

# **Supplementary Information for Financial Results FY12/21**

**Feb. 14, 2022**



**To accelerate drug discovery and development of mAb  
for therapeutics to overcome current medical unmet-needs**

**Chiome Bioscience Inc.**



- 1. Overview of FY12/21 “Financial results”**
- 2. Overview of FY12/21 “Operation highlights”**

## **Appendix.**

**Corporate information**

**Pipeline information**



## **Overview of FY12/21 “Financial results”**

# Financial results: Profit and Loss



(JPY in millions)

	FY2020	FY2021	Increase (decrease)	Main reasons for increase / decrease
Net sales	480	712	232	
Drug Discovery & Development	3	103	99	• Upfront payment of the License Agreement with Shanghai Henlius Biotech, Inc. for LIV-2008/2008b
Drug Discovery Support	477	609	132	• Growth in business with domestic pharmaceutical companies
COS/SGA	1,764	2,047	282	
R&D Expense	1,156	1,312	155	• Cost of the study drug manufacturing in CBA-1535 program
Other costs	607	735	127	• Up in material costs due to increased business transactions
Operating Loss	(1,283)	(1,334)	(50)	
Ordinary Loss	(1,291)	(1,329)	(37)	• Revenue from AMED grants
Net Loss	(1,293)	(1,479)	(186)	• Loss on devaluation of investment securities

# Financial results: Balance Sheet



(JPY in millions)

	As of Dec. 31, 2020	As of Dec. 31, 2021
Current assets	3,248	2,216
(Cash on hand in banks)	2,686	1,790
(Other current assets)	562	425
Non-current assets	246	122 ①
Total assets	3,494	2,339
Current Liabilities	342	392
Non-current liabilities	41	53
Total liabilities	384	446
Total net assets	3,109	1,893 ②
Total liabilities and net assets	3,494	2,339

## Explanation of balance sheet

① Non-current assets decreased due to impairment of investment securities of investees.

② Retained earnings    -1,479 million yen

# Financial results: Cash Flows



(JPY in millions)

	FY2020	FY2021
Cash flows from operating activities	(1,360)	(1,131) ①
Cash flows from investing activities	(3)	(35)
Cash flows from financing activities	1,944	271 ②
Net increase (decrease) in cash and cash equivalents	580	(895)
Cash and cash equivalents as of the beginning of the year	2,105	2,686
Cash and cash equivalents as of the end of the year	2,686	1,790

## ①Cash flows from operating activities

Expenses for clinical development for CBA-1205, CMC development for CBA-1535 and research for drug discovery, SG & A expenses.

## ②Cash flows from financing activities

Proceeds from issuance of shares resulting from exercise of 17<sup>th</sup> and 18<sup>th</sup> subscription rights to shares.



## **Overview of FY12/21 “Operation highlights”**



## Drug Discovery and Development – Pipeline

### CBA-1205

Humanized afucosylated  
anti-DLK1 antibody

- ✓ First part of Phase I clinical trial has been completed. From the course of the trial, the safety of the target and this antibody was found to be high. No change in the development schedule due to the steady progress, although a higher dose than the original planned maximum dose was added for safety evaluation.
- ✓ Decision was made to move to the second half of Phase I trial at the end of 2021.

### CBA-1535

Humanized anti 5T4 & CD3  
trisppecific antibody

- ✓ In preparation for the world's first Tribody antibody clinical trial.
- ✓ Established a production method for the novel molecule Tribody and completed the manufacture of GMP drug substance and investigational drugs.
- ✓ After the consultation with domestic regulatory authorities based on non-clinical trial data, it was determined that a clinical trial application could be filed in the first half of 2022.
- ✓ Patents granted in the US in January 2021 and in China in September 2021 (Patents granted in Japan, US, UK and China)

### BMAA

Humanized anti-  
Semphorin3A antibody

- ✓ Based on the acquired research data so far, we continue to search for new diseases which involve Semaphorin 3A as well as out-licensing activities.

### PCDC

Humanized anti-CDCP1  
antibody

- ✓ Initiate licensing activities for ADC use in parallel with basic research.
- ✓ A patent application has been published in July 2021.

### Discovery Projects

- ✓ Drug discovery portfolio have been reviewed, prioritized, or replaced with a new project based on the progress of the research to build potential pipeline.
- ✓ For two of our projects we have been focusing on, we will continue to promote research activities that will contribute to their commercialization in the future, while considering out-licensing and development plans.
- ✓ One of the drug discovery projects to be shifted to licensing activities has completed its new patent application.
- ✓ Promote basic data acquisition and evaluation activities for the launch of new projects.



# Operation highlights



## Pipeline - Out-Licensed programs

### LIV-2008

Humanized anti-TROP2  
antibody

- License agreement with Henlius for development, manufacturing and marketing of LIV-2008/2008b and its derivatives in China is signed in January 2021.
- Ongoing implementation for the evaluations at multiple overseas pharmaceutical companies.

### ADCT-701

- ADCT and the National Cancer Institute entered a collaboration for the development of ADCT-701.
- Preparation for IND applications and clinical trials in 2022 is in progress.

## Drug Discovery Support Business

Deals with  
pharmaceutical  
companies

- Growth of business with key clients in Japan.
- Net sales : 609 million yen (up 27.6% year-on-year, forecast over 14.9%)
- Extension of contract with Chugai in Japan and Chugai Pharmabody Research in Singapore (Oct. 18, 2021 / Nov. 1, 2021)

## Core Technology

ADLib<sup>®</sup> system

- Participate in the Grant Program of the Japan Agency for Medical Research and Development (AMED)
- Patent for Human ADLib<sup>®</sup> granted in CN and EU, and patent for antibody generation method in ADLib<sup>®</sup> granted in US and JP.
- Tokyo Medical and Dental University announces research results for Alzheimer's disease using anti-HMGB1 antibody generated by human ADLib<sup>®</sup> system.

# Drug Discovery and Development -Pipeline



## Out-Licensed Product

Code	Target	Therapeutic Area	Basic research, Drug Discovery	Preclinical Study	Phase 1	Partner
ADCT-701 (LIV-1205 ADC)	DLK-1	Oncology /ADC				2017.9~ 
LIV-2008 /2008b	TROP-2	Oncology				2021.1~ 

## In-house developed product

★ First in class

Code	Target	Therapeutic Area	Basic research, Drug Discovery	Preclinical Study	Phase 1	Partner
★ CBA-1205 (ADCC enhanced)	DLK-1	Oncology				Phase 1
CBA-1535 (Tribody™)	5T4×CD3 ×5T4	Oncology				Preparing for Phase 1

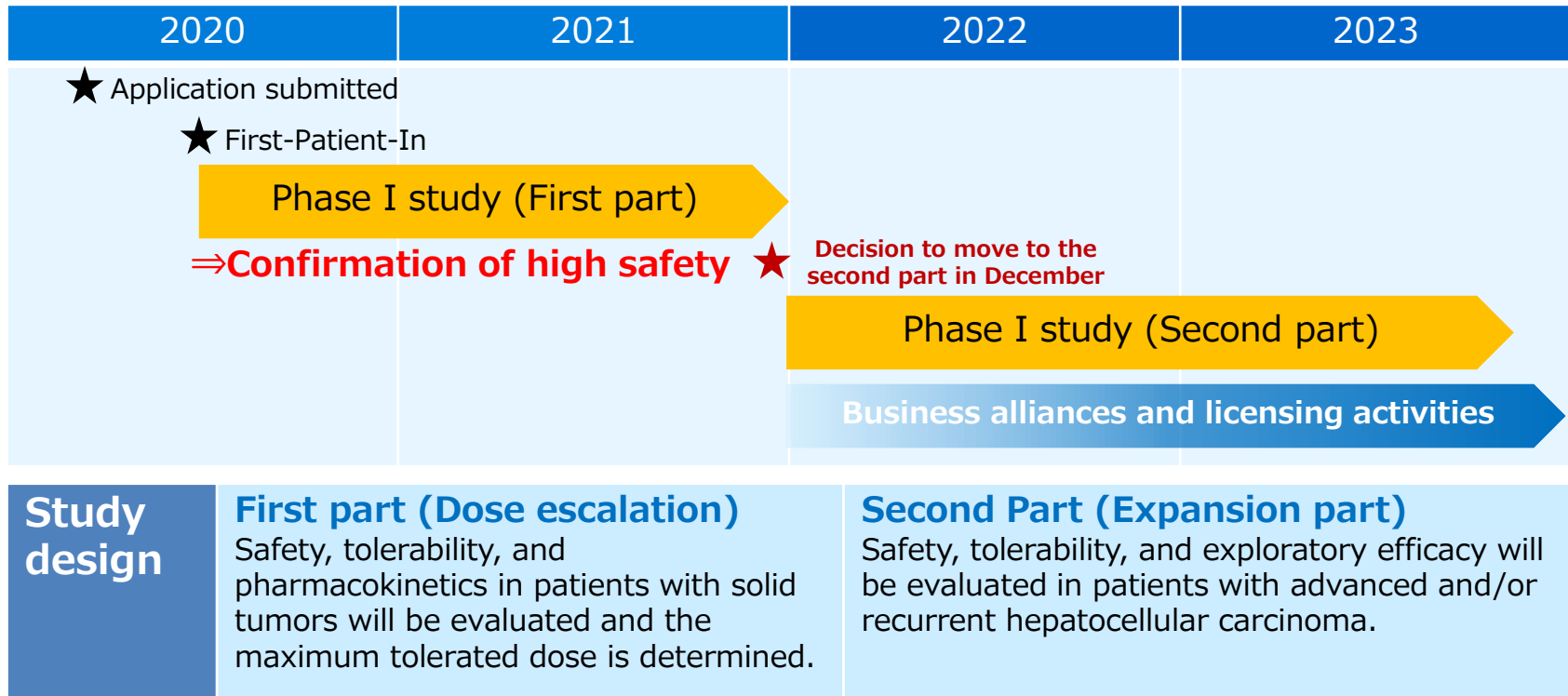
## License candidate and drug discovery project

Code	Target	Therapeutic Area	Basic research, Drug Discovery	Preclinical Study	Phase 1	Partner
★ BMAA	SEMA3A	undisclosed				Licensing opportunity
★ PCDC	CDCP1	Oncology /ADC				Licensing opportunity
Discovery PJ/ Drug discovery research	Undisclosed	Oncology, CNS, autoimmune diseases, etc.	<p>※Completed new patent applications for the oncology project, one of the priority projects</p>			—



# CBA-1205 Phase 1 study

**CBA-1205: A decision was made to move to expansion part of Phase I trial**  
**Evaluate safety and initial efficacy of the drug in patients with hepatocellular carcinoma**



Patients' enrollment completed at a very quick pace despite the spread of coronavirus

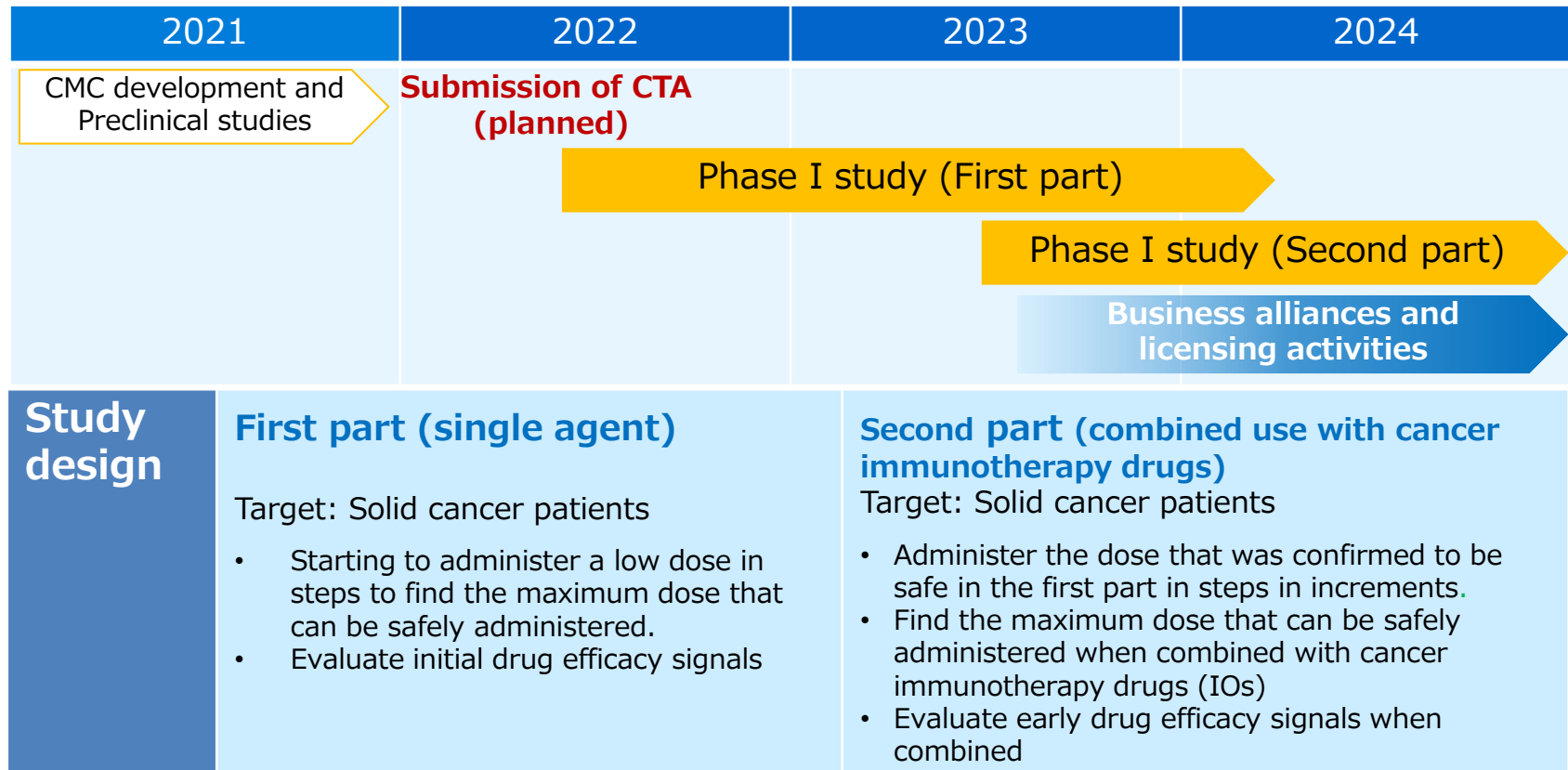
**No serious adverse reaction observed.**

**Confirmation of drug effect signal during the expansion part will be the key for early out-licensing**



# CBA-1535 Phase 1 study

## CBA-1535 Phase I Study Overview



### Aims of this development plan

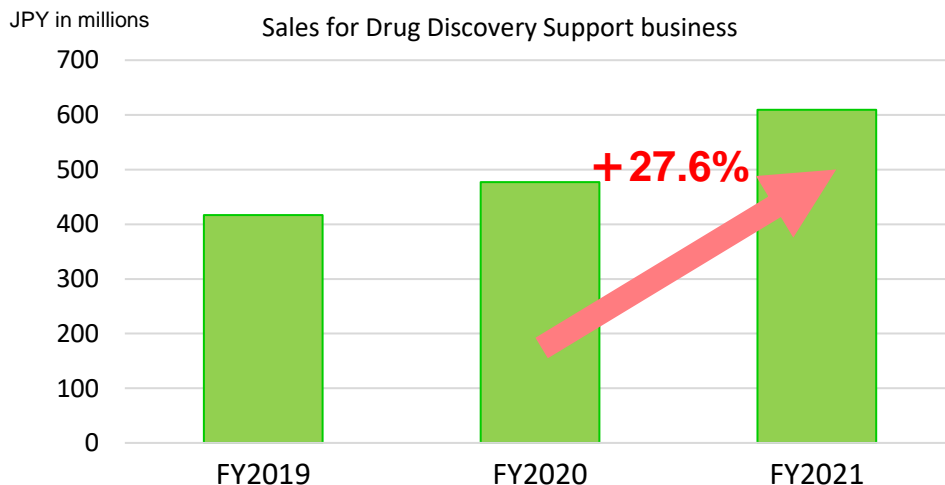
- This study is designed to confirm if CBA-1535 satisfies clinical needs such like safety and efficacy fastest by adopting combination use of IO in Phase 1
- Confirmation of safety in this study as a T Cell engager will be a milestone in the drug discovery using Tribody platform.

# Drug Discovery Support business



## Sales increase in contracted services

- New sales in the drug discovery support business for FY ending Dec 2021 were 609 million yen (up 27.6%) due to continued stable transactions with major domestic pharmaceutical clients and the contribution from Mologic and new pharmaceutical company transactions.
- Exceeded the forecast of FY ending Dec 2021 which was 530 million yen by 14.9%. In addition to the expansion of transactions with major clients, the completion of some projects ahead of schedule and the recording of sales in the fiscal year ending December 31, 2021, are factors to contribute the upward revision of the forecast in line with the new revenue recognition standard which will be applied from the FY ending December 31, 2022. Sales forecast for the FY ending December 31, 2022, is 620 million yen.
- Extension of contract master services agreement with Chugai Pharmaceutical and Chugai Pharmabody Research (CPR). (Chugai Pharmaceutical: extended until December 31, 2024, CPR: extended until December 31, 2026).



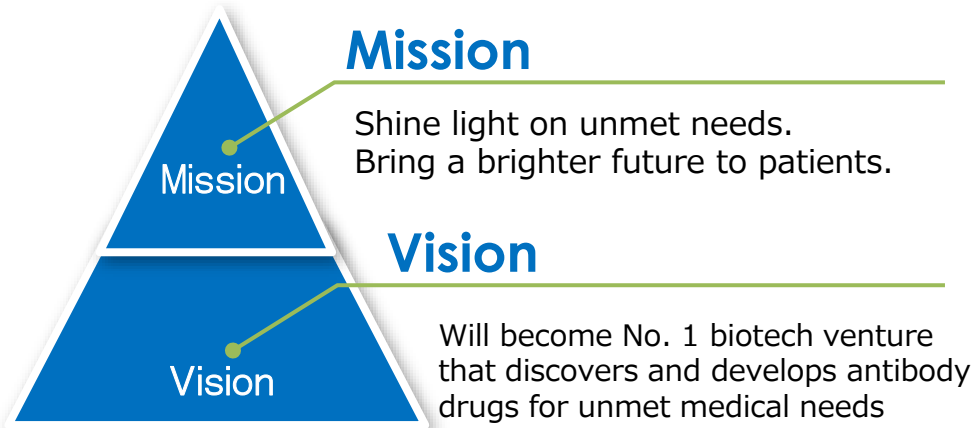
Major clients	Contract date
Chugai Pharmaceutical Co., Ltd.	Jun. 2011
Chugai Pharmabody Research Pte. Ltd	Aug. 2012
Mitsubishi Tanabe Pharma Co., Ltd. TANABE RESEARCH Laboratories U.S.A., Inc.	Dec. 2016
Ono Pharmaceutical Co., Ltd.	Oct. 2018
Kyowa Kirin Co., Ltd.	Jul. 2019



## **Appendix. Corporate information**



## Biotech company dedicating to satisfy unmet medical needs



### Management principle

- Place the highest priority on sound management and credibility and aim to become a corporation that grows with society.
- With creativity and science, develop therapeutic drugs for unmet medical needs, and contribute to the health of patients.
- Achieve successive product pipelines and improvement of corporate value through collaboration with external institutions.

- Founded:  
February 2005
- Listed on the stock exchange:  
Dec.2011  
(Tokyo Stock Exchange Mothers Section)
- President and Chief Executive Officer:  
Shigeru Kobayashi, M.E.



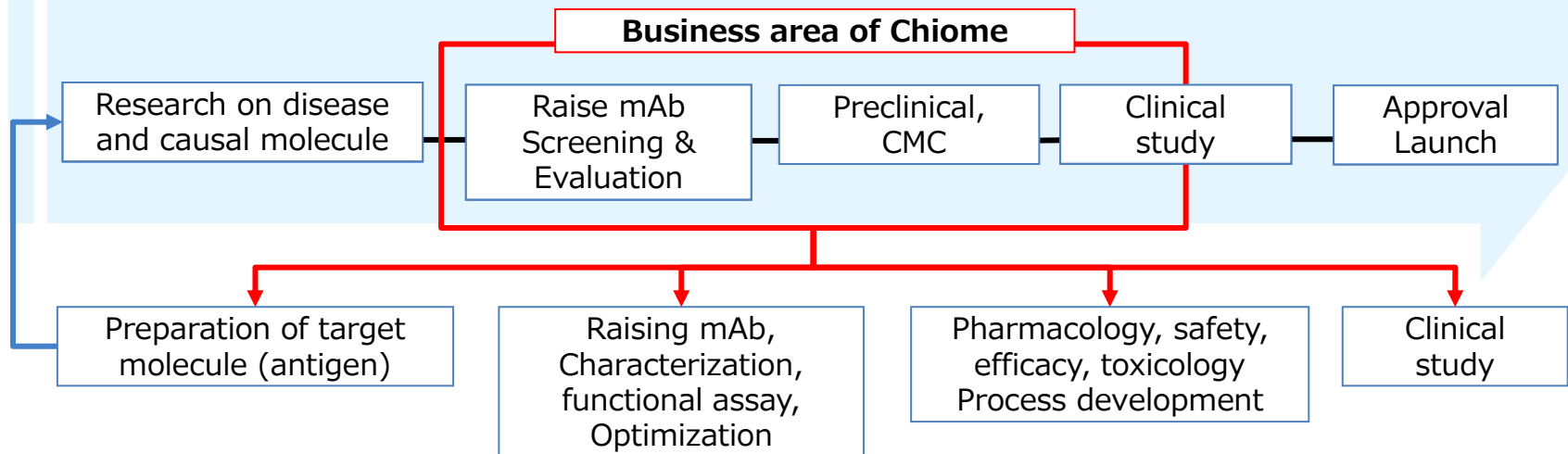
- Location :  
<Head Office and Research Laboratories>  
3-12-1Honmachi, Shibuya-ku, Tokyo  
<Drug Discovery Laboratories>  
2-13-3 Nogawahonchou, Miyamae-ku,  
Kawasaki-city, Kanagawa
- Number of Employees :  
62 (As of Dec. 31,2021)
- Business :  
Chiome Bioscience (4583.T), is a public company leveraging a proprietary monoclonal antibody generating technology, for drug discovery and development, as well as providing drug discovery supports.



## Antibody drug discovery for diseases where high unmet medical needs exist

- Intractable diseases for which effective treatment is not available
- Diseases for which some treatments are available, but not a drug
- Effective drugs are available, but are not easy to use or accompanies with hard side effects
- Difficult for a big pharma to focus on due to small number of patient

### Process of drug discovery



### Groups responsible for the roles above

Protein Group

Antibody Discovery

Antibody Discovery  
Labs.

Clinical  
Development





## Drug Discovery and Development Business

This is business to obtain revenues such as upfront, milestone, and royalty payments relating to out-licensing of patents of pipeline product and drug candidates, and also, income from collaborative research. It drives our future growth.

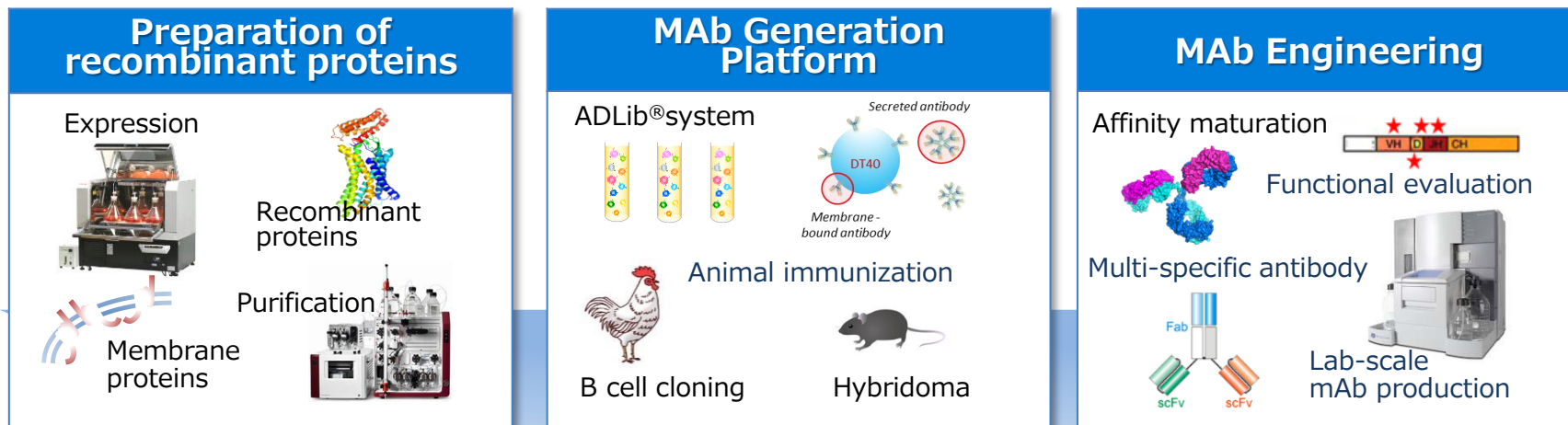
## Drug Discovery Support business

This is business to obtain revenues from antibody generation service by using platform technology that Chiome possesses to support drug discovery research at pharmaceutical companies, or for diagnostic and research purposes at academia or institutes on fee-for-service scheme. It secures constant revenue stream.

# Core competence for developing business



## Technology Platform (Chiome's mAb Discovery Engine)



Chiome possesses antibody platforms including its proprietary technology, and extensive know-hows and experiences in protein/antibody engineering to streamline the process of drug discovery.

### Advantage

Leveraging technology platforms to promote both Drug Discovery and Drug Discovery Support Businesses to Generate Sustainable Profits

### Drug Discovery and Development

Development of therapeutic drug and diagnostic agent

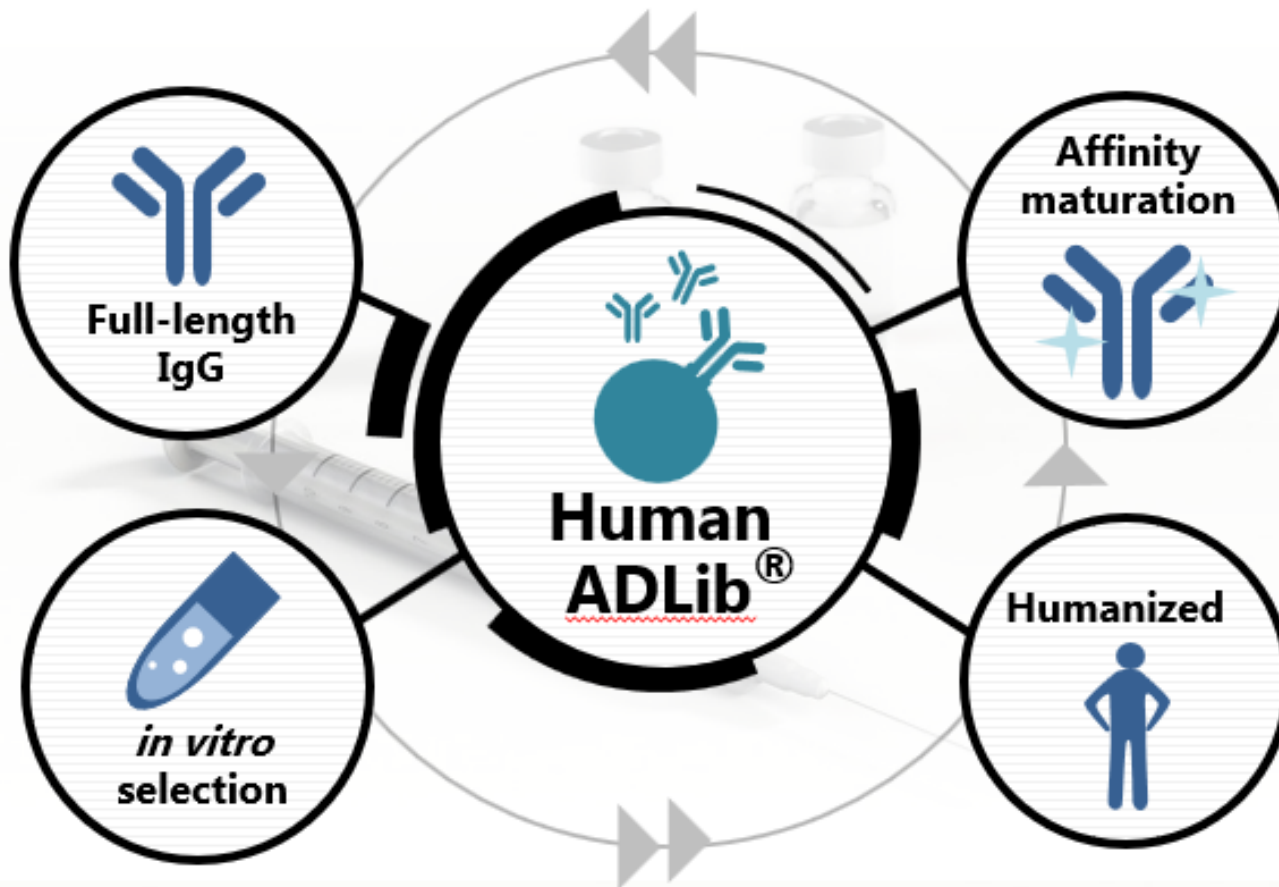
### Drug Discovery Support

Contract service for drug discovery

# Core technology : Human ADLib<sup>®</sup>System



## One-stop-order platform for antibody drug discovery

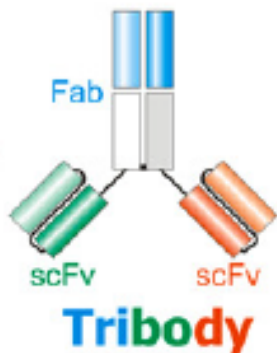


The ADLib<sup>®</sup>system offers a platform library with unique array space that adds seamless Affinity maturation function. It is a one stop order drug discovery and research tool that can complete all the steps necessary for antibody drug discovery such as selection, full-length IgG expression, humanization, and affinity maturation on 1 platform.

# Core technology : Tribody™



## Tribody™

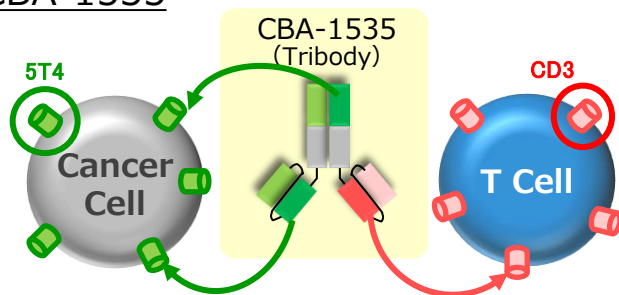


The Tribody technology enables the generation of multi-specific antibody products. This unique technology overcomes the key shortcomings of conventional mono- as well as of currently developed bi-specific antibody formats.



[Discover drug candidates utilizing Tribody technology](#)

## CBA-1535



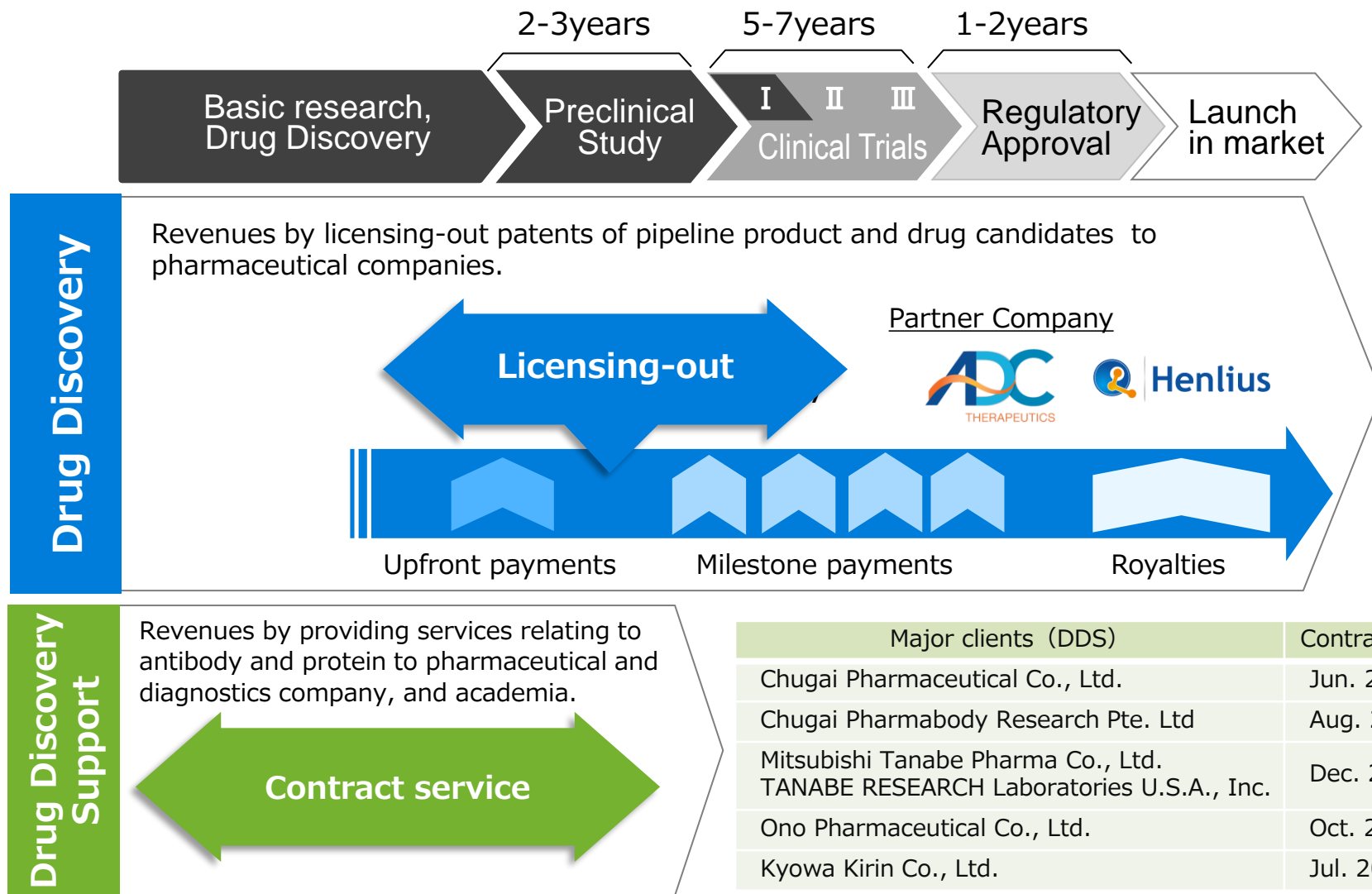
One of the binding sites can be designed to recruit immune cells (effector cells) with cytotoxic activity, such as T cells and NK cells, and the remaining 2 sites can be designed to bind to different epitopes of a cancer-specific antigen or to recognize different antigens expressed on the cancer cell surface.

Tribody™ enables creation of unique antibody by building multi-binding sites that bind to different antigen or epitope, which differentiate from conventional antibody.  
Chioe strives for developing an antibody drug with greater safety and higher efficacy.

# Revenue Model



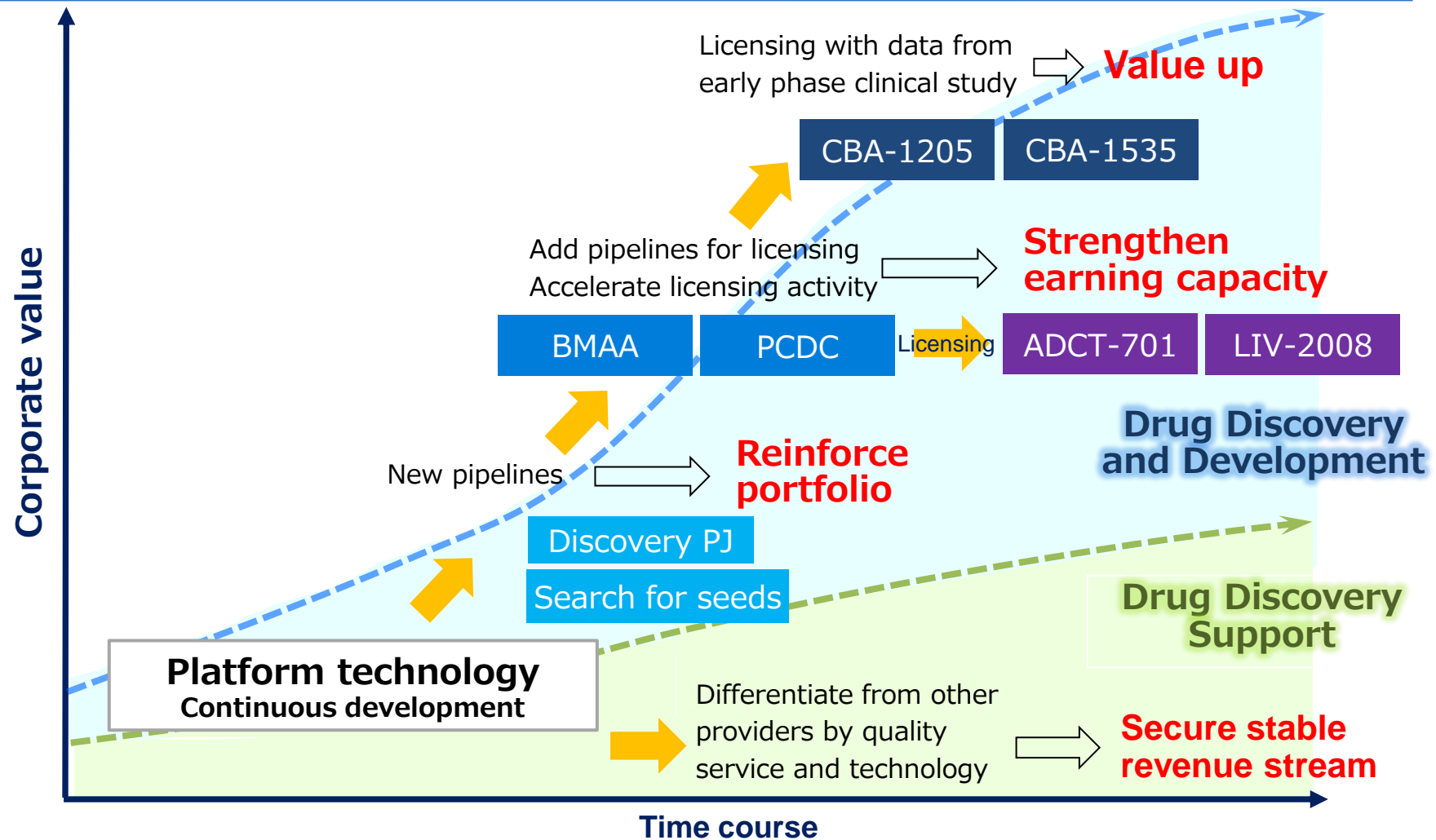
## Drug development process and Chiome's revenue model



# Business strategy for the future growth



Create candidate of innovative antibody drugs for unmet medical needs and pay maximum efforts to increase the corporate value by developing and licensing highly valuable antibodies.





## **Appendix. Pipeline information**

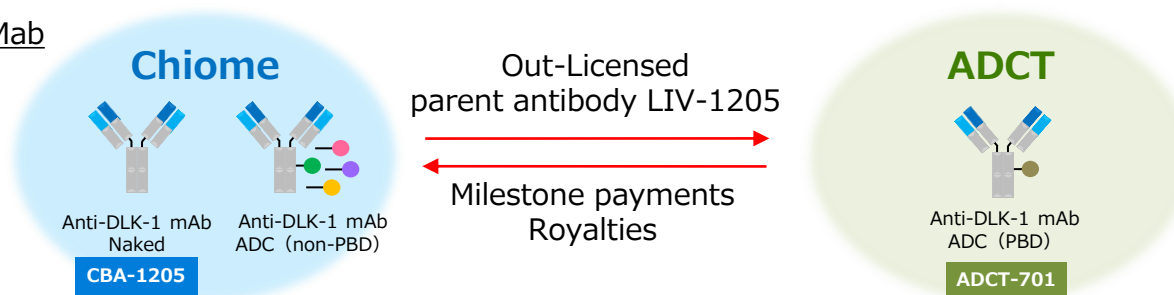
## ADCT-701\* (Humanized anti-DLK1 antibody ADC)



Therapeutic Area	Liver cancer, lung cancer, neuroblastoma etc.
Origin	An Antibody Drug Conjugate (ADC) form of LIV-1205 that was licensed out to Switzerland-based ADC Therapeutics SA in September 2017.
Patent	Granted in Japan, US, EU, China etc. (Humanized anti-DLK1 antibody )

- ✓ ADCT-701 is an antibody-drug conjugate of the antibody LIV-1205 developed by Chiome and PBD\* (\*Pyrrolobenzodiazepine : Drug with anti-tumor properties)
- ✓ ADCT is preparing for the filing of an IND for ADCT-701 in 2022.
- ✓ ADCT to develop the drug with National Cancer Institute (NCI) in neuroendocrine cancer.

### Rights of Anti-DLK1 Mab



Chiome has right to develop ADCs other than PBD, and it opened up the possibility of strategic development of anti-DLK-1 antibody.





## ADC Therapeutics entered into a collaboration with the National Cancer Institute (NCI) for the development of ADCT-701, targeting DLK-1.

- ✓ ADC Therapeutics and the National Cancer Institute (NCI) started a collaboration aimed at the continued development of ADCT-701, targeting DLK-1, in neuroendocrine malignancies.
- ✓ Chiome granted ADCT a worldwide exclusive license with a right to sublicense, develop, manufacture, and commercialize an ADC format of LIV-1205 and PBD conjugate.

### ADC Therapeutics Inc.

ADC Therapeutics is based in Switzerland and is focused on the development of proprietary antibody drug conjugates for the treatment of both solid and hematological cancers. ADC Therapeutics' CD19-directed ADC ZYNLONTA® is approved by the FDA, and it has multiple PBD-based ADCs in ongoing clinical trials in the USA and in Europe.



### About National Cancer Institute(NCI)

The NCI is part of the National Institutes of Health (NIH) in the United States and is one of eight organizations that constitute the Department of Public Health and Human Services. NCI is involved in much of the development of anti-cancer drugs in the United States, and in addition to having a large research program within the organization, it is also actively funding cancer researchers in the United States.



## LIV-2008 (Humanized anti-TROP2 antibody)



Therapeutic Area	Breast cancer (TNBC), lung cancer, colorectal cancer etc.
Expectation	LIV-2008 is a humanized monoclonal antibody targeting cell surface antigen "TROP-2" which is overexpressed in breast cancer, colon cancer, lung cancer and several types of solid cancers and is also expected to play a key role against the proliferation of cancer cells.
Patent	Granted in Japan, US, EU, China etc.

- ✓ Chiome grants an exclusive license, with sublicensing rights, to Henlius for development, manufacturing and marketing of LIV-2008/2008b and its derivatives in China (including Hong Kong Special Administrative Region, Macau Special Administrative Region, and Taiwan region)
- ✓ Chiome also grants to Henlius an option right to develop, manufacture and sale in the rest of the world other than the initial territory.

(Henlius Company website : [HKEX-EPS\\_20210114\\_9583899\\_0.PDF \(windows.net\)](#))

### Conditions

Upon exercise of the above option rights to develop, manufacture and market the product on a worldwide basis, there is an agreement for a total of up to approximately US\$122.5 million in upfront payments and milestone payments based on progress in development and sales. In addition, royalty income at a fixed rate based on the sales value will be paid if the product is launched.



## CBA-1205 (Humanized afucosylated anti-DLK1 antibody)

First in class

Origin	A humanized antibody generated by hybridoma technology in Livtech which Chiome acquired in 2015.
ADCC	GlymaxX (ProBioGen)
Therapeutic Area	Liver cancer, lung cancer, neuroblastoma etc.
Expectation	First-in-class therapeutic antibody targeting intractable cancers. Providing new therapeutics for highly malignant tumors that are without effective therapeutic drugs including hepatocellular carcinoma.
Patent	Granted in Japan, US, Europe, China etc.

### Phase I clinical trial

First part : Evaluate the safety in patients → **Evaluation completed.**

**No serious adverse reaction reported.**

Expansion part: Evaluate the safety and efficacy of the drug in patients with hepatocellular carcinoma.

Poster presentation at the annual meeting of the American Association for Cancer Research (AACR)

Title : CBA-1205, a novel glycoengineered humanized antibody targeting DLK-1 exhibits potent anti-tumor activity in DLK-1 expressing tumor xenograft models

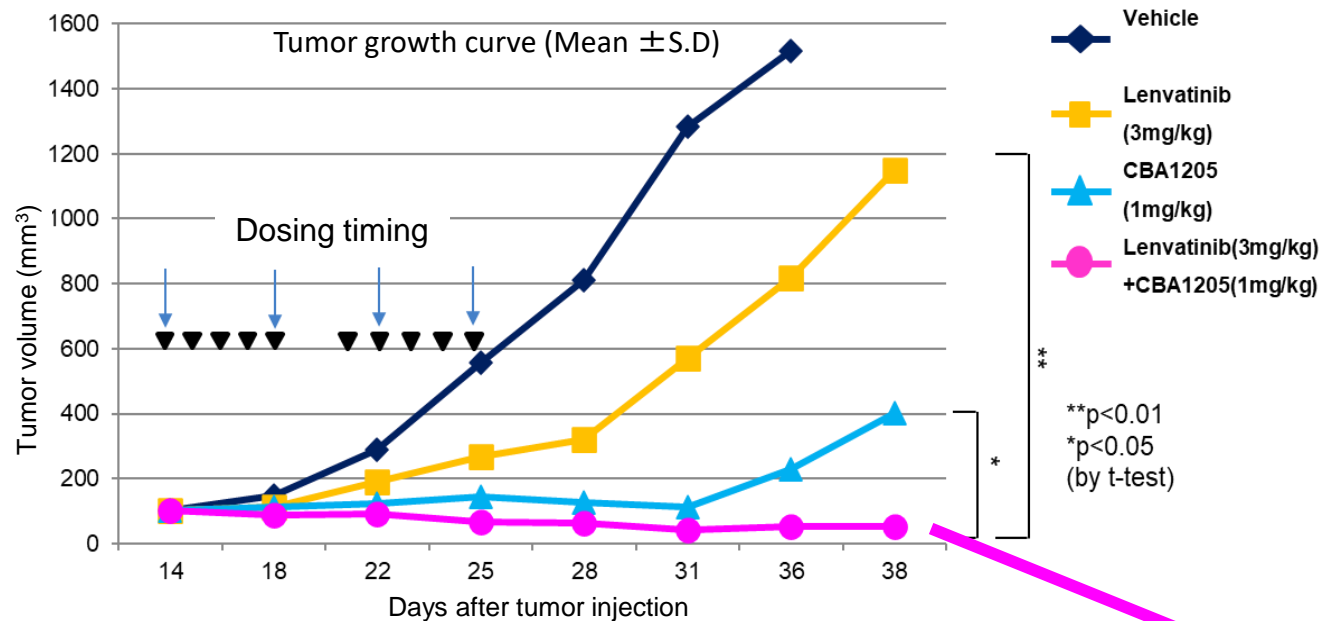
<https://www.abstractsonline.com/pp8/#!/6812/presentation/2425>

(April 2019)

A patent application, "Combination of CBA-1205 and Lenvatinib" filed in 2019 is published

## Mouse xenograft study: Hep3B hepatoma model CBA-1205 + Lenvatinib

Patent: WO/2020/204033



### Dosing regimen

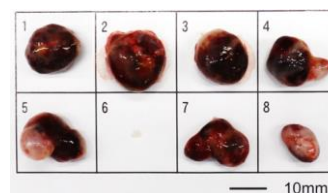
CBA-1205 : i.p., twice a week x 2 weeks

Lenvatinib: p.o., daily x 5 days a week for 2 weeks

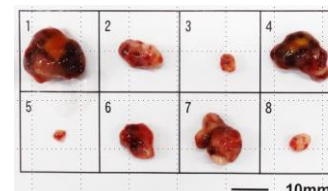
**Remarkable tumor regression was observed in combination of CBA-1205 and Lenvatinib in HCC xenograft treatment model.**

### Tumors on Day 38

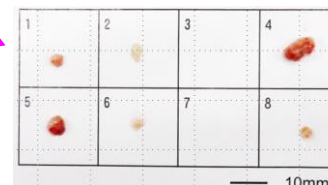
#### Lenvatinib (3 mpk)



#### CBA-1205 (1 mpk)



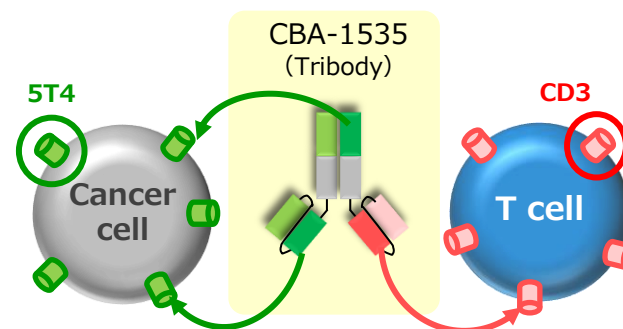
#### LEN (3 mpk) + CBA-1205 (1 mpk)



## CBA-1535 (Humanized anti 5T4 & CD3 trispecific antibody)

<b>Origin</b>	CBA-1535 is a T-cell engager, trispecific antibody, directed against the 5T4 tumor antigen, a protein found on various solid tumors and is thought to be involved in metastasis.
<b>Therapeutic Area</b>	Malignant mesothelioma, small cell lung cancer, non small cell lung cancer, TNBC etc.
<b>Expectation</b>	First-in-class therapeutic antibody with tri-specific format Offer a new treatment option for a disease which has poor prognosis and where there are only a few effective treatments.
<b>Patent</b>	Granted in Japan, UK, US, China. Pending in Europe etc.

- ✓ Celonic (CMO) completed the manufacturing of the drug substance and investigational drugs.
- ✓ As the coronavirus infection is unlikely to be brought under control, we have decided to apply for clinical trials in Japan rather than in the UK, which was originally planned, as this would have a relatively low impact on development.
- ✓ Clinical trial submission is expected in the first half of 2022.





## BMAA (Humanized anti-Semaphorin3A antibody)

First in class

Origin	A humanized antibody generated using the ADLib® System. Demonstrated as a selective antibody possessing functional inhibitory activity through collaboration with Professor Yoshio Goshima in Yokohama City University.
Therapeutic Area	Undisclosed
Expectation	To be applied in a wide range of disease areas including inflammatory and CNS diseases which involve SEMA3A. Providing treatment methods for patients who do not respond to traditional therapeutics for diabetic retinopathy, which is the primary medical condition causing loss of sight in adulthood.
Patent	Granted in Japan, US and Europe etc.

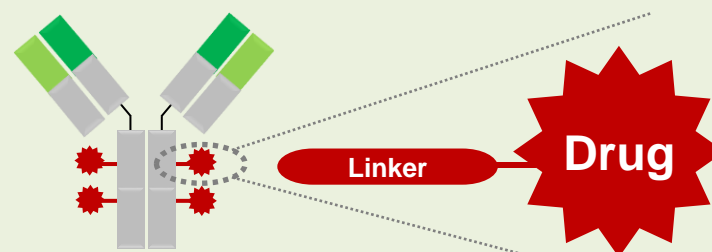
- ✓ Completion of a research collaboration with an overseas research institute aimed at diseases involving Semaphorin 3A.
- ✓ The data obtained so far on Semaphorin 3A and the exploratory research data (Semaphorin family) will be used for future business development activities.

## PCDC (humanized anti-CDCP1 antibody for antibody drug conjugate)

Origin	Humanized anti-CDCP1 antibody discovered by Chiome's proprietary antibody technologies.
Potential indication	Solid tumors (lung, colorectal, pancreatic, breast, ovarian etc.)
Opportunities	CDCP1 is a First-in-class therapeutic target highly expressed in broad range of solid tumors, including standard-of-care resistant cases. High efficacy and safety expected from binding and toxicological profiles of the antibody.
Patent application	"ANTI-CDCP1 ANTIBODY" : The international patent application is filed under the PCT.

- ✓ Open for licensing opportunities as an antibody for ADC
- ✓ Additional *in vivo* efficacy/safety studies are ongoing.
- ✓ Patent application was published from WIPO (7/2021)

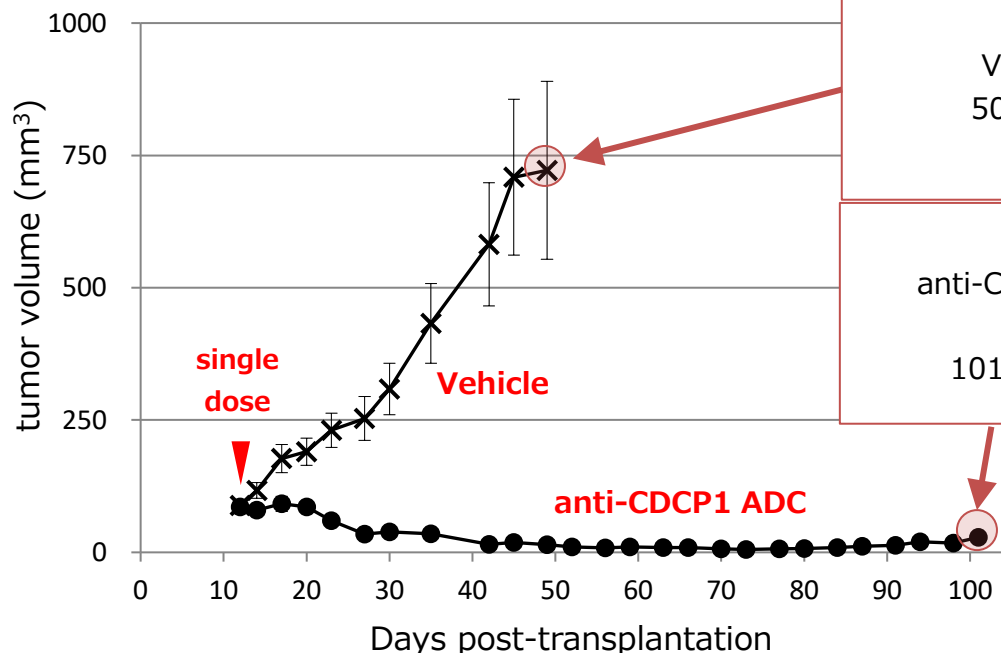
### Antibody-Drug Conjugate Technology



**A patent application for PCDC “Anti-CDCP1 antibody” is published**  
~The antibody for highly effective antibody-drug conjugate against various solid tumors~

Patent :WO/2021/132427

## Anti-tumor efficacy against prostate cancer xenograft model



—×— Vehicle (Phosphate buffered saline)  
—●— Anti-CDCP1 ADC (1 mg/kg dosage)

arrow : tumor

Vehicle  
50 days



anti-CDCP1  
ADC  
101 days



## Tumors overexpressing CDCEP1

- ◆ Lung
- ◆ Head & Neck
- ◆ Esophageal
- ◆ Colorectal
- ◆ Cervical
- ◆ Breast
- ◆ Ovarian
- ◆ Prostate etc.





# **Shine light on unmet needs. Bring a brighter future to patients.**

**To accelerate drug discovery and development of mAb  
for therapeutics to overcome current medical unmet-needs**





- 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.
- The Company disclaims any intention or obligation to update or revise any forward-looking statements whether as a result of new information, future events or otherwise.