

Financial Results

FY2019 Q3

(January to September 2019)

Carna Biosciences, Inc.



Stock Code : 4572

- **Drug Discovery Support business achieved its highest sales performance both as Q3 and Q1-3 in our history**
 - **Issued Series 18th subscription rights to shares (July)**
 - **Drug Discovery Support business sponsored the Targeted Protein Degradation Forum in Japan and presented our products & services in the sponsored seminar (Aug)**
 - **Drug Discovery Support business exhibited and promoted our products & services at 2019 Chinese Medicinal Chemistry Symposium & CPA-EFMC International Symposium on Medicinal Chemistry in Chendgu, China (Aug)**
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- Oct
-
- **Started collaboration with SeraNovo for the development of oral formulation of Carna's Kinase Inhibitor (Oct)**

FY2019 Q3

Consolidated Financial Results



(JPY mn)	FY2018 Q3 Actual	FY2019 Q3 Actual	YoY Change	FY2019 Plan	
Sales	586	2,862	+2,275 +387.7%	3,038	Upfront payment of JPY2,128 mn from Gilead.
Operating Profit/Loss	(762)	1,357	+2,119	313	Gross profits increased thanks to upfront payment.
Ordinary Profit/Loss	(773)	1,346	+2,119	279	
Net Profit/Loss	(822)	1,113	+1,935	214	
R&D Cost	791	813	+21 +2.8%	1,808	Investment in preclinical studies.

Note 1: Rounded down to the nearest million yen.

Note 2: YoY change % for Operating Profit, Ordinary Profit, and Net Profit are not presented since losses were recorded in the previous period.

Note 3: FY2019 plan was revised on June 25, 2019.

FY2019 Q3

Results by Business Segment



(JPY mn)	FY2018 Q3 Actual	FY2019 Q3 Actual	YoY Change	FY2019 Plan	
Total Sales	586	2,862	+2,275 +387.7%	3,038	
Drug Discovery Support	536	734	+197 +36.8%	938	Sales in the U.S. and China were strong.
Drug Discovery & Development	50	2,128	+2,078 42x	2,100	Upfront payment of JPY2,128 mn from Gilead.
Total Operating Profit/Loss	(762)	1,357	+2,119	313	
Drug Discovery Support	114	257	+143 +125.5%	247	Gross profit increased thanks to sales growth.
Drug Discovery & Development	(876)	1,099	+1,976	65	Investment in preclinical studies.

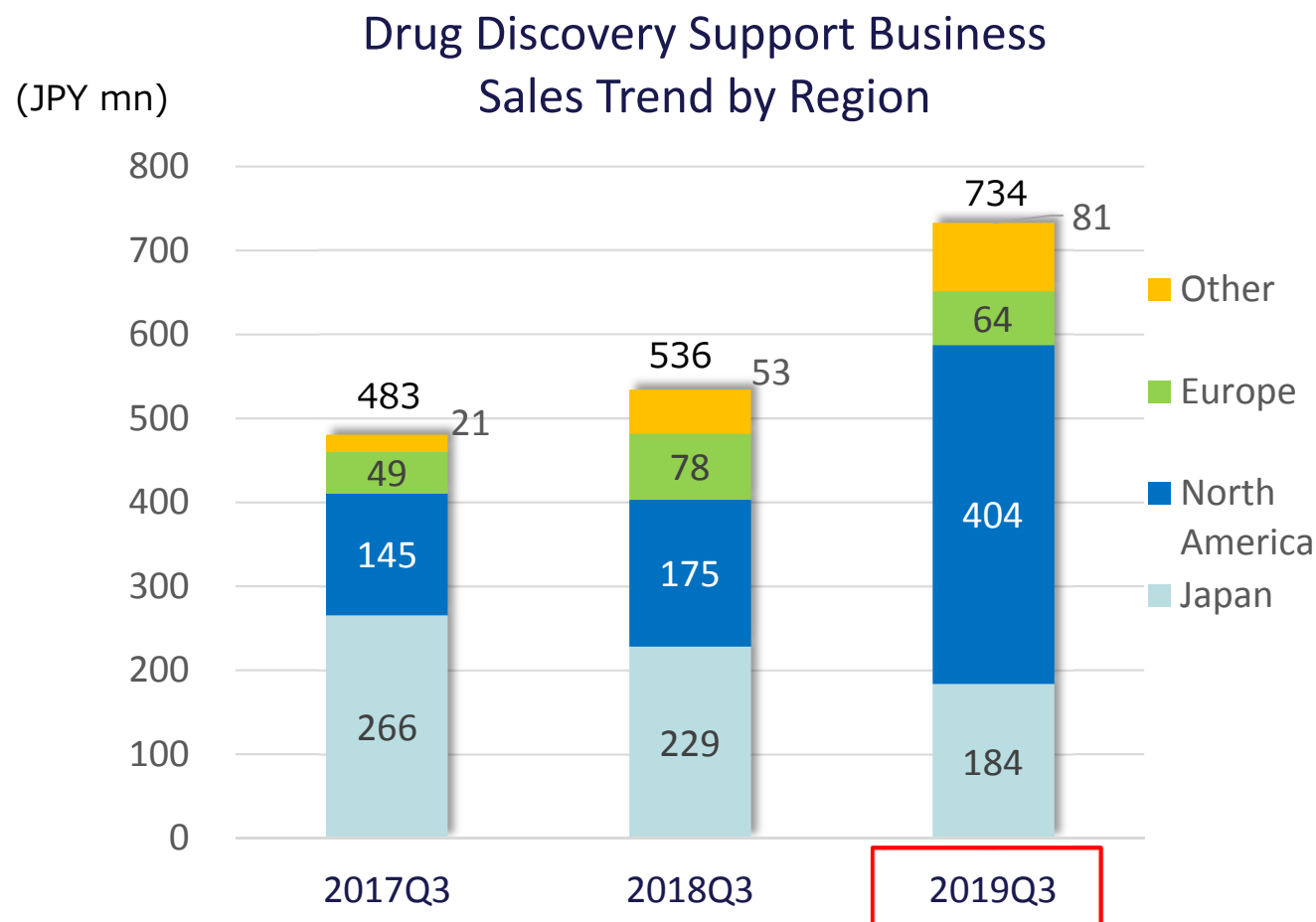
Note 1: Rounded down to the nearest million yen.

Note 2: YoY change % for Operating Profit is not presented since loss was recorded in the previous period.

Note 3: FY2019 plan was revised on June 25, 2019.

FY2019 Q3 Sales Trend by Region

Drug Discovery Support Business



- Japan: Decreased 19.8% YoY
Q3 sales were solid (+2.9% yoy), showing a sign of recovery.
- North America: Increased 130.9% YoY
Demand from new biotech companies for profiling service and kinase proteins were strong. Sales to Gilead also contributed to the record-high sales as Q1-Q3.
- Europe: Decreased 18.1% YoY
Sales of assay kits and newly launched NanoBRET were robust. Aiming to expand new products/services including NanoBRET.
- Other: Increased 52.9%YoY
Sales in China were strong. Expecting further growth from China.

Consolidated Balance Sheet



(JPY mn)

	As of Dec. 31, 2018	As of Sep. 30, 2019	Change	Reason for changes
Current assets	1,671	5,023	+3,351	Cash and deposits +3,249
Cash and deposits	1,355	4,604	+3,249	
Non-current Assets	98	104	+6	
Total assets	1,770	5,128	+3,358	
Current liabilities	400	1,104	+704	Income taxes payable +220
Non-current liabilities	482	535	+53	Long term loans payable +71 Bonds payable -28
Total liabilities	882	1,640	+757	
Total net assets	887	3,487	+2,600	Capital stock and capital surplus +1,481、Retained earnings +1,113
Total liabilities and net assets	1,770	5,128	+3,358	
Shareholders' equity ratio	49.7%	67.7%		
BPS	86.8 yen	308 yen		
PBR	10.37 x	6.12 x		
Share price of Carna	900 yen	1,885 yen		

Note: Share price of Carna Biosciences is based on the closing price of JASDAQ growth

Realize Drug Discovery Vision 2030 and become a Leading Drug Discovery company that continuously deliver innovative drugs

■ Funds raised from warrants will be used to accelerate research and development.

- ✓ Advance developments of two BTK inhibitors, AS-0871 and AS-1763.
- ✓ Prime next wave of development programs
- ✓ Expand research pipeline

■ Series 18th Subscription Rights to Shares

Series	Status of Exercise (as of end of Oct. 2019)
Series 18th Subscription Rights to Shares	Total Number of shares exercised 542,000 shares (33.4% of total rights)
	Total value exercised 968 million yen

Robust Preclinical Pipeline



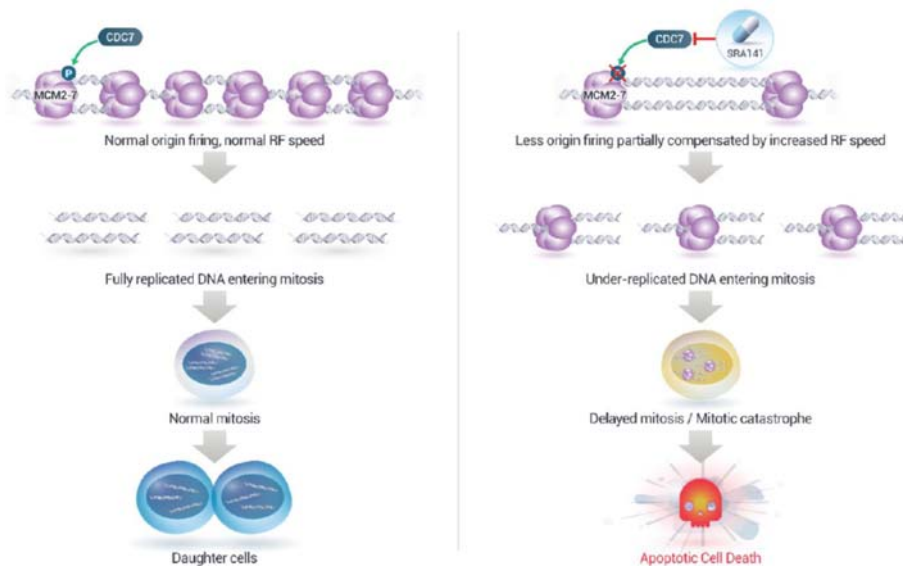
Compound	Target	Indication	Discovery	Preclinical	Clinical	Partner
SRA141 (AS-141)	CDC7/ASK	Cancer		IND Completed		SIERRA ONCOLOGY
Small Molecule	Kinase	Immuno-Oncology				GILEAD
Small Molecule	Kinase	Psychiatry & neurology				Sumitomo Dainippon Pharma

Compound	Target	Indication	Discovery	Preclinical	Clinical	Collaboration Partner
AS-0871	BTK	Autoimmune Diseases				
AS-1763	BTK	Blood Cancer Immuno-Oncology				
Small Molecule	Wnt-signal	Cancer Immuno-Oncology				National Cancer Center Japan
Small Molecule	TGF β signaling	Blood Cancer Immuno-Oncology				HIROSHIMA UNIVERSITY
Small Molecule	Kinase	Autoimmune Diseases				
Small Molecule	N/A	Malaria				KITASATO UNIVERSITY
Small Molecule	Undisclosed	Cancer				National Cancer Center Japan

SRA141 : CDC7 Inhibitor Targeting Cancer (Out-licensed to Sierra Oncology)

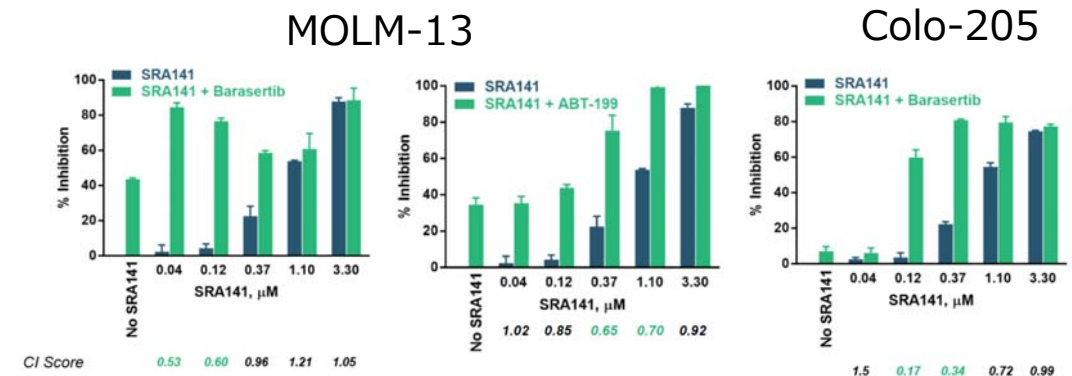


- ✓ Sierra has successfully completed the IND filing process with FDA, and plans to conduct a Phase 1/2 study in patients with colorectal cancer. Carna will receive the first milestone payment (\$4.0M) upon the initiation of Phase 1 study. (Milestone payment from sierra is not included in Carna's FY2019 earnings plan.)
- ✓ Sierra announced that it is conducting a campaign intended to seek non-dilutive strategic options to support further advancement of SRA141.



CDC7 Kinase Inhibition by SRA141 Induces a Potentially Novel Caspase-Dependent Tumor Cell Apoptosis Associated with Altered DNA Replication and Cell Cycle Dynamics

Veena Jagannathan¹, Snezana Milutinovic², Ryan J. Hansen², Bryan Strouse², Christian Hassig², Eric Brown¹
¹University of Pennsylvania, Cancer Biology, Philadelphia, PA, ²Sierra Oncology, Vancouver, BC, Canada



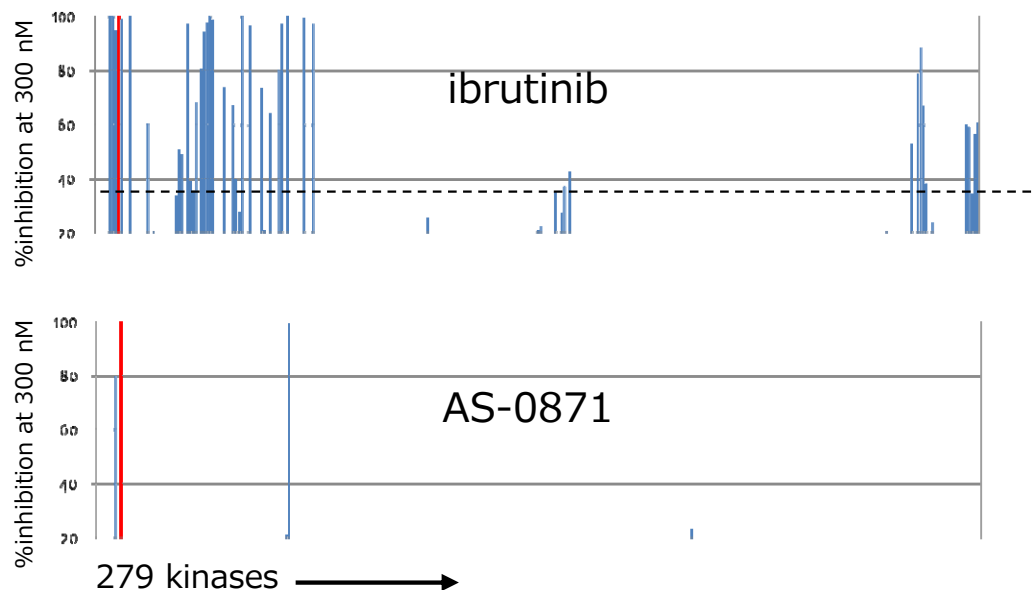
Source: Sierra Oncology

AS-0871 : Development undergoing targeting autoimmune diseases

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|--|---|
| <ul style="list-style-type: none">● Small molecule BTK inhibitor● Non-covalent/reversible● High kinase selectivity | <ul style="list-style-type: none">● Demonstrated significant efficacies in arthritis models● Showed efficacy in systemic lupus erythematosus model● Preclinical development undergoing with CTA submission targeted in 2019 |
|--|---|

- ✓ GMP bulk production has been completed.
- ✓ Most of the GLP tox studies and safety studies have been completed.
- ✓ Manufacturing of the drug product is undergoing to initiate the Phase I clinical study.
- ✓ Documentation for CTA undergoing with submission targeted in 2019.

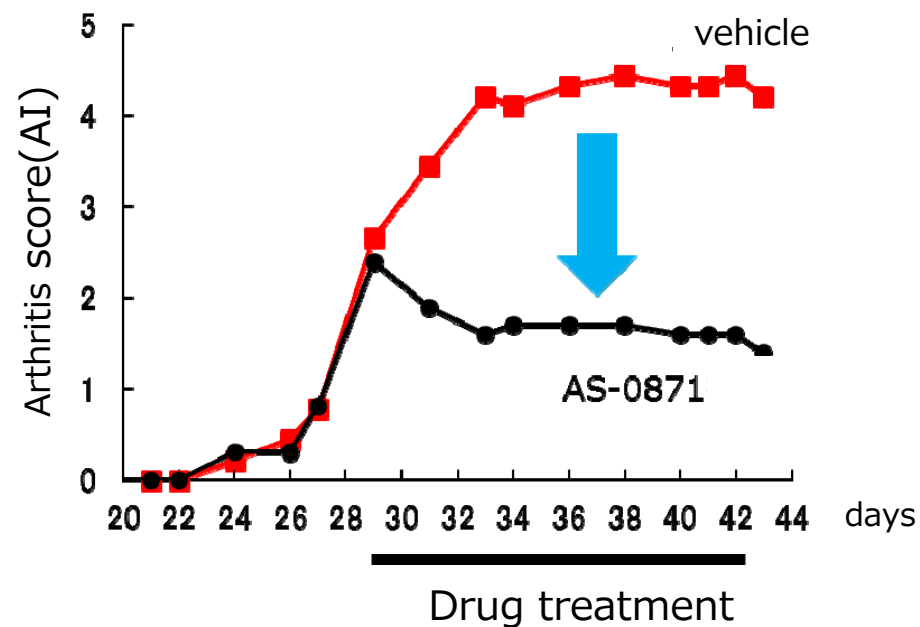
◆ High kinase selectivity



◆ AS-0871 inhibits an allergic reaction



Therapeutic efficacy in Collagen-induced arthritis (CIA) mice

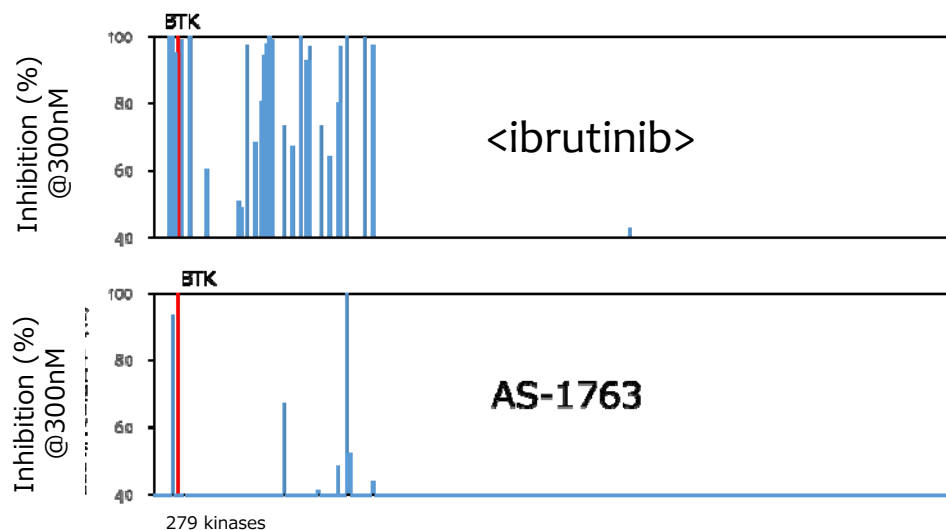


AS-1763 : Development undergoing targeting blood cancer

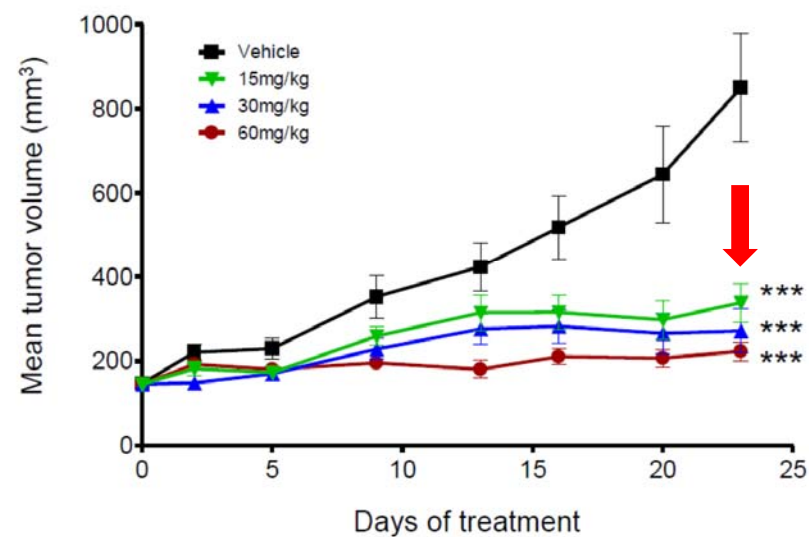
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| <ul style="list-style-type: none">● Non-covalent/reversible● High kinase selectivity● Inhibits both BTK wild type and ibrutinib resistant BTK C481S mutants | <ul style="list-style-type: none">● Displayed strong anti-tumor effects in lymphoma model● Preclinical development undergoing with IND submission targeted in 2020● Displayed efficacy in immuno-oncology model● Potential applications for autoimmune diseases |
|---|--|

- ✓ GMP bulk production has been completed.
- ✓ Preclinical development undergoing with IND submission targeted in 2020.

◆ High kinase selectivity

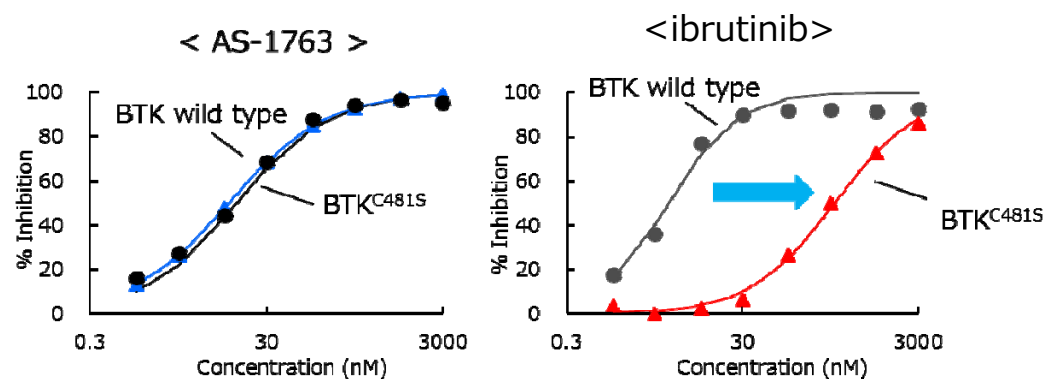


◆ AS-1763 significantly inhibits tumor growth in a B-cell lymphoma mouse model



*** P<0.0001

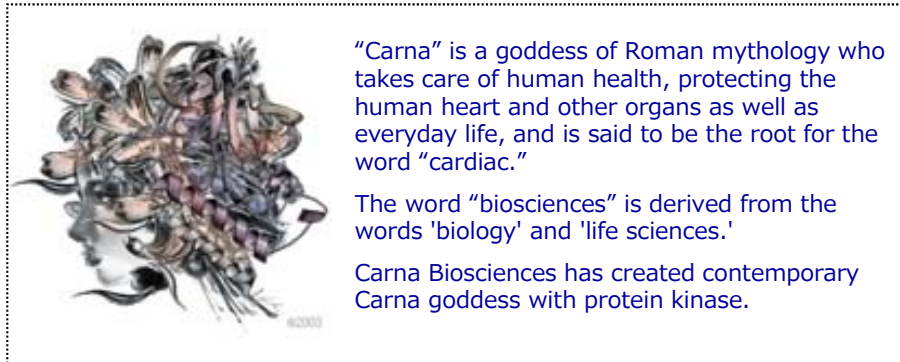
◆ AS-1763 inhibits both WT and C481S mutant BTK enzymes



Summary of Drug Discovery Support Business



- ✓ In Japan, we are continuing active marketing efforts to identify customer needs to boost sales.
- ✓ In North America, strong sales increase from new biotech companies contributed to the record-high sales as Q1-3. Sales to Gilead also contributed to the robust result. We continue seeking new customers, aiming to expand market share further.
- ✓ In China, sales are continuously expanding. We are working closely with the agent in China for aggressive promotion.



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