

# Financial Results

## FY2019 Q1

(January to March 2019)

# Carna Biosciences, Inc.



**Stock Code : 4572**

- Published a research paper in *Scientific Reports* describing the development of novel biosensors for cell-based assay system (January).
- **Opened a clinical development office in South San Francisco to commence clinical studies of our drug candidates in the U.S. (February).**
- Japan Patent Office granted a patent for Wnt-signal inhibitor (March).
- **The exercise of Series 16th subscription rights to shares was completed (March).**
- The patent for BTK Inhibitor was granted in China (March).
- The patent for CDC7 kinase inhibitor was registered in South Korea (March).

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- **The exercise of Series 17th subscription rights to shares was completed (April).**

# FY2019 Q1 Consolidated Financial Results



(JPY mn)	FY2018 Q1 Actual	FY2019 Q1 Actual	YoY Change	FY2019 Plan	
Sales	211	<b>169</b>	-41 -19.5%	1,240	Sales in Japan, EU, and other regions were weak while sales in the U.S. were strong.
Operating Loss	(188)	<b>(233)</b>	-44	(1,658)	-Gross profits decreased due to sales decline. -Investment in R&D.
Ordinary Loss	(191)	<b>(235)</b>	-44	(1,671)	
Net Loss	(194)	<b>(236)</b>	-42	(1,693)	
R&D Cost	208	<b>228</b>	+19 +9.5%	2,011	Investment in preclinical studies.

Note 1: Rounded down to the nearest million yen.

Note 2: YoY change % for Operating Loss, Ordinary Loss, and Net Loss are not presented since losses were recorded.

Note 3: FY2019 plan was disclosed on February 8, 2019.

# FY2019 Q1 Results by Business Segment



(JPY mn)	FY2018 Q1 Actual	FY2019 Q1 Actual	YoY Change	FY2019 Plan	Vs. Revised Plan	
Total Sales	211	<b>169</b>	-41 -19.5%	1,240	13.7%	
Drug Discovery Support	211	<b>169</b>	-41 -19.5%	800	21.2%	Sales in Japan, EU, and other regions were weak while sales in the U.S. were strong.
Drug Discovery & Development	—	—	—	440	—	
Total Operating Loss	(188)	<b>(233)</b>	-44	(1,658)	—	
Drug Discovery Support	64	<b>30</b>	-34 -52.8%	144	21.1%	-Gross profits decreased due to sales decline. -R&D cost increased to develop new products and services.
Drug Discovery & Development	(253)	<b>(263)</b>	-10	(1,802)	—	Investment in preclinical studies.

Note 1: Rounded down to the nearest million yen.

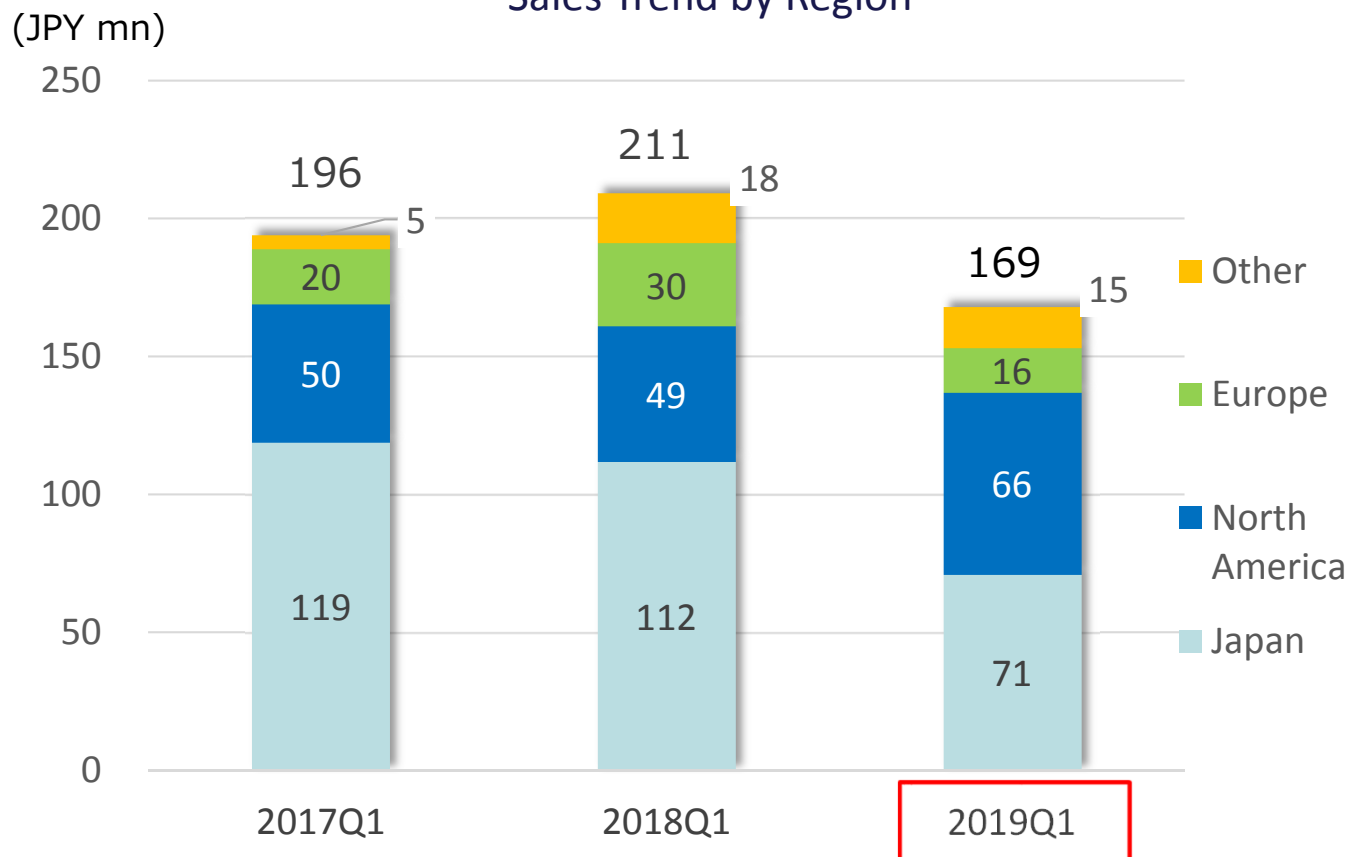
Note 2: YoY change % and comparison to FY2018 plan for Operating Loss are not presented since losses were recorded.

Note 3: FY2019 plan was disclosed on February 8, 2019.

# FY2019 Q1 Sales Trend by Region Drug Discovery Support Business



Drug Discovery Support Business  
Sales Trend by Region



- Japan: Decreased 36.8% YoY  
Fiscal year-end demand in March was relatively weak.
- North America: Increased 34.0% YoY  
Profiling service and kinase proteins were strong. Reached record-high sales as Q1.
- Europe: Decreased 47.2% YoY  
Sales of kinase proteins were weak while profiling service was robust.
- Other: Decreased 12.8% YoY  
Temporary drop due to delay in recognizing sales.

# Consolidated Balance Sheet



(JPY mn)

	As of Dec. 31, 2018	As of Mar. 30, 2019	Change	Reason for changes
Current assets	1,671	1,505	-166	
Cash and deposits	1,355	1,180	-174	
Non-current Assets	98	95	-2	
Total assets	1,770	1,600	-169	
Current liabilities	400	327	-72	Current portion of long-term loans payable -18
Non-current liabilities	482	425	-56	Long term loans payable -42 Bonds payable -14
Total liabilities	882	753	-129	
Total net assets	887	847	-40	Capital stock and capital surplus +199, Retained earnings -236
Total liabilities and net assets	1,770	1,600	-169	

Shareholders' equity ratio	49.7%	52.7%
BPS	86.8 yen	81.6 yen
PBR	10.37x	12.9x
Share price of Carna Biosciences	900 yen	1,050 yen

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

## ■ Financing strategy to secure funds to invest in R&D

- ✓ Maximize the revenue from the drug discovery and drug discovery support business.
- ✓ Completed fund raising from Series 16<sup>th</sup> and 17<sup>th</sup> Subscription Rights to Shares
- ✓ New fund raising.

## ■ Series 16th and 17th Subscription Rights to Shares

Series	Status of Exercise (as of April 12, 2019)
Series 16th Subscription Rights to Shares	Total Number of shares exercised 930,000 shares (100% of total rights) Total value exercised 1,104 million yen
Series 17th Subscription Rights to Shares	Total Number of shares exercised 465,000 shares (100% of total rights) Total value exercised 475 million yen

# Robust Preclinical Pipeline



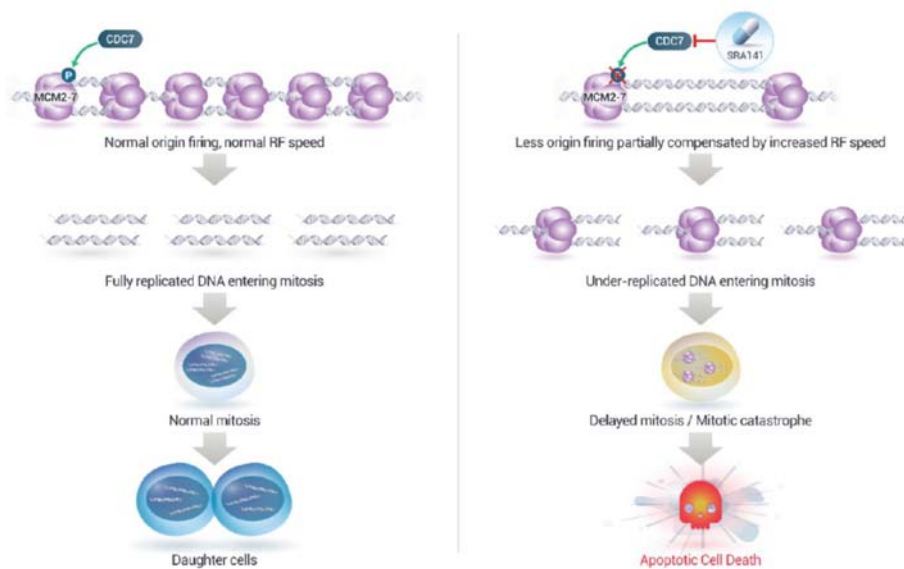
Compound	Target	Indication	Development Phase			
			Discovery	Preclinical	Clinical	Partner/ Collaboration partner
SRA141 (AS-141)	CDC7/ASK	Cancer		IND completed		SIERRA ONCOLOGY
AS-0871	BTK	Autoimmune Diseases				
AS-1763	BTK	Blood Cancer Immuno-Oncology				
Small Molecule	Wnt-signal	Cancer Immuno-Oncology				National Cancer Center Japan
Small Molecule	Kinase	Psychiatry & neurology				Sumitomo Dainippon Pharma
Small Molecule	TGFβ signaling	Blood Cancer Immuno-Oncology				HIROSHIMA UNIVERSITY
Small Molecule	Kinase	Autoimmune Diseases				
Small Molecule	N/A	Malaria				KITASATO UNIVERSITY
Small Molecule	DGK	Immuno-Oncology				
Small Molecule	Undisclosed	Cancer				National Cancer Center Japan



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

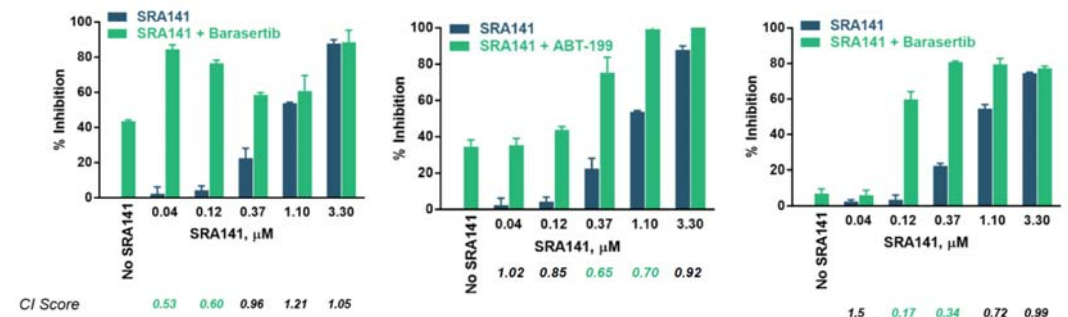


- ✓ Sierra has successfully completed the IND filing process with FDA, and plans to conduct a Phase 1/2 study in patients with colorectal cancer. Carna will receive the first milestone payment (\$4.0M) upon the initiation of Phase 1 study.
- ✓ Sierra reported in its poster presentation at AACR Annual Meeting 2019 in April that SRA141 inhibits tumor growth with a differentiated mechanism of action from other DNA damage response targeted drugs such as palbociclib, a CDK4/6 inhibitor, or SRA737, a CHK1 inhibitor being developed by Sierra. These findings by Sierra reveal a potentially unique spectrum of clinical opportunities for SRA141 as both monotherapy and in combination with other agents such as venetoclax.



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

Veena Jagannathan<sup>1</sup>, Snezana Milutinovic<sup>2</sup>, Ryan J. Hansen<sup>2</sup>, Bryan Strouse<sup>2</sup>, Christian Hassig<sup>2</sup>, Eric Brown<sup>1</sup>  
<sup>1</sup>University of Pennsylvania, Cancer Biology, Philadelphia, PA, <sup>2</sup>Sierra Oncology, Vancouver, BC, Canada



Source: Sierra Oncology

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# AS-0871 : Non-covalent BTK Inhibitor targeting autoimmune diseases

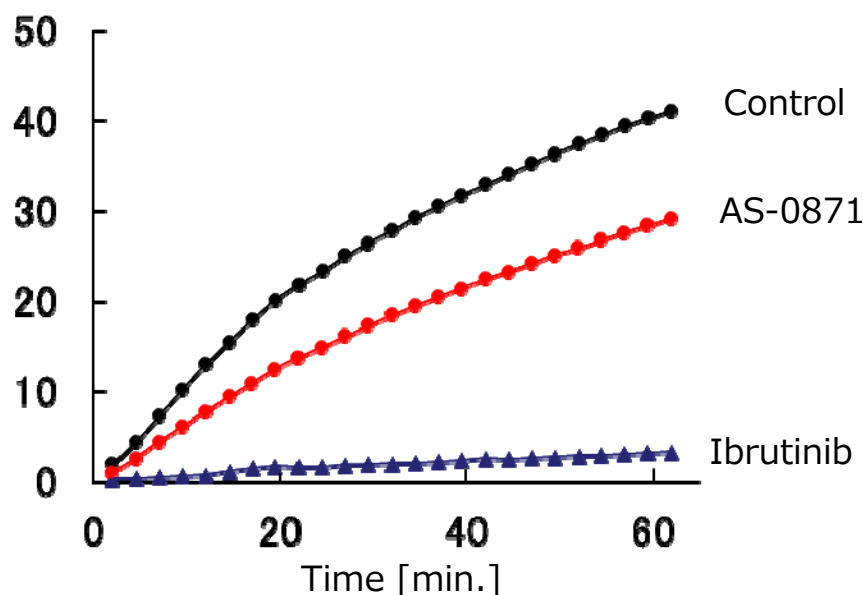


- ✓ Non-GMP bulk production for GLP tox studies has been completed.
- ✓ GMP bulk material production for Phase I clinical study is ongoing.
- ✓ No serious toxicity has been observed in single oral dose range-finding toxicity study in rodent even at the highest dose.

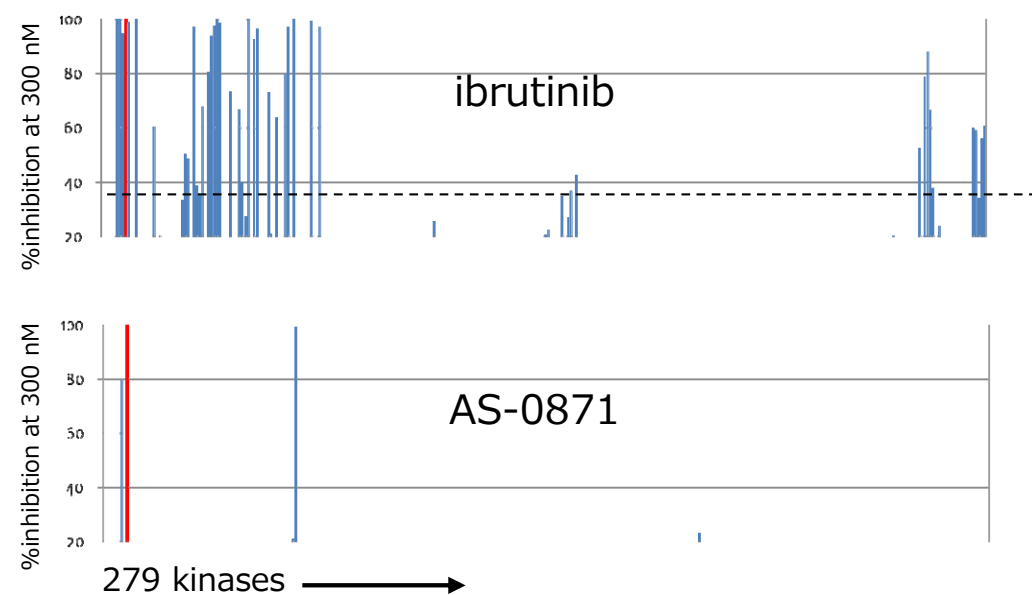
## AS-0871 : Development undergoing targeting autoimmune diseases

- Small molecule BTK inhibitor
- Non-covalent/reversible
- High kinase selectivity
- Demonstrated significant efficacies in arthritis models
- Showed efficacy in systemic lupus erythematosus model
- Preclinical development undergoing with CTA submission targeted in 2019

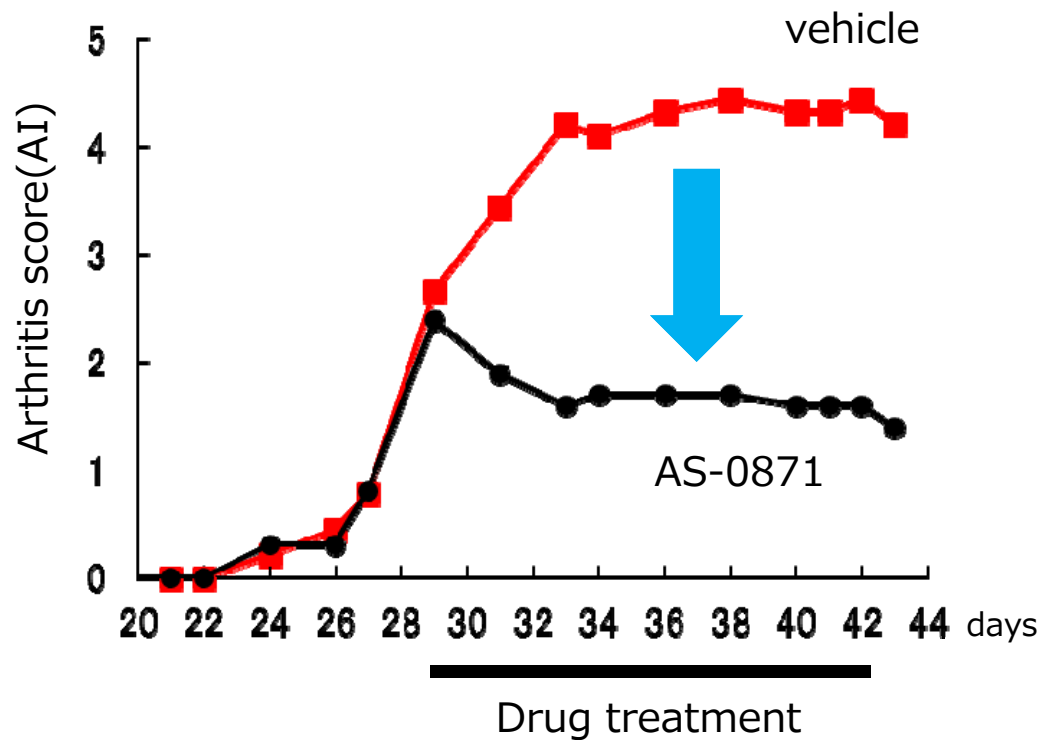
### ◆ Non-covalent/Reversible inhibition



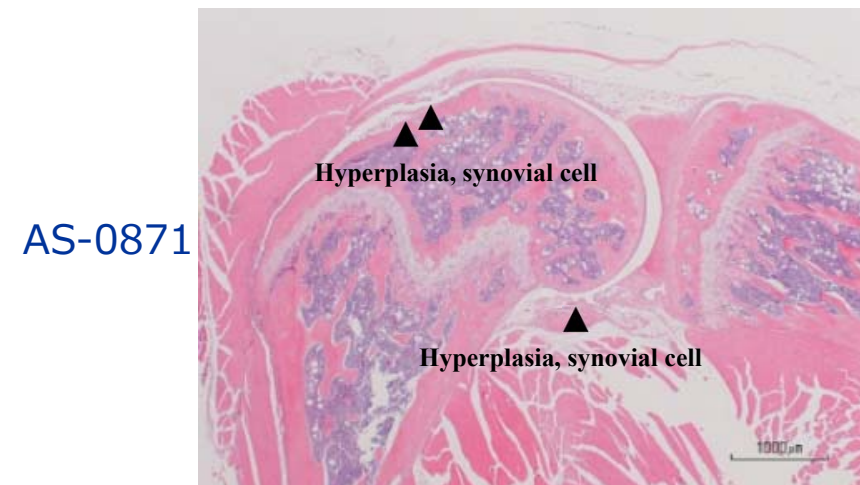
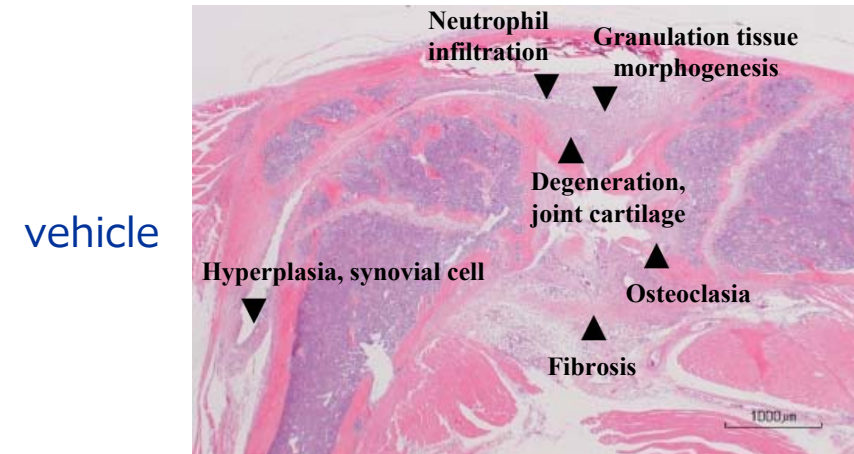
### ◆ High kinase selectivity



## Therapeutic efficacy in Collagen-induced arthritis (CIA) mice



## Histopathology of knee joints



# AS-1763:Next Generation BTK Inhibitor Targeting Blood Cancer

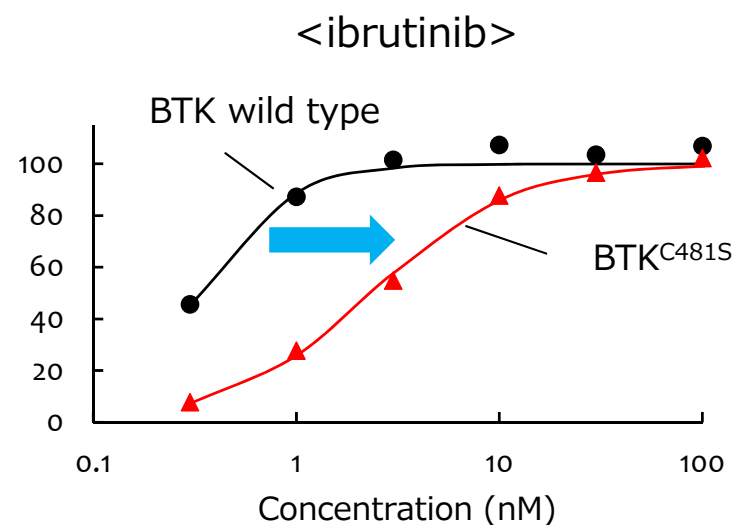
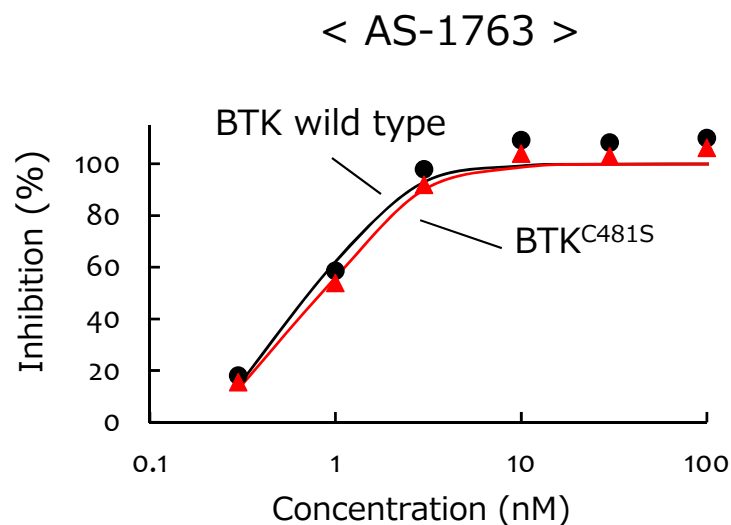


- ✓ We are accelerating the preclinical development of AS-1763 by leveraging Evotec AG's INDiGO platform.
- ✓ API process development was completed.

## AS-1763 : Development undergoing targeting blood cancer

- Non-covalent/reversible
- High kinase selectivity
- Inhibits both BTK wild type and ibrutinib resistant BTK C481S mutants
- Displayed strong anti-tumor effects in lymphoma model
- Preclinical development undergoing with IND submission targeted in 2019
- Potential applications for autoimmune diseases

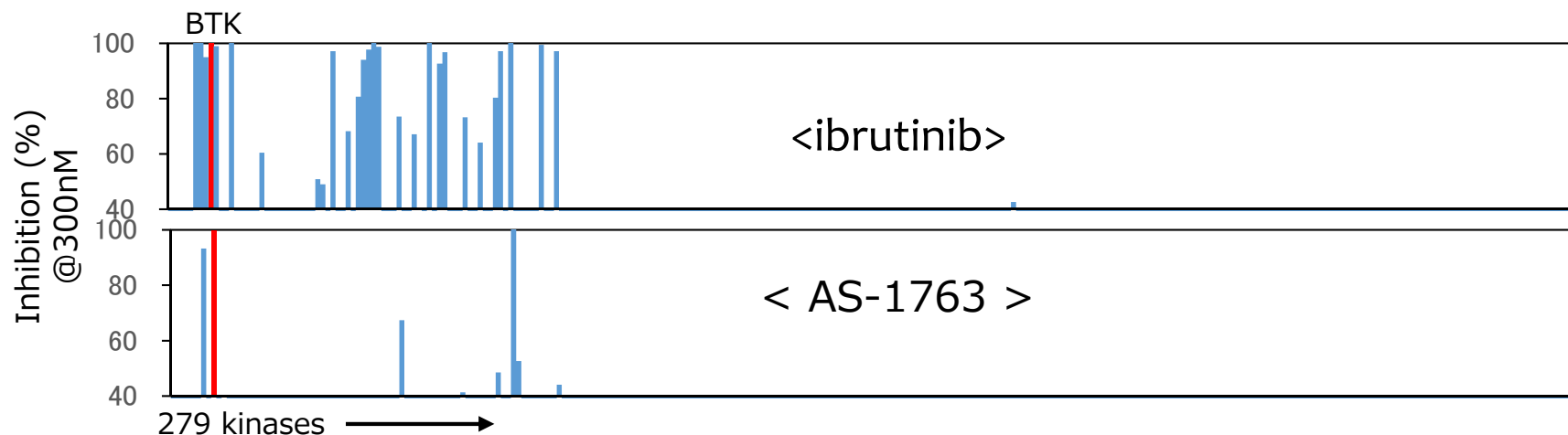
- AS-1763 inhibits both WT and C481S mutant BTK enzymes



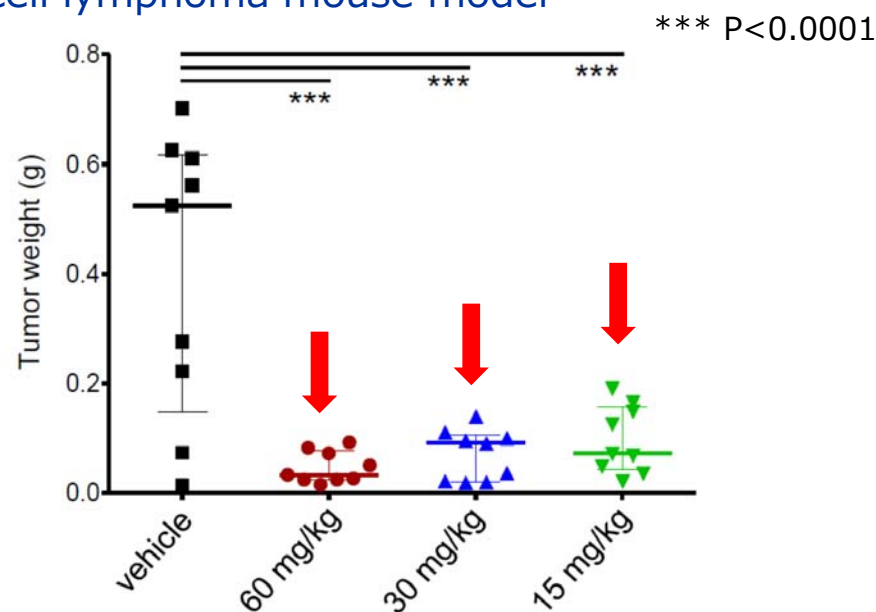
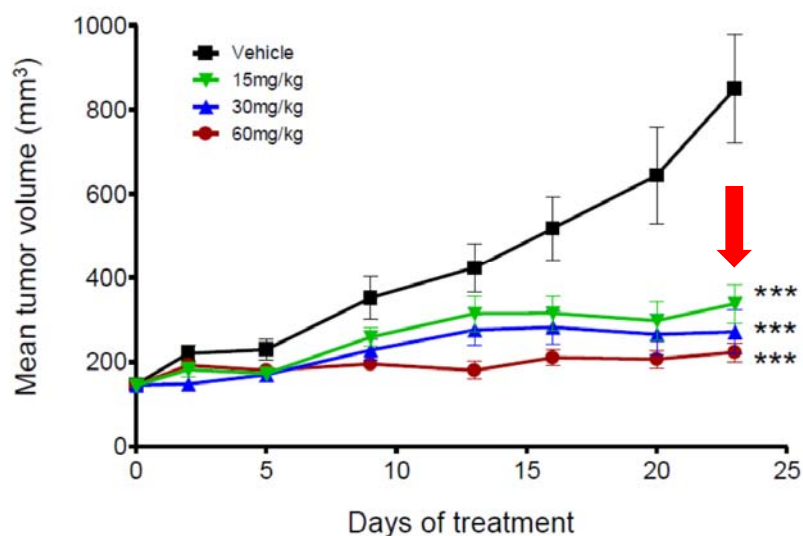
# AS-1763: Next Generation BTK Inhibitor Targeting Blood Cancer



- AS-1763 is a highly selective inhibitor



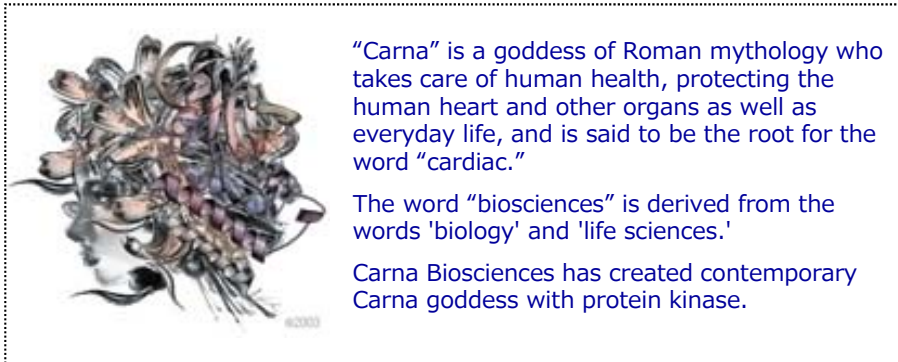
- AS-1763 significantly inhibits tumor growth in a B-cell lymphoma mouse model



# Summary of Drug Discovery Support Business



- ✓ In Japan, we are continuing active marketing efforts to identify customer needs to boost sales.
- ✓ In North America, in additions to the continuous orders from big pharma, sales from new biotech companies are expanding. Carna will continue seeking new customers, aiming to expand market share further.
- ✓ In Europe, we aim to boost sales by adding new agents.
- ✓ In China, we expect sales to expand further as drug discovery research is expanding rapidly. Sales decline in Q1 is temporal and we plan to work more closely with the agent in China.



“Carna” is a goddess of Roman mythology who takes care of human health, protecting the human heart and other organs as well as everyday life, and is said to be the root for the word “cardiac.”

The word “biosciences” is derived from the words 'biology' and 'life sciences.'

Carna Biosciences has created contemporary Carna goddess with protein kinase.

## **Carna Biosciences, Inc.**

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