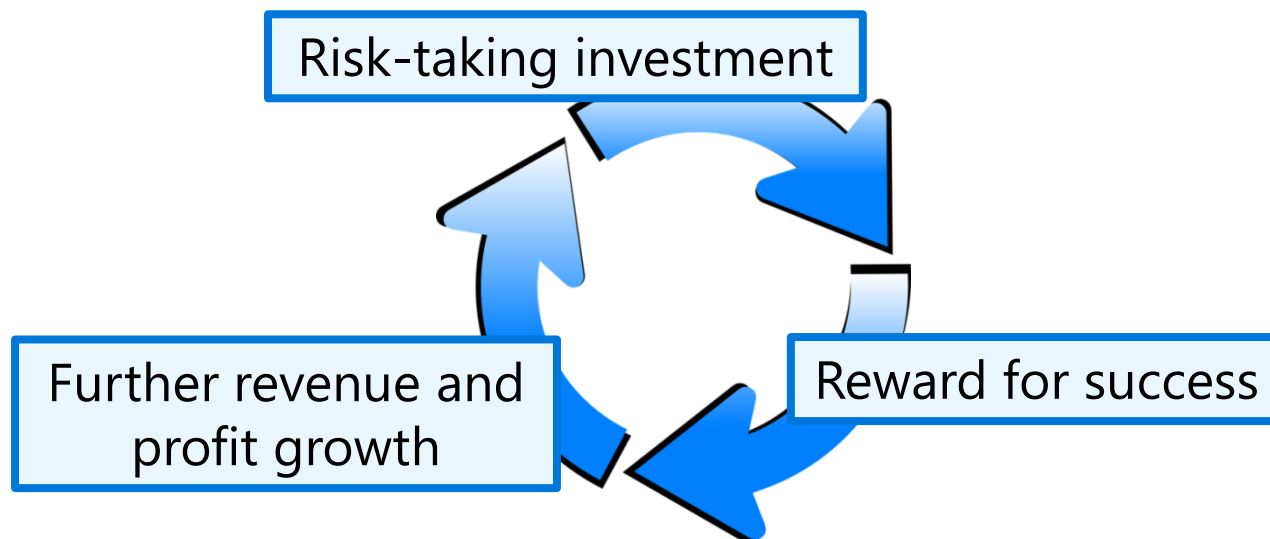


- **Cost Management**

- Shionogi will reinvest the payment* from Roche which was obtained as the result of our proactive investment in the global Phase III study of the highest priority compound S-033188 for further revenue and profit growth

- > **Accelerate R&D for growth drivers, including S-033188**

⇒ Taking actions for further profit growth in addition to achieving the targets for our basic business



Upward Revision of FY2017 Financial Forecasts (Consolidated)



(Unit: B yen)

	FY2017			FY2016	Y on Y	
	Original Forecast	Revised Forecast	Change	Full year Results	Change (%)	Change (B yen)
Sales	340.0	345.0	5.0	338.9	1.8	6.1
Operating income	112.5	113.5	1.0	108.2	4.9	5.3
Ordinary income	123.5	132.0	8.5	123.0	7.3	9.0
Profit attributable to owners of parent	92.0	101.0	9.0	83.9	20.4	17.1

- Upward revisions for all categories of income and profit
- First time for Shionogi to exceed the profit attributable to owners of parent of 100.0 billion yen

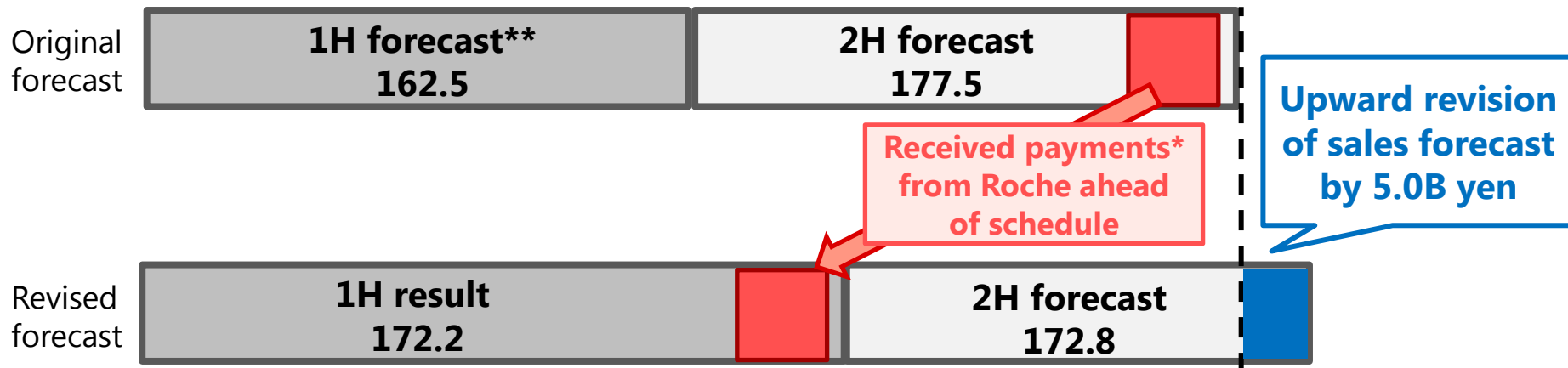
Exchange Rate (average)	FY2017 Forecasts	FY2016 Results
USD (\$) – JPY (¥)	110.0	108.39
GBP (£) – JPY (¥)	140.0	141.62
EUR (€) – JPY (¥)	120.0	118.80

1H Results and Revised Full Year Forecasts of FY2017

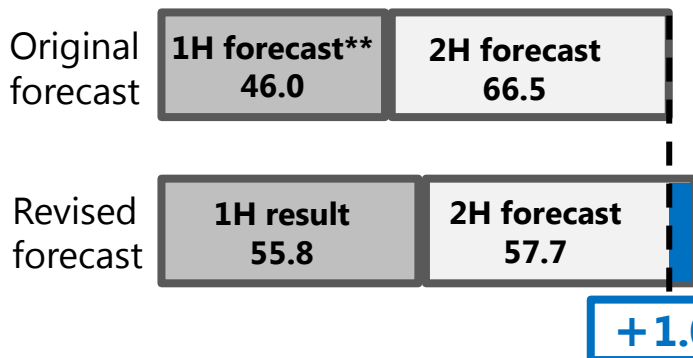


• Sales (340.0→345.0)

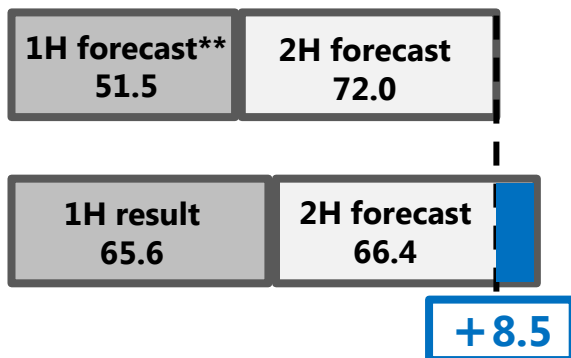
(Unit: B yen)



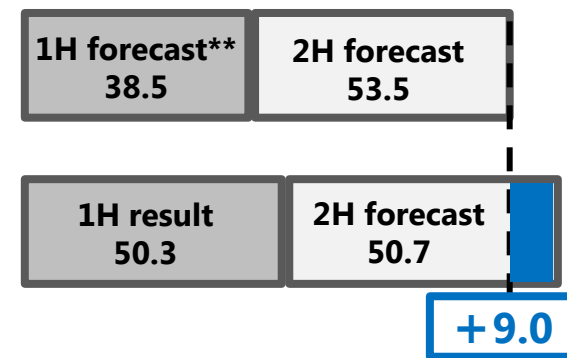
• Operating income (112.5→113.5)



• Ordinary income (123.5→132.0)



• Profit attributable to owners of parent (92.0→101.0)



Revision of Statement of Income (Consolidated)



(Unit: B yen)

	FY2017			FY2016 Full year Results	Y on Y	
	Original Forecast	Revised Forecast	Change		Change (%)	Change (B yen)
Sales	340.0	345.0	5.0	338.9	1.8	6.1
(Royalty* income)	125.0	125.8	0.8	106.3	18.3	19.5
	22.5 [35.6]	22.2 [34.9]		23.0 [33.4]		
Cost of sales	76.5	76.5	-	77.8	(1.6)	(1.3)
Gross profit	263.5	268.5	5.0	261.1	2.8	7.4
SG&A expenses	44.4	44.9		45.1		
	151.0	155.0	4.0	152.9	1.4	2.1
Selling & administrative expenses	29.1	29.0		27.5		
	99.0	100.0	1.0	93.0	7.5	7.0
R&D expenses	15.3	15.9		17.7		
	52.0	55.0	3.0	59.9	(8.2)	(4.9)
Operating income	33.1	32.9		31.9		
	112.5	113.5	1.0	108.2	4.9	5.3
Non-operating income & expenses	P11.0	P18.5	7.5	P14.9	24.6	3.6
Ordinary income	36.3	38.3		36.3		
	123.5	132.0	8.5	123.0	7.3	9.0

Main
reasons

1. Selling & administrative expenses +1.0 B yen: Increase of expenses regarding C & O and SI
2. R&D expenses +3.0 B yen: Increase of expenses in the global Phase III study of S-033188
3. Increased dividend from ViiV +7.5 B yen: Global sales growth of HIV franchise

Revision of Sales by Segments (Consolidated)



(Unit: B yen)

	FY2017			FY2016	Y on Y	
	Original Forecast	Revised Forecast	Change	Full year Results	Change (%)	Change (B yen)
Prescription drugs	143.9	144.1	0.2	158.0	(8.8)	(13.9)
Overseas	25.4	25.5	0.1	29.2	(12.7)	(3.7)
Shionogi Inc.	12.0	11.2	(0.8)	17.9	(37.3)	(6.7)
Osphena [®]	4.6	3.9	(0.7)	4.7	(17.8)	(0.8)
Contract manufacturing	15.3	15.4	0.1	12.1	27.0	3.3
OTC and quasi-drugs	7.5	7.0	(0.5)	6.8	3.1	0.2
Royalty income	145.0	150.3	5.3	115.7	30.0	34.7
Royalty income for the sales of HIV franchise and Crestor [®]	125.0	125.8	0.8	106.3	18.3	19.5
HIV franchise	103.0	103.3	0.3	73.3	40.9	30.0
Crestor [®]	22.0	22.5	0.5	33.0	(31.8)	(10.5)
Others	2.9	2.7	(0.2)	17.1	(84.4)	(14.4)
Total	340.0	345.0	5.0	338.9	1.8	6.1

Revision of Sales of Prescription Drugs in Japan



(Unit: B yen)

	FY2017			FY2016		Y on Y	
	Original Forecast	Revised Forecast	Change	Full year Results	Change (%)	Change (B yen)	
Cymbalta®	25.3	26.0	0.6	19.0	36.5	6.9	
Intuniv®	0.62	2.0	1.4	-	-	2.0	
Symproic®	0.38	0.60	0.22	-	-	0.6	
Total of Strategic products	26.3	28.6	2.3	19.0	50.3	9.6	
Actair®	0.13	0.13	(0.0)	0.08	66.7	0.1	
Mulpleta®	0.17	0.17	0.0	0.13	32.2	0.0	
Pirespa®	6.0	6.0	(0.0)	5.8	2.0	0.1	
OxyContin® franchise	8.9	8.9	0.0	9.7	(8.1)	(0.8)	
Rapiacta®	2.8	2.8	0.0	2.9	(3.2)	(0.1)	
Brightpoc® Flu	0.93	0.92	(0.0)	1.0	(6.6)	(0.1)	
Glashvista®	0.69	0.31	(0.4)	0.55	(43.9)	(0.2)	
Total of New Products	45.8	47.7	1.9	39.1	22.0	8.6	
Crestor®	36.4	34.4	(2.0)	43.1	(20.2)	(8.7)	
Irbetan® franchise	14.8	14.8	0.0	15.3	(3.1)	(0.5)	
Others	46.9	47.2	0.3	60.5	(22.0)	(13.3)	
Prescription drugs	143.9	144.1	0.2	158.0	(8.8)	(13.9)	

Sales of Prescription Drugs in Japan (Revised)



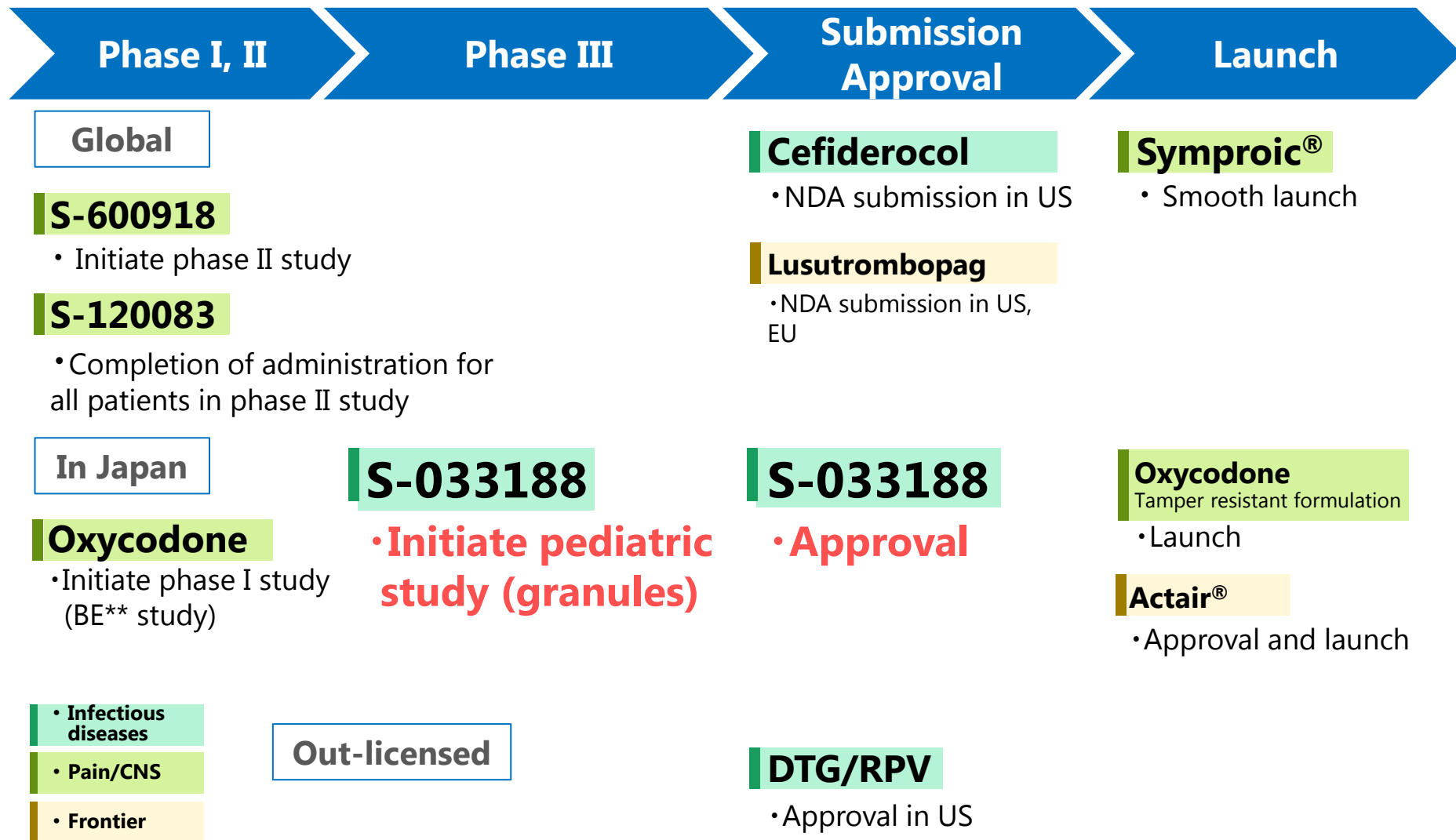
Main variation factors in sales of prescription drugs in Japan

New drugs	1H Results	2H Revised Forecast	Full year Revised Forecast
Growth of new drugs including Cymbalta®	+3.1	+5.5	+8.6
Launch of generics for Crestor® and Irbetan®	(0.0)	△9.2	△9.2
Long-listed drugs, etc.	1H Results	2H Revised Forecast	Full year Revised Forecast
Decreased sales of long-listed drugs including Flomox® Decreased stockpiling of Rapiacta®	△5.3	△3.1	△8.4
Transferring the marketing rights for 24 long-listed drugs	△3.8	△1.2	△4.9
Prescription drugs	△6.0	△7.9	△13.9

(Unit: B yen)

- **Decreased sales of Crestor® and Irbetan® due to the launch of generic drugs will be compensated for by the growth of new drugs including Cymbalta®, Intuniv®, Symproic®, etc.**
- **Continue to focus on new drugs, not depending on the long-listed drugs**

Objectives for 2H FY2017*



2. Maximizing Growth Drivers to Address Societal Needs

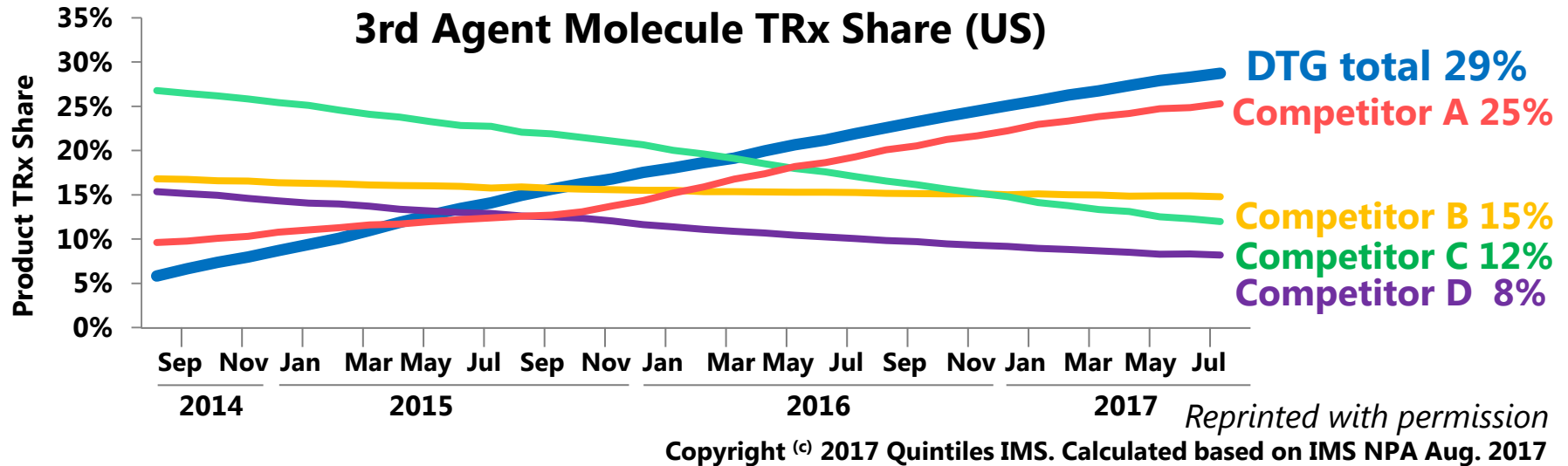
-Contributing to a more vigorous society-

1. Growth Drivers Providing Revenue Base
 - HIV franchise
2. Next Growth Drivers
 - S-033188 and cefiderocol
 - Cymbalta® and ADHD franchise

Growth and Progress of HIV Franchise



Trend of the numbers of prescriptions in US (TRx Share)



Launch schedule for new additions to integrase inhibitor franchise

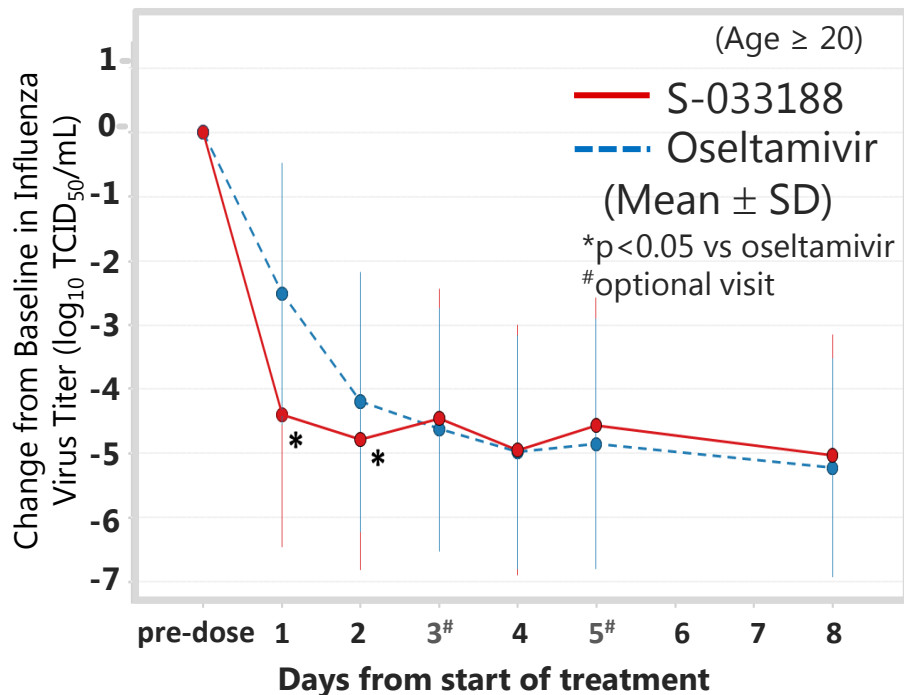
2018	2019	2020	2020 +
			Future combinations
DTG/RPV NDA submission in US and EP	DTG + 3TC Phase III	CAB + RPV (long-acting injection) Phase III	CAB for HIV prevention (long-acting injection) Phase III

- DTG/RPV: NDA submission in US and EU in Jun. 2017
 - Expected approval by the end of 2017

S-033188: Results for OwH study -1-



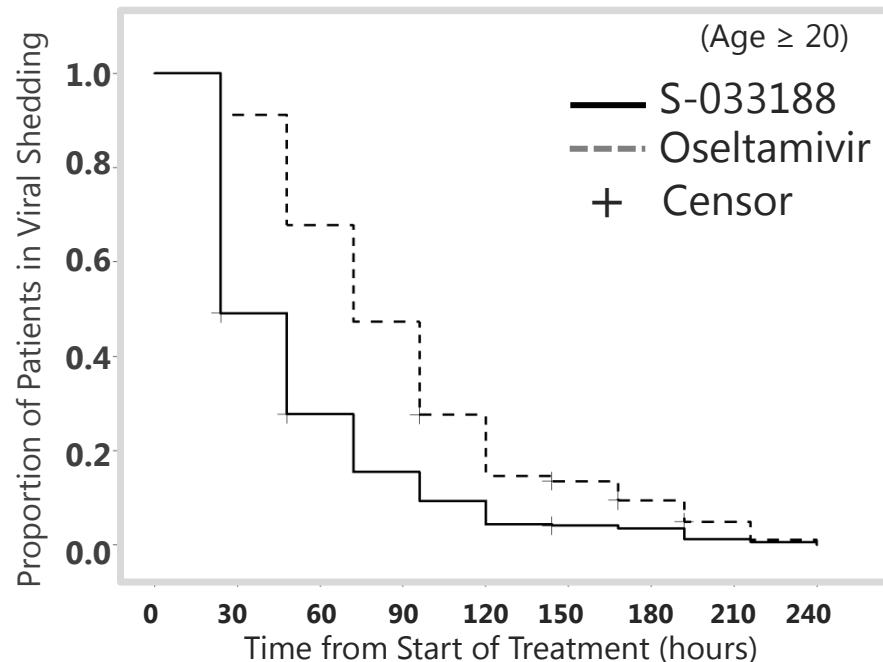
Reduction of virus titer



S-033188(n)	338	333	87	331	71	335
Oseltamivir(n)	346	344	105	335	78	339

**Stronger antiviral effect
against influenza virus
compared to oseltamivir**

Time to cessation of viral shedding

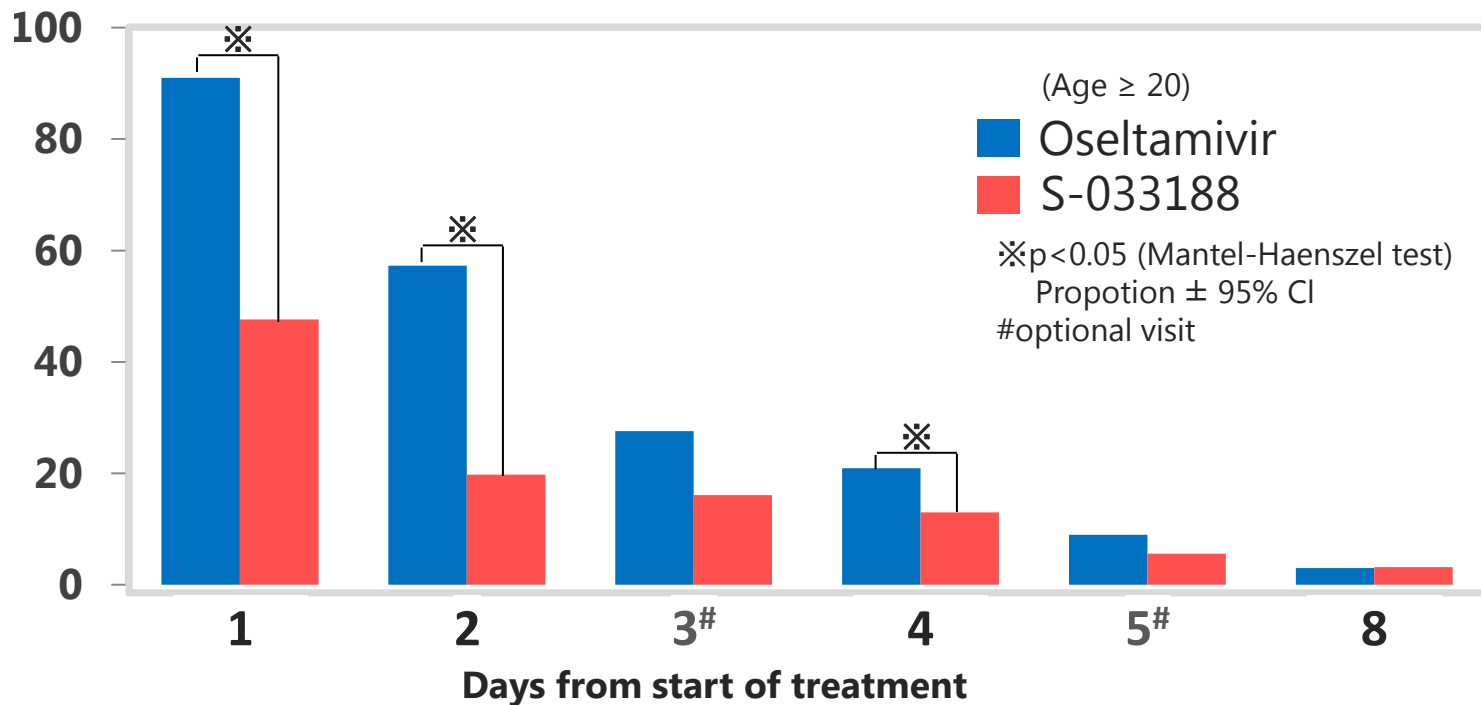


	S-033188 N=348	Oseltamivir N=355
Median (95% CI), hours	24.0 (24.0, 48.0)	72.0 (72.0, 96.0)
Difference vs placebo (95% CI [***]), hours	-48.0 (-72.0, -24.0)	
Stratified Generalized Wilcoxon test vs Oseltamivir p-value	< .0001	

S-033188: Results for OwH study -2-



Proportion of Patients Positive for Influenza Virus Titer(%)



S-033188 (n)	338	333	87	331	71	335
Oseltamivir (n)	346	344	105	335	78	339

- S-033188 showed a strong antiviral effect against influenza virus
- From the day after taking medicine, proportion of patients positive for influenza virus titer significantly decreased compared to oseltamivir

NDA submission under *Sakigake fast-track review** (Oct. 25, 2017)

- **Generic name: baloxavir marboxil**
- **Assured adherence**
 - Stronger antiviral effect and safer profile compared to oseltamivir
 - Only a single oral dose both for adults and children
- **Expected to suppressing virus transmission and general aerosol-mediated infection in households, schools or workplaces**
- **Addressing future flu pandemics**
 - Strong antiviral effect against various influenza subtypes including avian influenza (H5N1 or H7N9) and viruses resistant to existing anti-flu drugs



**Accelerating global development
by strengthening collaboration with Roche**

Cefiderocol: Multidrug-resistant Gram-negative bacterial infections



Threat of AMR (Antimicrobial Resistance)

- Impact of AMR by 2050*
 - The number of deaths is estimated to be over 10 million globally
 - Impact on GDP is estimated to be \$100 trillion
- Cefiderocol is receiving global attention as a drug candidate to treat infections caused by all three bacteria classified as critical priority by WHO
 - *Pseudomonas aeruginosa*, *Acinetobacter baumannii*, and *Enterobacteriaceae*
- R&D for new anti-microbial agents is supported globally
 - Generating Antibiotics Incentives Now Act (GAIN Act) in US

Global Development of Cefiderocol

- Preparation of NDA submission for cUTI in US
 - Cefiderocol is designated as QIDP by FDA in US
 - > Priority review and fast track designation
 - > Extension of patent/marketing exclusivity will be given after approval
- Two global phase III studies are ongoing
 - (1) Carbapenem-resistant study
 - (2) HAP/VAP study

Cymbalta®: Pediatric Study for Cymbalta®



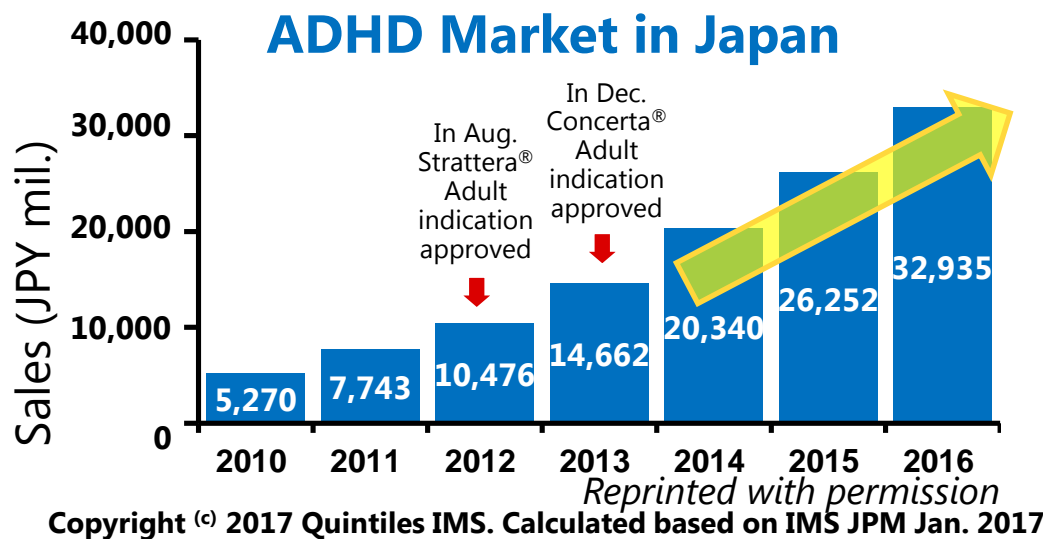
Jul. 2016 Therapeutic guidelines were revised and recommended appropriate treatment by antidepressants in the US



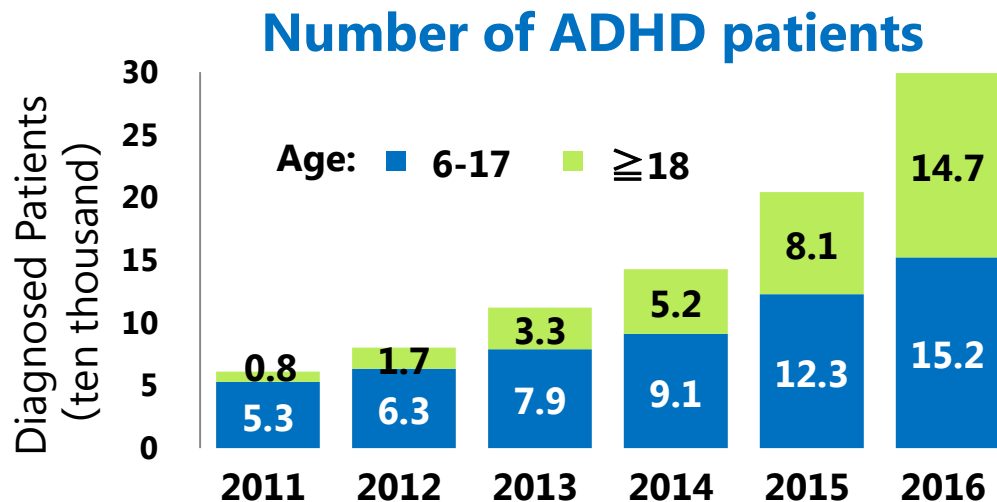
Jul. 2016 Therapeutic guidelines of the Japan Society of Mood Disorders (2nd Edition) were published

- Rising medical need for treatment of pediatric depression with medicines
- No medicines indicated for treatment of depression and depressive symptoms in children in Japan
- **Shionogi began clinical trials of Cymbalta® to determine optimal dosage and administration for children and adolescent use (Jul. 2017)**
- Reexamination period of Cymbalta® was extended (Aug. 2017)

Trend of ADHD Market in Japan



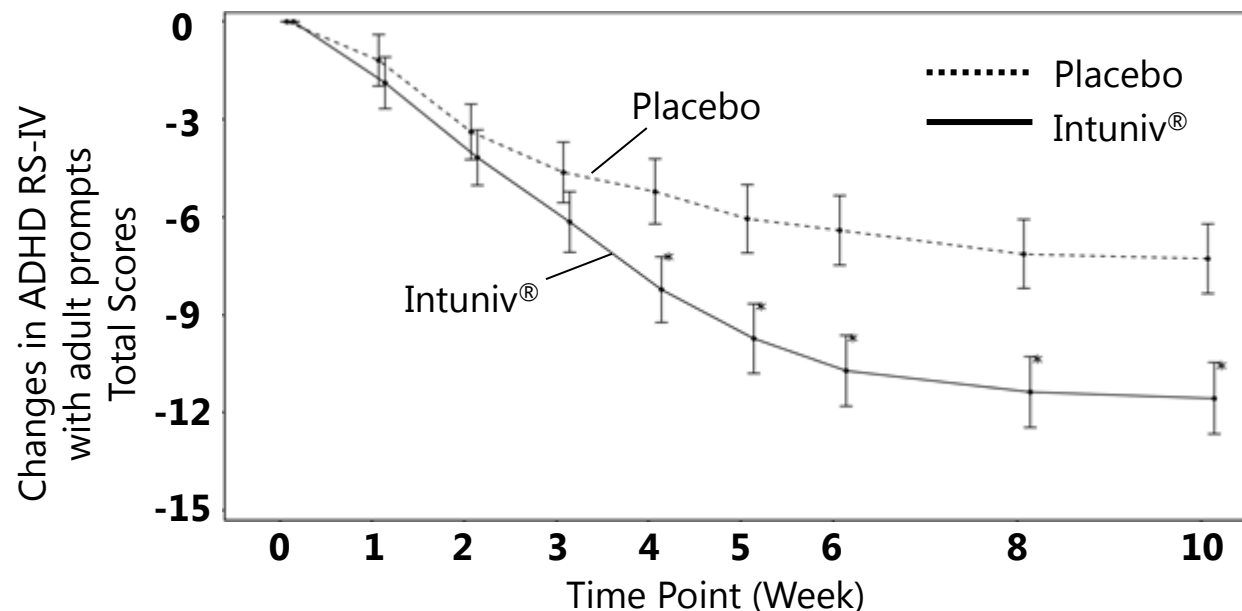
Sales are increasing 30% or more* annually



Adult patients
Y on Y increase (2015→2016)
+81%

Pediatric patients
Y on Y increase (2015→2016)
+24%

Intuniv®: Phase III Study in Adults



Significant improvement compared to placebo

- First positive results of Intuniv® in adult patients in the world
- Continue to accumulate long-term efficacy and safety data
- Targeting approval of additional indication for adult ADHD in FY2019

Treatment Group	Baseline		Week10				
	Observed Value		Observed Value		Change from baseline	vs Placebo	
	n	Mean (SD)	n	Mean (SD)	LS Mean (SE)	Difference of LS Mean [95% CI]	p-value
Placebo	100	31.70 (6.83)	93	23.55 (10.29)	-7.27 (1.07)		
Intuniv®	100	31.45 (5.92)	79	19.53 (9.45)	-11.55 (1.10)	-4.28 [-6.67, -1.88]	0.0005

3. Addressing Further Societal Needs to Achieve Sustainable Growth

History and Future Perspective of Medicine



Small Molecules

Antibodies



Specific Peptides

Small Molecules

1899

Antibodies

2000s

- Target proteins for developing antibody drugs are limited
- It's getting more and more difficult to obtain active antibody drug candidates

New Modalities

(Peptides, Oligonucleotides, Cell therapy, etc.)

2020s

Balancing Innovation and Health Economics

	Small Molecules	Specific Peptides	Antibodies
Molecular weight	-500	500 - 2,000	ca. 150,000
Specificity	Mid – High	High	High
Side effect	Low - Mid	Low	Low
Intracellular target	Achievable	Achievable	Not achievable
Manufacturing costs	Low	Low	High
Oral dosing	Easy	Possible	Difficult

Innovation

Drug discovery for intracellular targets which can not be reached by antibodies



Health economics

Low cost manufacturing allows flexibility to meet health economic demands

History of Shionogi's Peptide Drug Discovery



Utilizing our know-how in small molecule drug discovery and manufacturing of proteins/peptides to meet medical needs

- In 1990: Launch of Immunomax[®]- γ (protein drug)
- In 1992: Launch of Immunase[®] (protein drug)
- R&D derived from protein or peptide: NS75A/NS75B (GnRH* antagonist), S-0373 (TRH** mimetic non-peptide compound), etc.



- **In 2017: Several drug candidates of peptide or nucleic acid in our pipeline**

Preclinical	Phase I	Phase II	Phase III
Peptide candidate	Global	S-488210 Head and neck squamous cell carcinoma	
Botulinum toxin candidate		S-588410 Bladder cancer	
Nucleic acid candidate	In Japan	S-588410 Bladder cancer	S-588410 Esophageal cancer

Improving Productivity with New Platforms for Drug Discovery



Grow sustainably as a drug discovery-based pharmaceutical company beyond 2020



Activating drug discovery process by strengthening technology platforms to allow us to sustainably generate development candidates with high productivity

Future Novel Platform

Current

Drug discovery platform
centered on small molecules



Future

Novel
platforms
incl. peptides

**Maximizing our strength
through strategic alliances**

Collaboration with PeptiDream Inc.



1. Feb. 5, 2016: Research collaboration for 4 targets

→ Achieved its first milestone in Mar. 2017
(Obtained a high-activity hit peptide)

2. Jun. 12, 2017: Non-exclusive license for PDPS*

- The first Japanese company to in-license PDPS* technology
- The productivity of drug discovery can be dramatically improved by widely utilizing this technology together with Shionogi's small molecular drug discovery capability

3. Sep. 1, 2017: Established a new CMO (PeptiStar) PeptiStar

- R&D, manufacturing, sales and marketing for API** of specific peptides



Ongoing Collaborative Research with PeptiDream Inc.



Pursue specific peptides as a novel class of small molecule products, leveraging and expanding our small molecule drug discovery skills

Target validation

Hit screening

Hit to lead

Lead optimization

FIC/LIC compounds

PJ-4

PJ-2,3

PJ-1

Certified high-activity peptide "hit" in Mar. 2017

Successfully found high-activity peptides in a very short period for very difficult targets by small molecule drug discovery approach

Target milestones:

- By 2020: Discover drug candidates
- By 2021: Phase I

About UMN Pharma

- Company Name: UMN Pharma Inc.
 - Incorporated in 2004 as a pharmaceutical venture targeting for Unmet Medical Needs
 - Listed on the Tokyo Stock Exchange MOTHERS market in 2012
- Paid in capital: 217 million yen (As of Sep. 30, 2017)
- Location: Yokohama Headquarters, Yokohama Research Center, Akita Laboratory, Akita Manufacturing Facilities
- Employees : 23 including 16 researchers (As of Sep. 30, 2017)
- Main Business: **Cutting-edge original vaccine manufacturing platform**
 1. R&D of next generation biomolecules (mainly various anti-infectious disease vaccines)
 - Seasonal Influenza vaccine (UMN-0502)
 - Norovirus VLP* single vaccine (UMN-2002)
 - Rotavirus VLP* single vaccine (UMN-2001), etc.
 2. Contract manufacturing of biopharmaceuticals (early to mid stage of development)

Significance of the Collaboration with UMN Pharma



Significance and expected outputs from the collaboration

• **UMN Pharma: Strengths and features**

- Platform to manufacture recombinant protein antigens which will be the core of next-generation vaccines
- Development of anti-infective vaccines
- R&D facilities covering early to mid stage of development

• **Shionogi: Strengths and features**

- R&D for infectious diseases
- R&D of small to mid sized molecules
- Focused on development of novel drug discovery platforms
- Development of in-house adjuvants

Synergy: UMN's vaccine platform meets Shionogi's strategy for infectious diseases

- Acquiring new strengths for influenza, RSV*, herpes viruses, norovirus etc.
- Synergistic benefit by applying our in-house adjuvants
- Addressing emerging and re-emerging infectious diseases

• Funding scheme**

- 3rd party allocation: c.a. 170 million yen
- Convertible bonds: c.a. 1.43 billion yen
- Certain milestone payments

• **Short term goals**

- Establishment of basic technology platform supporting future global business
- Securing manufacturing facilities for commercial protein drugs

• **Mid-Long term goals**

- Expanding our product lineup from prevention to treatment
- Strengthening infectious disease pipeline

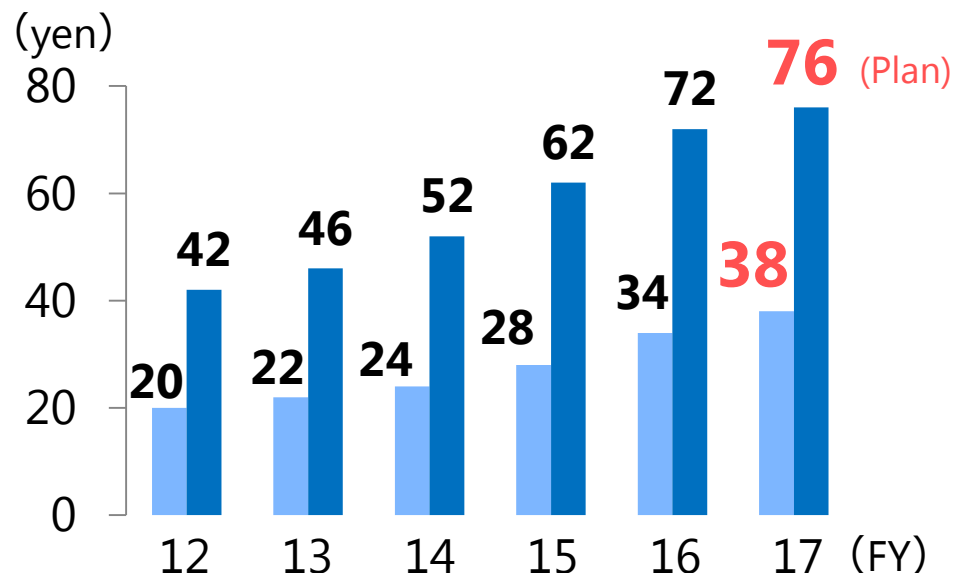
Shareholder Return

Dividend Forecasts



	Dividend per share			DOE	ROE
	half-year	year-end	annual		
FY2016	34.00	38.00	72.00	4.5%	16.3%
FY2017	38.00	(Plan) 38.00	(Plan) 76.00	(Estimate) 4.3%	(Estimate) 17.8%

Planning continuous increases in both half-year dividends and annual dividends



Appendix

- Shareholder Return
- Pipeline
- Target Milestones for Launch of New Products
- S-033188: Summary for OwH study
- Activities of the *Office for Children's Bright Future*

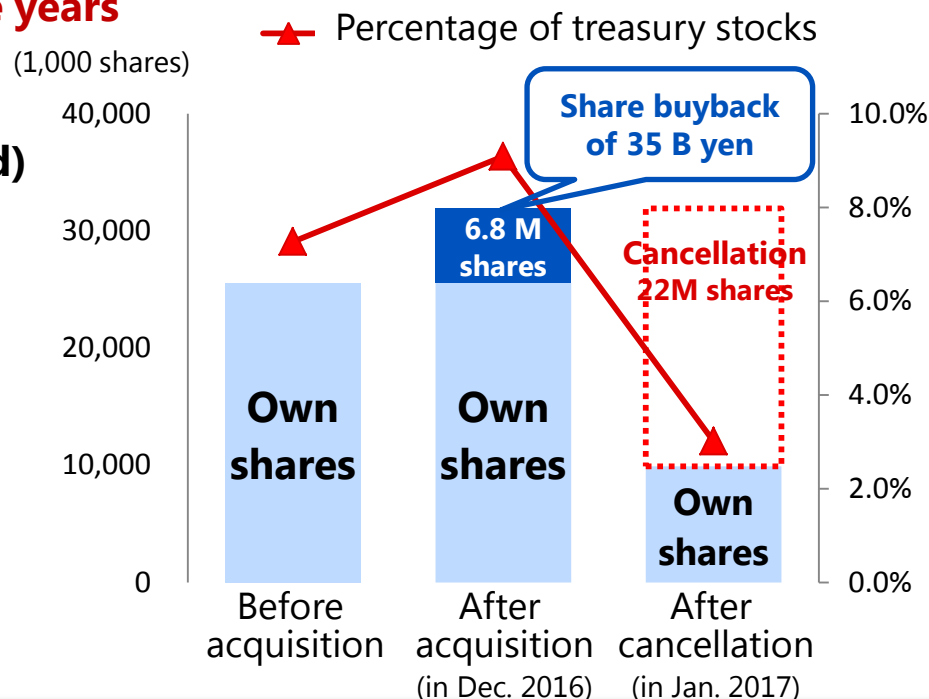
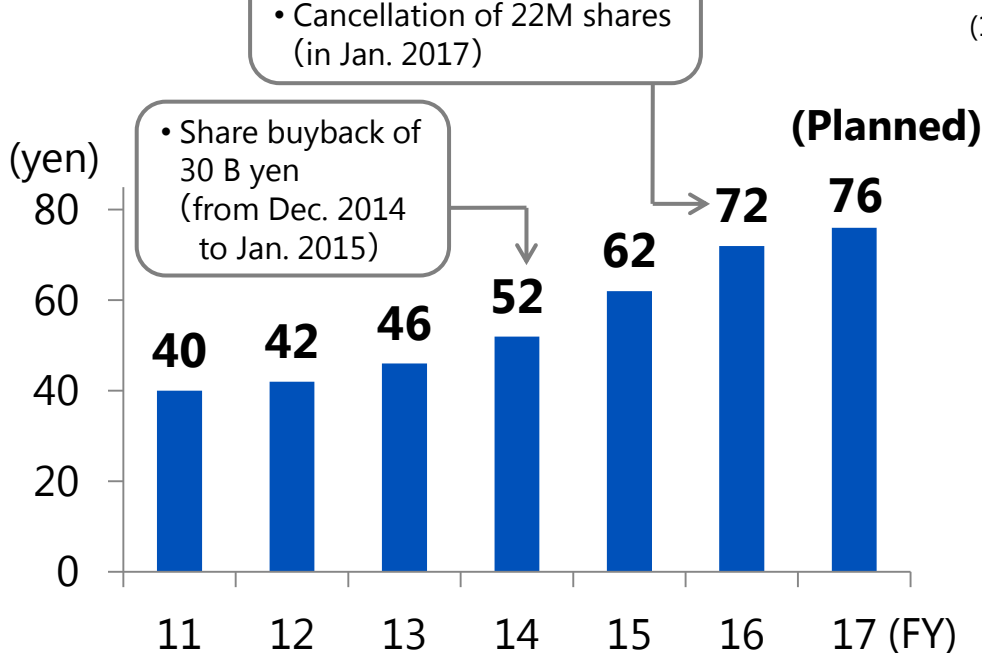
Shareholder Return Policy of Shionogi

- Maximize enterprise value by balancing three key factors: return to shareholders, investment for further growth and strategic opportunities
- Sharing our mid- to long-term profit growth with our shareholders by increasing returns as appropriate by share buyback, cancellation of treasury stocks, and elimination of cross-share holdings

Planning to increase dividend for six consecutive years

- Share buyback of 35 B yen (from Nov. to Dec. 2016)
- Cancellation of 22M shares (in Jan. 2017)

- Share buyback of 30 B yen (from Dec. 2014 to Jan. 2015)



Target Milestones for FY2017 (as of Oct. 2017)



Areas	Product	As of Apr. 1, 2017		Target for FY2017
Infectious disease	Cefiderocol Multidrug-resistant Gram-negative bacterial infections	Global: Preparation for NDA submission		US: NDA submission
	S-033188 (baloxavir marboxil) Influenza virus infection	Global: Phase III	Japan: Phase III (pediatric)	Japan: NDA submission
Pain/CNS	Intuniv® ADHD (pediatric)	Japan: NDA submission		Japan: Launch
	Symproic® Opioid-induced constipation	Japan: Approval		Japan: Launch
	Symproic® Opioid-induced constipation	US: Approval		US: Launch
	Oxycodone Treatment of moderate to severe chronic pain	Japan: NDA submission		Japan: Approval
	Oxycodone Tamper resistant formulation	Japan: NDA submission		Japan: Approval
	Lisdexamfetamine ADHD (pediatric)	Japan: Preparation for NDA submission		Japan: NDA submission
	Cymbalta® Depression (pediatric)	-		Japan: Phase III
	S-600918 Neuropathic pain	Japan: Phase I		Phase II (regions to be determined)
Frontier	Lusutrombopag Thrombocytopenia associated with chronic liver disease	Global: Phase III		US and EU: NDA submission
	Actair® (Pediatric allergic rhinitis caused by house-dust mite allergen)	Japan: NDA submission		Japan: Approval

Pipeline (as of Oct. 2017)



Preclinical	Phase I	Phase II	Phase III	Filed
	Global	Cefiderocol Multidrug-resistant Gram-negative bacterial infections S-120083 Inflammatory pain S-707106 Type2 diabetes S-488210 Head and neck squamous cell carcinoma epertinib Malignant tumor S-588410 Bladder cancer	S-033188 (baloxavir marboxil) Influenza virus infection Cefiderocol Multidrug-resistant Gram-negative bacterial infections Lusutrombopag Thrombocytopenia	Naldemedine (EU) Opioid-induced constipation
Antibody drug candidate against pseudomonas Central neuropathic pain Obesity LCM inhalation	S-117957 Insomnia S-237648 Obesity			
	In Japan	Cefiderocol Multidrug-resistant Gram-negative bacterial infections S-237648 Obesity S-525606 Allergic rhinitis caused by Japanese cedar allergen S-588410 Bladder cancer	Cefiderocol Multidrug-resistant Gram-negative bacterial infections Intuniv® ADHD (adult) Cymbalta® Depression (pediatric) S-588410 Esophageal cancer	S-033188 (baloxavir marboxil) Influenza virus infection S-033188 (baloxavir marboxil) Influenza virus Infection (pediatric) Oxycodone Moderate to severe chronic pain Oxycodone Tamper resistant formulation Lisdexamfetamine ADHD (pediatric) Actair® Pediatric patients with perennial allergic rhinitis
Out-licensed	GSK3342830 Multidrug-resistant Gram-negative bacterial infections		DTG+3TC Treatment for HIV infection CAB LAP Prevention for HIV infection CAB + RPV LAP Treatment for HIV infection Janssen/Shionogi BACE inhibitor Alzheimer's disease Osphena® Vaginal dryness associated with postmenopausal VVA	DTG/RPV Treatment for HIV infection Infectious diseases Pain/CNS Metabolic disorder Frontier
Janssen/Shionogi Project compound Alzheimer's disease				

Target Milestones for Launch of New Products

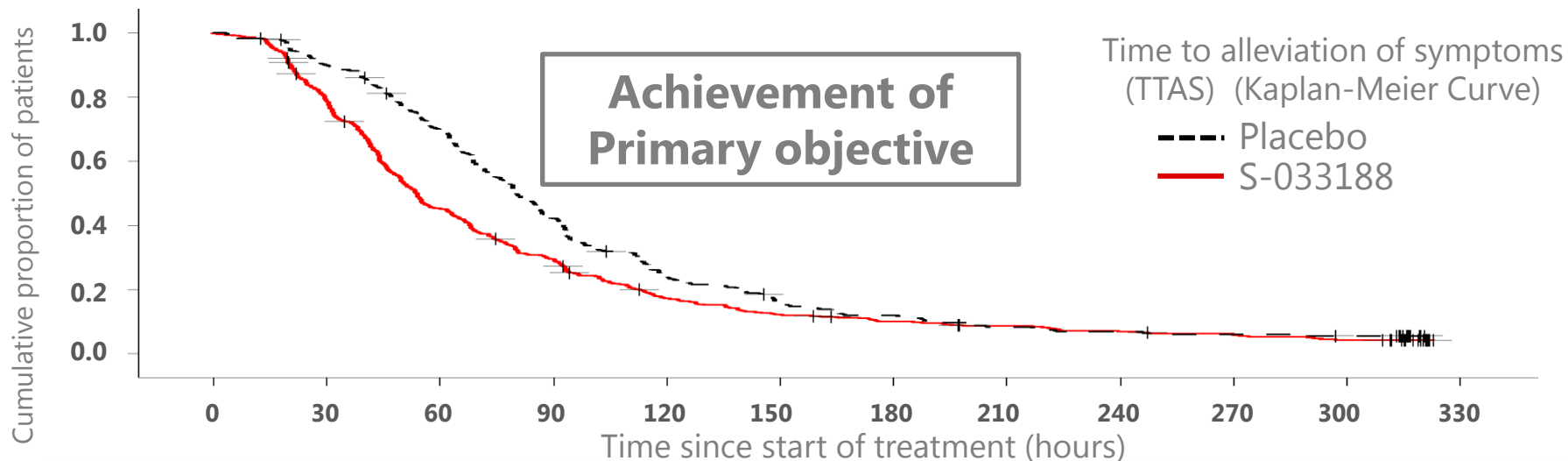


FY2017	FY2018	FY2019
Japanese business		
Symproic® Intuniv® ADHD (pediatric) Oxycodone Tamper resistant formulation Actair® Pediatric patients with perennial allergic rhinitis	S-033188 (baloxavir marboxil) Lisdexamfetamine	Intuniv® ADHD (adult)
Overseas business		
Symproic® (US)	Cefiderocol Osphena® Vaginal dryness associated with postmenopausal VVA Lusutrombopag Naldemedine (EU)	
Global out-licensed products		
	DTG + RPV	DTG + 3TC

S-033188: Summary for OwH study



- **Time to alleviation of symptoms (TTAS)**
 - S-033188 demonstrated a statistically significant reduction in TTAS compared to placebo and achieved the primary objective.
- **Viral titer**
 - S-033188 demonstrated statistically significant differences, in the early post-treatment period, both in the reduction of virus titer, and in the duration of viral shedding, compared to either placebo or oseltamivir.
- **Safety**
 - S-033188 was well tolerated. The incidence of treatment-related adverse events in the S-033188 treatment arm was comparable to that in the placebo arm.
 - The S-033188 treatment arm had statistically significantly fewer treatment-related adverse events compared to the oseltamivir arm.



Activities of the *Office for Children's Bright Future*



Aiming to create vigorous society:
Providing patients with developmental disabilities and/or central nervous system diseases with life-improving support



Photo 1



Photo 2

Main activities in 2017

- Jan. 25 Partnership with Osaka Prefectural Government
- Apr. 1 Sponsorship with Hyogo prefecture's event of World Autism Awareness Day
- Apr. 2 Blue Lighting of Osaka Castle on World Autism Awareness Day (Photo 1)
- Apr. 7 Co-sponsored Symposium on Developmental Disorders (Photo 2)
- Aug. 6 and 9 Training program for child care workers and kindergarten teachers
- Aug. 9 *Medicines Lab* (hands-on learning: tablet making and dissolution of drug) for children to understand contribution of medicines to better health
- Sep. 7 and Oct. 5 Lecture on work strategies of persons with hearing difficulties in special support schools
- Sep. 26 Introduction to Parents Program

Forward-Looking Statements

- Forecast or target figures in this material are neither official forecasts of earnings and dividends nor guarantee of target, achievement and forecasts, but present the midterm strategies, goals and visions. Official earnings guidance should be referred to in the disclosure of the annual financial report (*kessan tanshin*) in accordance with the rules set by Tokyo Stock Exchange.
- Materials and information provided during this presentation may contain so-called “forward-looking statements”. These statements are based on current expectations, forecasts and assumptions that are subject to risks and uncertainties which could cause actual outcomes and results to differ materially from these statements.
- Risks and uncertainties include general industry and market conditions, and general domestic and international economic conditions such as interest rate and currency exchange fluctuations. Risks and uncertainties particularly apply with respect to product-related forward-looking statements. Product risks and uncertainties include, but are not limited to, technological advances and patents attained by competitors; challenges inherent in new product development, including completion of clinical trials; claims and concerns about product safety and efficacy; regulatory agency’s examination period, obtaining regulatory approvals; domestic and foreign healthcare reforms; trend toward managed care and healthcare cost containment; and governmental laws and regulations affecting domestic and foreign operations.
- For products that are approved, there are manufacturing and marketing risks and uncertainties, which include, but are not limited to, inability to build production capacity to meet demand, unavailability of raw materials, and failure to gain market acceptance.
- Shionogi disclaims any intention or obligation to update or revise any forward-looking statements whether as a result of new information, future events or otherwise.
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