

Financial Results FY2018 Q1 (January to March 2018)

Carna Biosciences, Inc.



Stock Code : 4572

FY2018 Q1 Key Highlights



- A patent for CDC7 inhibitor was registered in Japan (January)
- Received bank loans (January)
- The board resolved to introduce a restricted stock compensation plan for directors and employees (February)
- A patent for BTK inhibitor was registered in Canada (March)
- European Patent Office granted a patent for CDC7 inhibitor (March)
- Sumitomo Dainippon Pharma and Carna signed an agreement on joint research, development, and commercialization (March)

April ~

- United States Patent and Trademark Office granted a patent for CDC7 inhibitor (April)
- The board resolved to absorb ProbeX, a consolidated subsidiary (April)
- National Cancer Center and Carna entered into a new research collaboration agreement for novel drug discovery targets (May)
- Intellectual Property Office of Singapore granted a patent for BTK inhibitor (May)
- Evotec AG and Carna announced to collaborate on Evotec's INDiGo platform (May)



(JPY mn)	FY2017 Q1 Actual	FY2018 Q1 Actual	YoY Change	FY2018 plan		
Sales	196	211	+15 +7.7%	1,190	Sales of kinase proteins were robust.	
Operating Loss	(113)	(188)	-75	(679)	Investment in R&D.	
Ordinary Loss	(113)	(191)	-77	(694)		
Net Loss	(118)	(194)	-75	(758)		
R&D Cost	130	208	+ 78 + 59.7%		Investment in preclinical study of pipeline.	

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: FY2018 plan was disclosed on February 9, 2018.

FY2018 Q1 Results by Business Segment



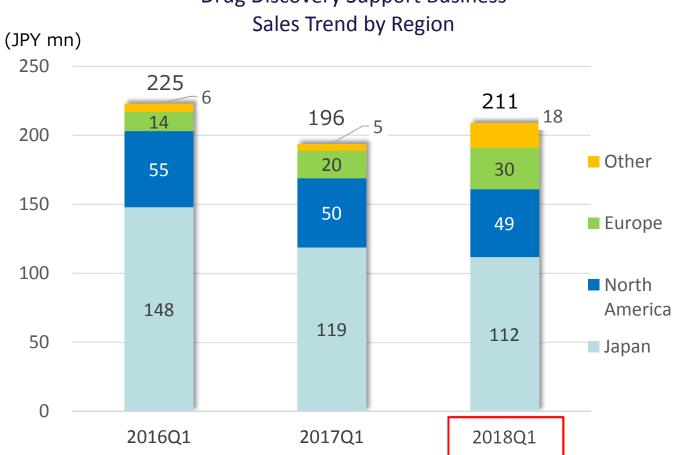
(JPY mn)	FY2017 Q1 Actual	FY2018 Q1 Actual	YoY Change	FY2018 Plan	Vs. Revised Plan	
Total Sales	196	211	+15 +7.7%	1,190	17.7%	
Drug Discovery Support	196	211	+15 +7.7%	750	28.1%	Sales of kinase proteins were robust in the U.S., EU, and other region, especially in China.
Drug Discovery & Development		—	_	440		
Total Operating Loss	(113)	(188)	-75	(679)	—	
Drug Discovery Support	63	64	+1 +1.7%	150	43.0%	Sales mix was improved thanks to robust kinase proteins sales.
Drug Discovery & Development	(177)	(253)	-76	(829)		Investment in preclinical study expenses/

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: FY2018 plan was disclosed on February 9, 2018.

FY2018 Q1 Sales Trend by Region **Drug Discovery Support Business**





Drug Discovery Support Business

- Japan: Decreased 5.8% YoY \geq On track to the plan. Sales to other companies were firm while sales to Ono Pharmaceutical were weak.
- North America: Decreased 1.0% YoY Cell-based assay services were robust while kinase proteins were weak.
- Europe: Increased 50.0% YoY Sales of kinase proteins were robust.
- Other: Increased 208.6%YoY \geq Sales of kinase proteins increased significantly in China.
- (Note) Sales to Ono Pharmaceuticals FY2017Q1 · · · 61 mn yen FY2018O1 · · · 38 mn yen

Consolidated Balance Sheet



(JPY mn)

	As of Dec. 31, 2017	As of Mar. 31, 2018	Change	Reason for changes		
Current assets	2,134	2,173	+39			
Cash and deposits	1,856	1,848	-7			
Non-current Assets	56	53	-3			
Total assets	2,190	2,226	+36			
Current liabilities	341	407	+65	Current portion of long-term loans payable +108、Account payable-other -32		
Non-current liabilities	470	$4/11$ 634 ± 1641 $-$		Long term loans payable +183、 Bonds payable -14		
Total liabilities	812	1,046	+234			
Total net assets	1,377	1,179	-198	Retained earnings -194		
Total liabilities and net assets	2,190	2,226	+36			

Shareholders' equity ratio	62.2%	52.3%
BPS	142.68 yen	121.95 yen
PBR	7.91 x	15.03 x
Share price of Carna Biosciences	1,128 yen	1,833 yen

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



• SRA141 (out-licensed to Sierra Oncology): CDC 7 inhibitor for Cancer

Sierra is advancing the research to initiate clinical study, anticipating to submit an IND in H2 2018. Carna will receive milestone payment upon initiation of Phase I study.

Recent studies demonstrated that SRA141 significantly inhibits tumor growth in AML MV4-11 rat xenograft model and colorectal COLO-205 rat xenograft model. In AML model, some rats were cured completely and in colorectal model, complete tumor regressions were observed for over half of rats. Phase 1/2 clinical program to be focused on colorectal cancer.

• AS-871: BTK inhibitor for Autoimmune diseases

A contract manufacturing organization (CMO) is manufacturing non-GMP bulk for GLP studies. We plan to start preclinical safety studies under GLP conditions in 2018.

• CB-1763: BTK inhibitor for Blood cancer

We signed a service agreement with Evotec AG to accelerate the preclinical development of CB-1763 by leveraging Evotec's INDiGO platform.

Prioritizing and allocating resources to our two potential blockbuster BTK programs, AS-871 and CB-1763 to achieve successful IND submissions in H1 2019.







Sumitomo Dainippon Pharma

Combining accumulated Carna's know-how on kinase inhibitor discovery with Sumitomo Dainippon Pharma's know-how on drug discovery research in the area of neuroscience to discover novel kinase inhibitors

- Agreement > Joint research to discover novel kinase inhibitors
 - Clinical development and commercialization by Sumitomo Dainippon Pharm

Indication Therapeutic areas with high unmet medical needs focusing on psychiatric and neurological disorders (Carna retains rights to oncology)

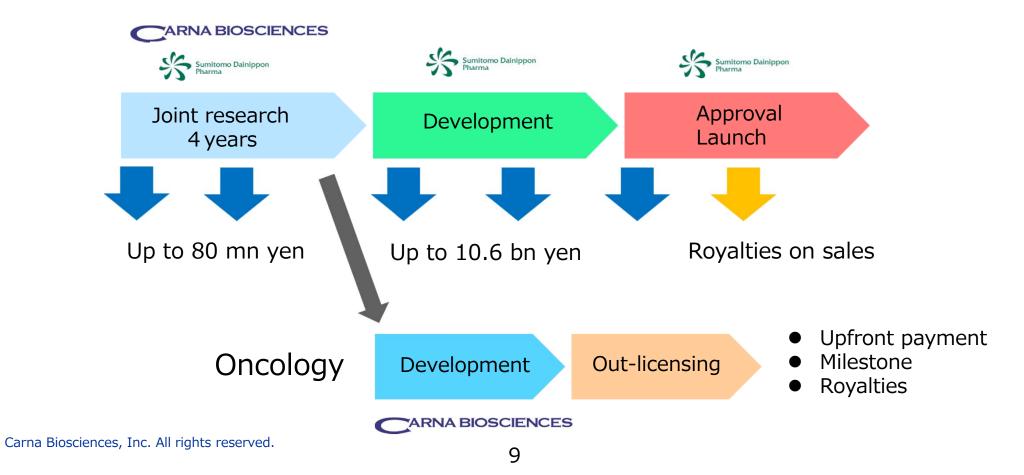
Outline of Joint Research Agreement



- Date of agreement March 27, 2018
- Term 4 years from the date of the contract
- Upfront and milestone payment
- Carna will receive up to approximately 10.6 billion yen in total as an upfront payment and milestone payments on development and sales

Royalties

Specified amount of royalties in accordance with the sales amount





✓ A new research collaboration with National Cancer Center to discover novel therapeutic interventions in cancers

National Cancer Center and Carna Biosciences will collaborate on drug discovery research to develop a novel anticancer drug with new mechanisms of action that have been discovered by Dr. Kenkichi Masutomi, Chief, Division of Cancer Stem Cell at National Cancer Center Research Institute.

National Cancer Center Japan



National Cancer Center and Carna Biosciences have been working together successfully under a research collaboration since 2008 to research and develop new drugs targeting WNT signal. This new collaboration agreement will further strengthen the relationship between both parties, which enables to accelerate the development of novel anti-cancer drugs to bring innovative treatment to cancer patients.



Pipeline Status

CARNA	BIOSCIEN	NCES

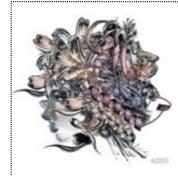
	Target	Indication	Development Phase					
Compound			Discovery	Preclinical	PhI	PhII	PhIII	Partner/ Collaboration partner
SRA141 (AS-141)	CDC7/ASK	Cancer						
AS-871	ВТК	Autoimmune Diseases						
CB-1763	ВТК	Blood Cancer Immuno-Oncology						
Small Molecule	Wnt-signal	Cancer Immuno-Oncology						🥙 National Cancer Center Japan
Small Molecule	Kinase	Psychiatry & neurology						Sumitomo Dainippon
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

Summary of Drug Discovery Support Business



- ✓ In Japan, sales to major customers were steady except Ono Pharmaceutical.
- ✓ In North America, cell-based assay services remaind robust while kinase proteins were weak.
- ✓ Sales of kinase proteins increased significantly in China, followed by Korea. Aim to expand sales in China further by strengthening relationship with our distributor.
- ✓ Sales of kinase proteins were robust in Europe
- ✓ We continued to focus our marketing efforts on expanding sales of DGK assay kits.
- ✓ Preparing to launch a new cell-based assay service and to restart RPPA service.





"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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