

Supplementary Information for Financial Results Q1 FY12/22

May 13, 2022



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

Chiome Bioscience Inc.



- 1. Overview of Q1 FY12/22 “Financial results”**
- 2. Overview of Q1 FY12/22 “Operation highlights”**

Appendix.

- Corporate information**
- Pipeline information**



Overview of Q1 FY12/22 “Financial results”

Financial results: Profit and Loss



(JPY in millions)

	Q1 FY2021	Q1 FY2022	Increase (decrease)	Main reasons for increase / decrease
Net sales	246	128	(117)	
Drug Discovery & Development	103	0	(103)	Upfront payment of the out-licensing contract was recorded in FY12/21
Drug Discovery Support	143	128	(14)	
COS/SGA	401	615	213	
R&D Expense	216	446	229	Expenses recorded for the completion of manufacturing of study drugs for CBA-1535
Other costs	185	169	(15)	
Operating Loss	(155)	(486)	(331)	
Ordinary Loss	(149)	(491)	(341)	
Net Loss	(160)	(492)	(331)	

Financial results: Balance Sheet



(JPY in millions)

	As of Dec. 31, 2021	As of Mar. 31, 2022
Current assets	2,216	2,005
(Cash on hand in banks)	1,790	1,744
(Other current assets)	425	260 ^{*1}
Non-current assets	122	121
Total assets	2,339	2,126
Current Liabilities	392	419
Non-current liabilities	53	53
Total liabilities	446	473
Total net assets	1,893	1,653
Total liabilities and net assets	2,339	2,126

Explanation of balance sheet

*1 Upon completion of manufacturing of study drugs for CBA-1535, advance payments were reversed and charged to the current period as an expense



Overview of Q1 FY12/22 “Operation highlights”

Operation highlights



Drug Discovery and Development – Pipeline

CBA-1205

Humanized afucosylated anti-DLK1 antibody

- ✓ The first part of the Phase I clinical study showed high safety and tolerability. Several cases were confirmed where the administration has lasted more than 6 months amongst patients who were refractory to standard treatments
- ✓ The enrollment of patients for the second part of the clinical study Phase I and the process of adding extra clinical study sites are in progress.

CBA-1535

Humanized anti 5T4 & CD3 trispecific antibody

- ✓ The submission of the clinical study plan to the Pharmaceuticals and Medical Devices Agency (PMDA) was completed on February 16, 2022.
- ✓ The processes are in place at the clinical study sites for the first clinical study in the world for Tribody antibody.

Discovery Projects

- ✓ Amongst priority projects, an application for a new substance patent completed for an oncology project
- ✓ Research on new drug discovery projects related to Tribody is also in progress and we will work on the patent application to be filed for this fiscal year.

Pipeline - Out-Licensed programs

LIV-2008

Humanized anti-TROP2 antibody

- ✓ Henlius, which we out-licensed, has multiple development plans under consideration for future IND applications.

ADCT-701

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



Drug Discovery Support Business

Deals with pharmaceutical companies

- ✓ In applying the new revenue recognition standard, some projects were recorded as revenue in FY12/2021. Despite the sales decrease compared year-on-year, steady transactions with existing clients that are mainly domestic pharmaceutical companies were conducted.
- ✓ Launch of a diagnostic kit by Fujirebio using our ADLib® system.

Core Technology

ADLib® system

Tribody™

- ✓ Participated in a subsidized project by Japan Agency for Medical Research and Development (AMED) (researches on infectious disease areas, technical improvement for ADLib® system)
- ✓ ADLib Notice of Allowance
 - Patent for a method of promoting diversification of the variable region of antibodies (Japan)
 - Antibody acquisition methods (Europe)
- ✓ Publication of the paper: Research results on cancer immunotherapy using Tribody™ technology <https://www.mdpi.com/1422-0067/23/7/3466>
- ✓ Conference presentation: A research group led by Associate Professor, Naoya Yamashita, from the Faculty of Applied Bioscience, Kanagawa Institute of Technology presented "Construction of the ELISA assay to quantify Semaphorin 3A in the adult brain". The antibody was obtained using our ADLib® 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~ ADC Therapeutics
LIV-2008 /2008b	TROP-2	Oncology				2021.1~ Henlius

In-house developed product

★ First in class

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

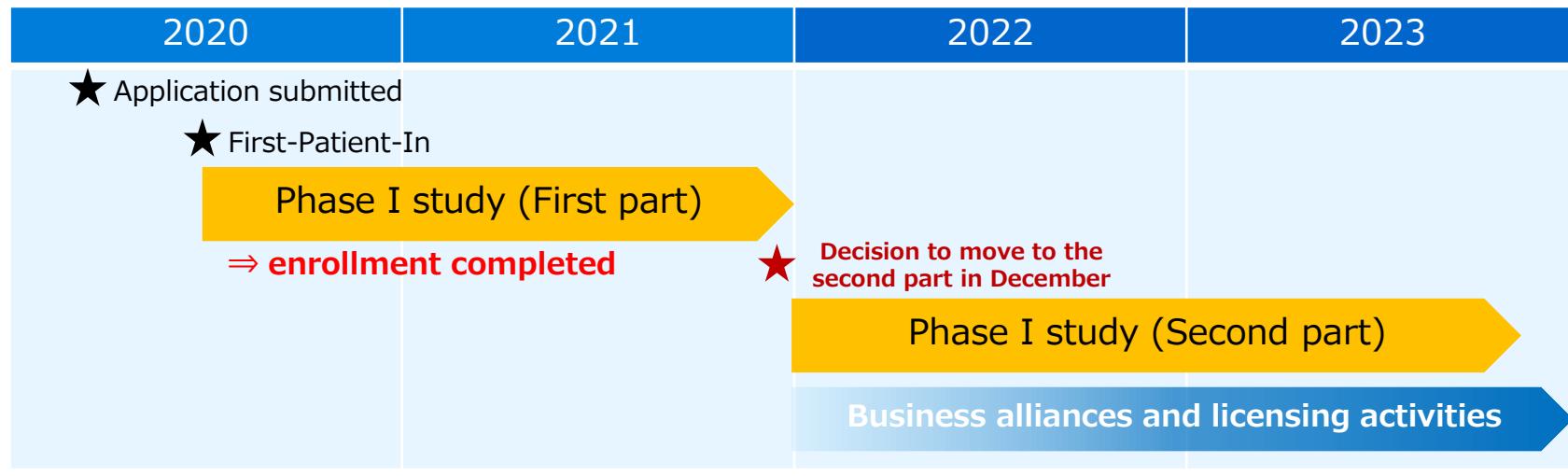
License candidate and drug discovery project

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



CBA-1205 Phase 1 study

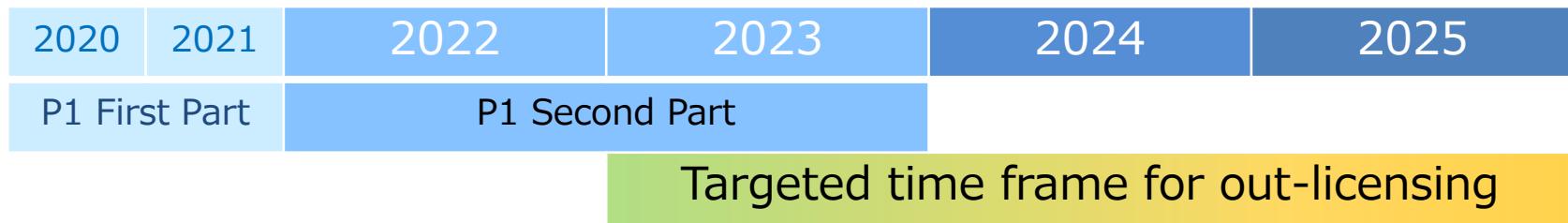
CBA-1205 In the first part, several cases were confirmed where the administration has lasted more than 6 months amongst patients who were refractory to standard treatments



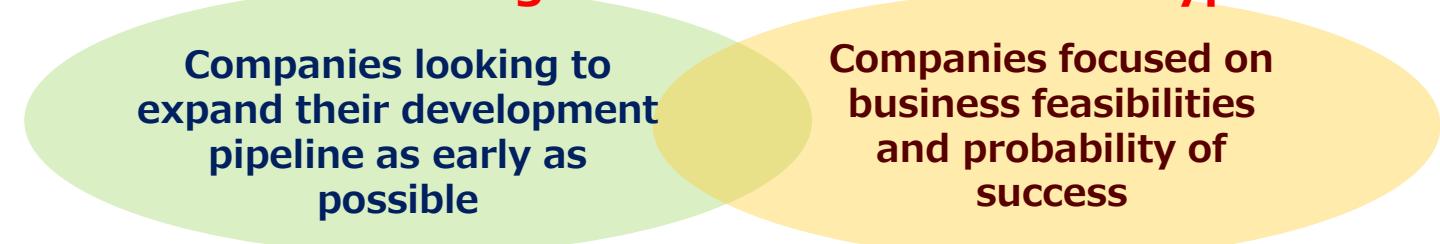
Study design	First part (Dose escalation) Safety, tolerability, and pharmacokinetics in patients with solid tumors will be evaluated and the maximum tolerated dose is determined.	Second Part (Expansion part) Safety, tolerability, and exploratory efficacy will be evaluated in patients with advanced and/or recurrent hepatocellular carcinoma.
--------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

- No serious adverse reactions reported
- **Several cases where the administration has lasted more than 6 months amongst patients who were refractory to standard treatments were confirmed**

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



Out-licensing candidates: 2 different types



Possible points for evaluation and consideration



- 1st-in-class (original drug)
- High safety in humans
- Patents granted in major regions
- Manufacturing method established, information for clinical studies in place

- The response rate in patients
- Biomarker
- Comparison with other drugs, advantages
- Expansion of cancer types, business possibilities

Upfront payment \leq Upfront payment

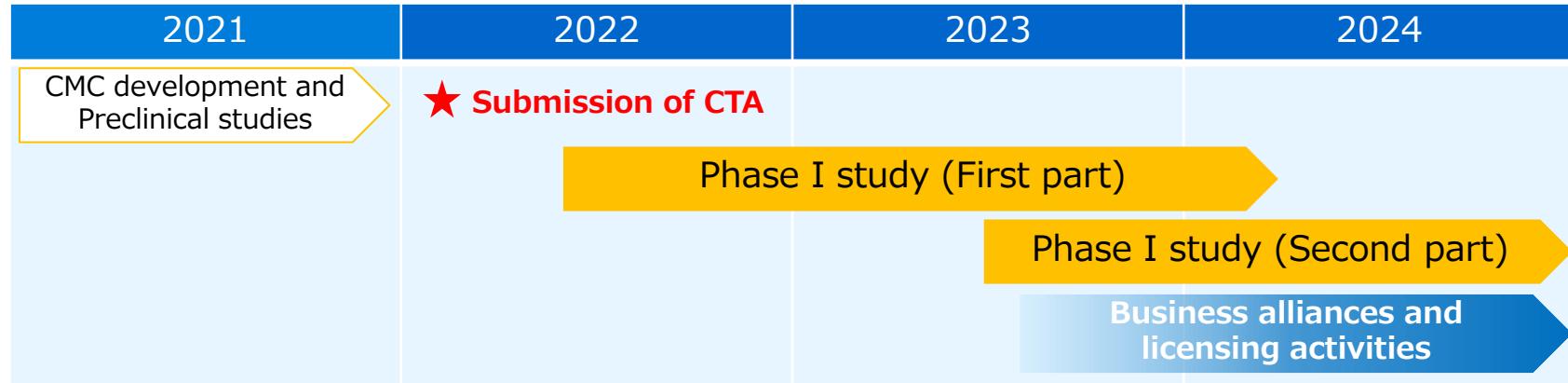


Expectations for a surplus in a single year by out-licensing in early-stage or after P1



CBA-1535 Phase 1 study

CBA-1535 Phase I Study Overview



Study design

First part (single agent)

Target: Solid cancer patients

- Starting to administer a low dose in steps to find the maximum dose that can be safely administered.
- Evaluate initial drug efficacy signals

Second part (combined use with cancer immunotherapy drugs)

Target: Solid cancer patients

- Administer the dose that was confirmed to be safe in the first part in steps in increments.
- Find the maximum dose that can be safely administered when combined with cancer immunotherapy drugs (IOs)
- Evaluate early drug efficacy signals when combined

Aims of this development plan

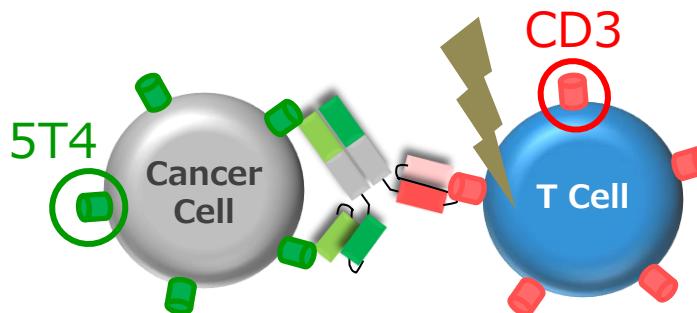
- This study is designed to confirm if CBA-1535 satisfies clinical needs such like safety and efficacy fastest by adopting combination use of IO in Phase 1
- Confirmation of safety in this study as a T Cell engager will be a milestone in the drug discovery using Tribody platform.

Potential applications for Tribody™



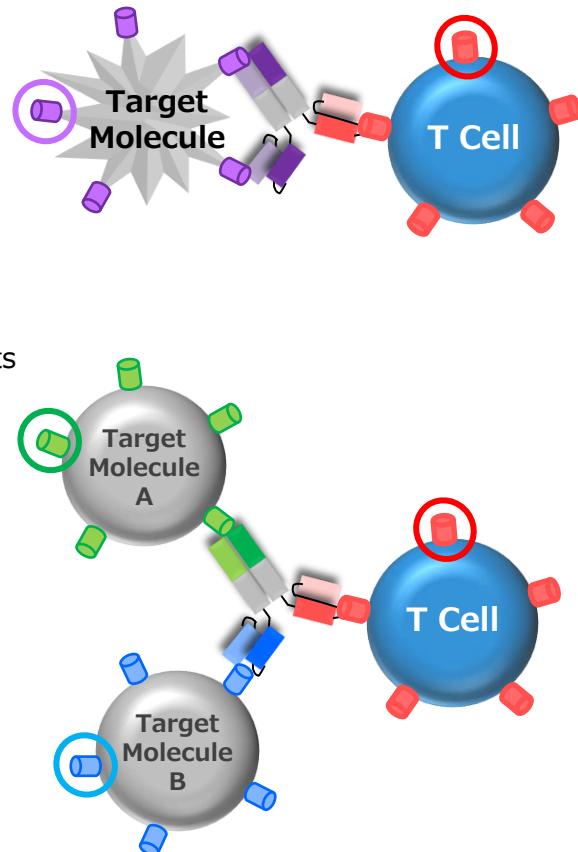
By applying therapeutic targets to those other than 5T4, research efficiency and the creation of a new continuous pipeline are expected

CBA-1535



Varying combination of targets and number of binding

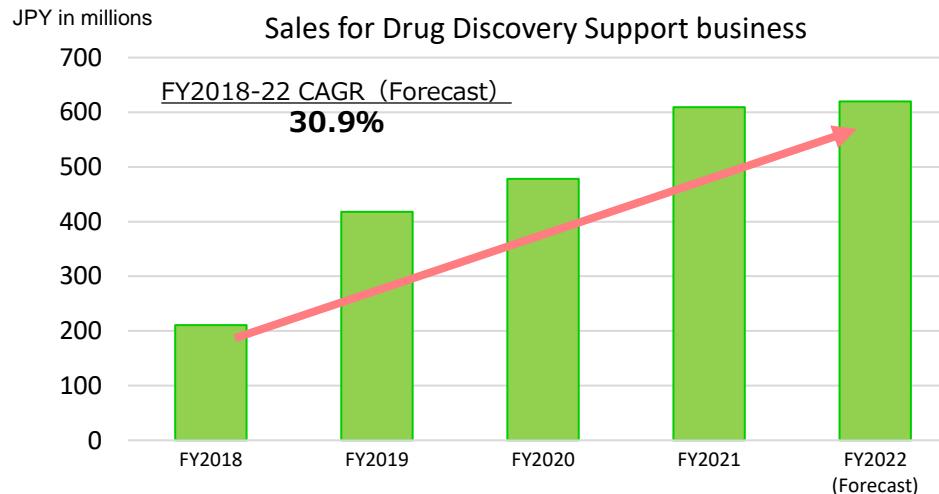
Candidate for new development





Sales increase in contracted services

- Net sales for the first quarter amounted to ¥128 million (a decrease of ¥14 million year-on-year).
- Despite the sales decrease compared year-on-year, steady transactions with existing clients, mainly domestic pharmaceutical companies, were conducted.
- In applying the new revenue recognition standard, some transactions were recorded as revenue in FY12/2021.
- Net sales forecast of ¥620 million in the drug discovery support business for the year ending December 31, 2022.



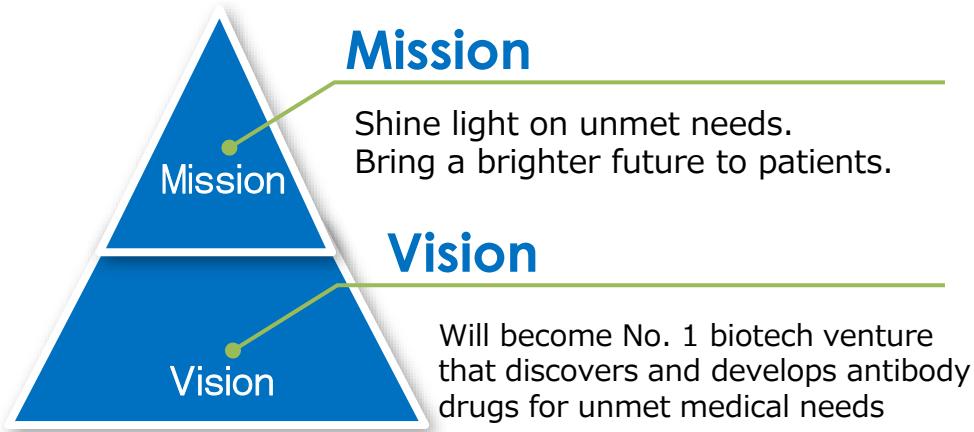
Major clients	Contract date
Chugai Pharmaceutical Co., Ltd.	Jun. 2011
Chugai Pharmabody Research Pte. Ltd	Aug. 2012
Mitsubishi Tanabe Pharma Co., Ltd.	Dec. 2016
TANABE RESEARCH Laboratories U.S.A., Inc.	
Ono Pharmaceutical Co., Ltd.	Oct. 2018
Kyowa Kirin Co., Ltd.	Jul. 2019



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 Growth Section)
- President and Chief Executive Officer: Shigeru Kobayashi, M.E.
- Location :
<Head Office and Research Laboratories>
3-12-1 Honmachi, 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.

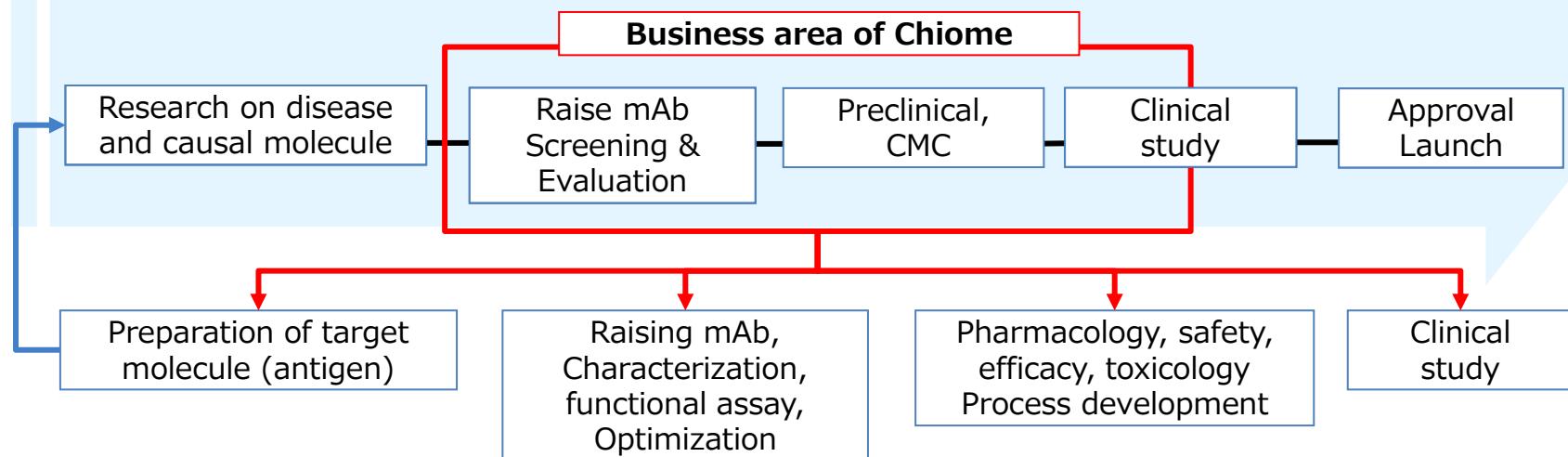




Antibody drug discovery for diseases where high unmet medical needs exist

- 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.

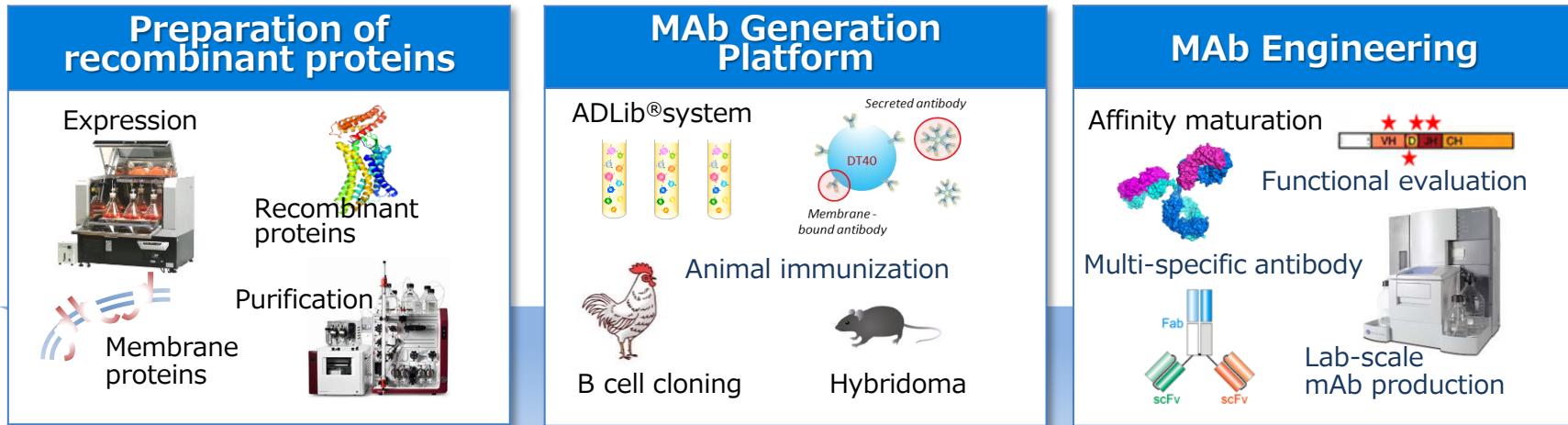
Drug Discovery Support business

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

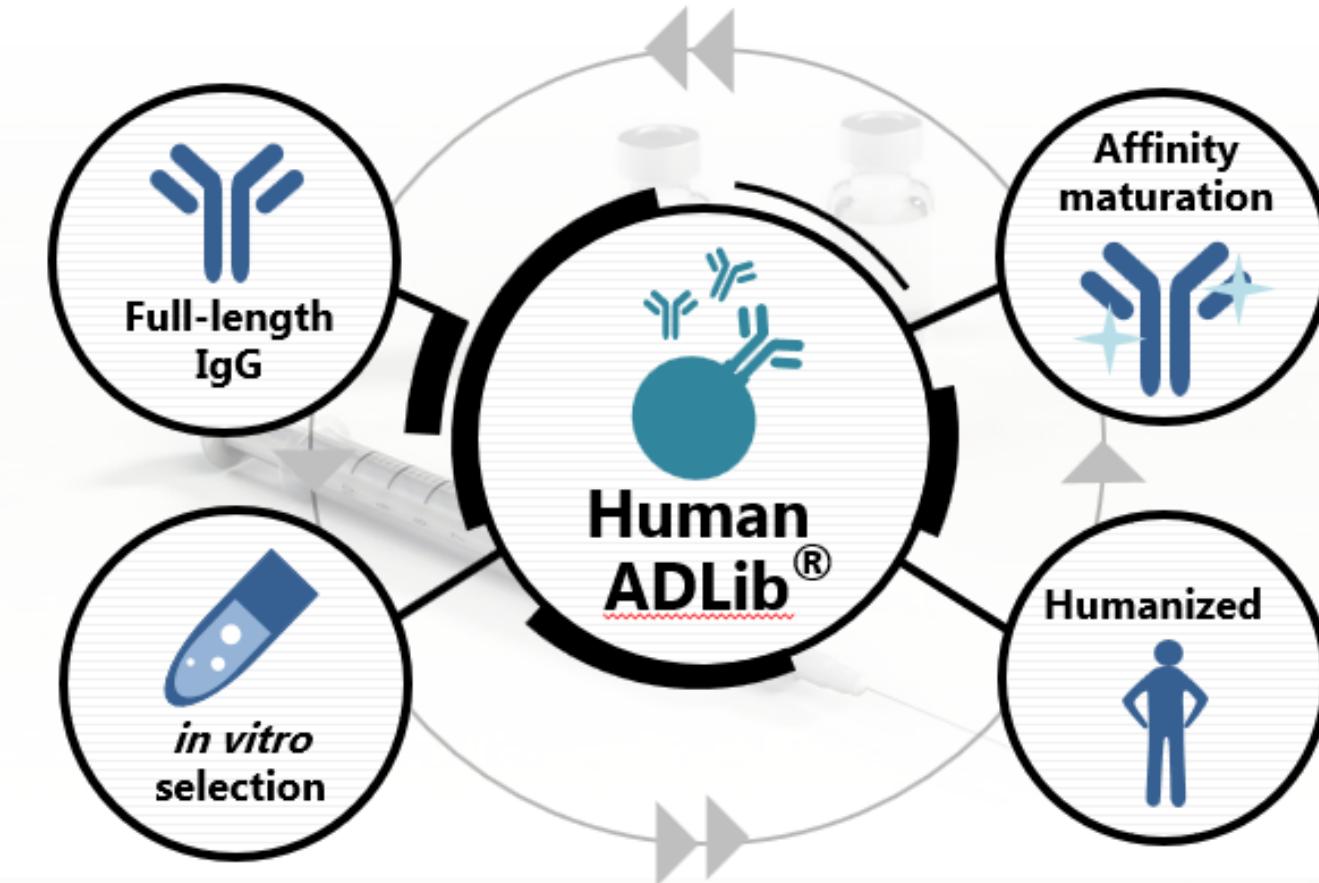
Drug Discovery Support

Contract service for drug discovery

Core technology : Human ADLib®System



One-stop-order platform for antibody drug discovery



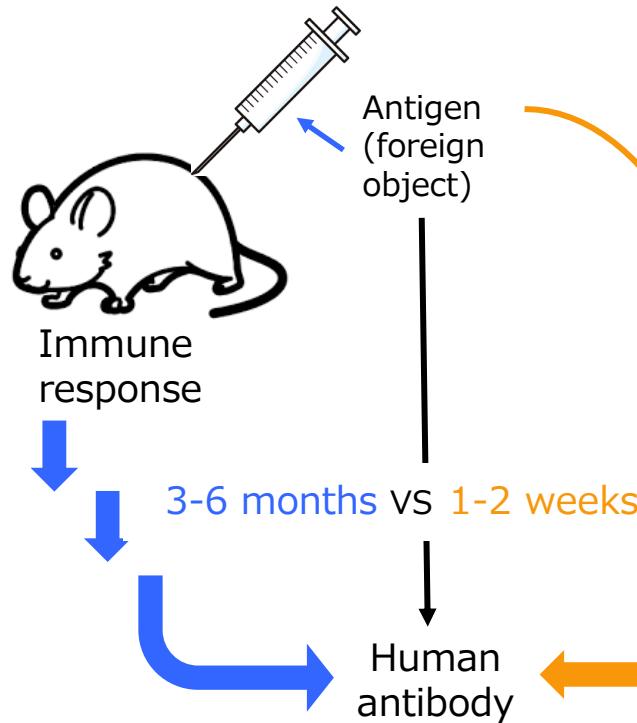
The ADLib® system offers a platform library with unique array space that adds seamless Affinity maturation function. It is a one stop order drug discovery and research tool that can complete all the steps necessary for antibody drug discovery such as selection, full-length IgG expression, humanization,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

Core technology that support 2 businesses: ADLib® System

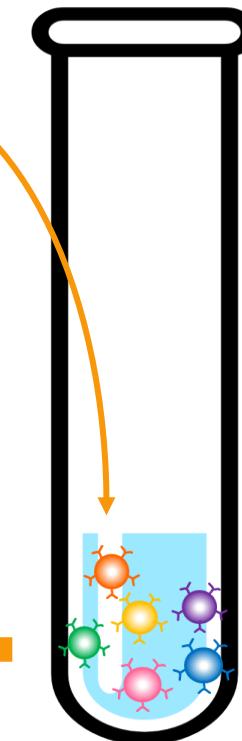


Generating method of human antibodies in cultured cells (in vitro) without living organisms (animals)

Animal immunization method



ADLib® system

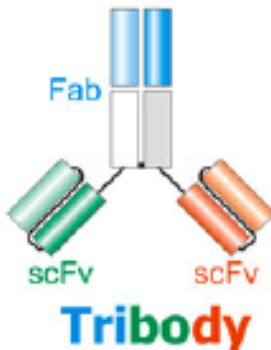


- Acquire human antibodies **in a short period of time**
- Unlike immunization methods using individual animals, **not affected by immune tolerance**
- By utilizing the feature of autonomous genetic diversification, **a high affinity of antibodies can be achieved in sequence**
- Acquire antibodies as early as possible leads to **early application for patents**

Core technology : Tribody™



Tribody™

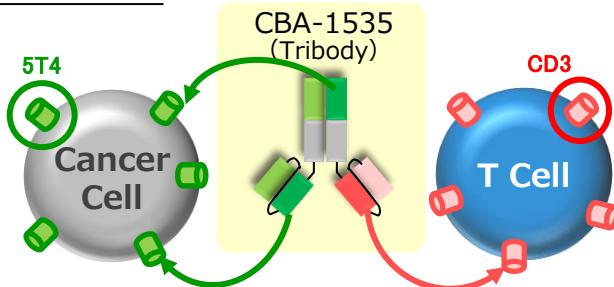


The Tribody technology enables the generation of multi-specific antibody products. This unique technology overcomes the key shortcomings of conventional mono- as well as of currently developed bi-specific antibody formats.



[Discover drug candidates utilizing Tribody technology](#)

CBA-1535



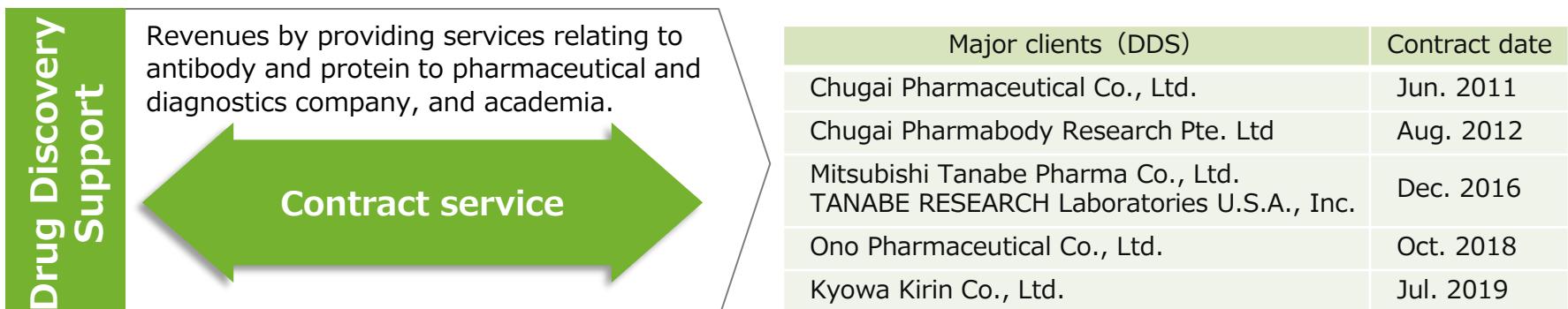
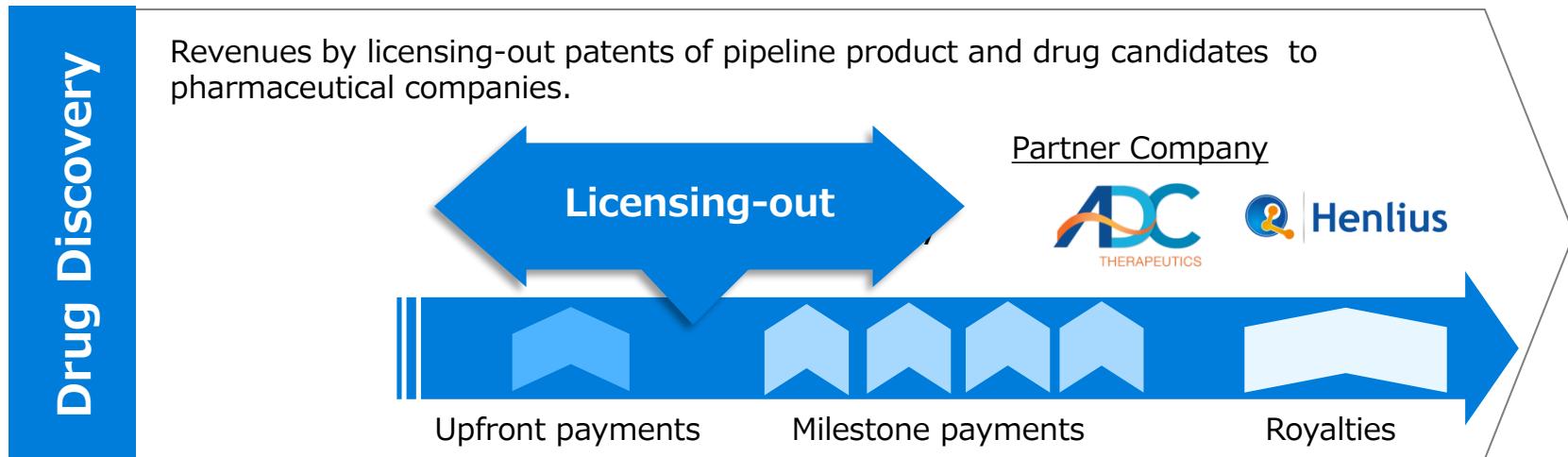
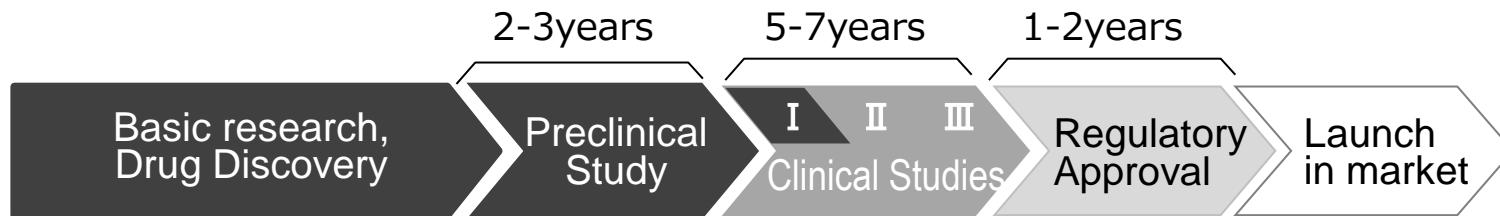
One of the binding sites can be designed to recruit immune cells (effector cells) with cytotoxic activity, such as T cells and NK cells, and the remaining 2 sites can be designed to bind to different epitopes of a cancer-specific antigen or to recognize different antigens expressed on the cancer cell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

By combining targets and the number of binding, **it is expected to generate antibodies to targets that could not be made into drugs in the past, and that have characteristics that will free patients from the need to administer multiple drugs in combination.**

Revenue Model



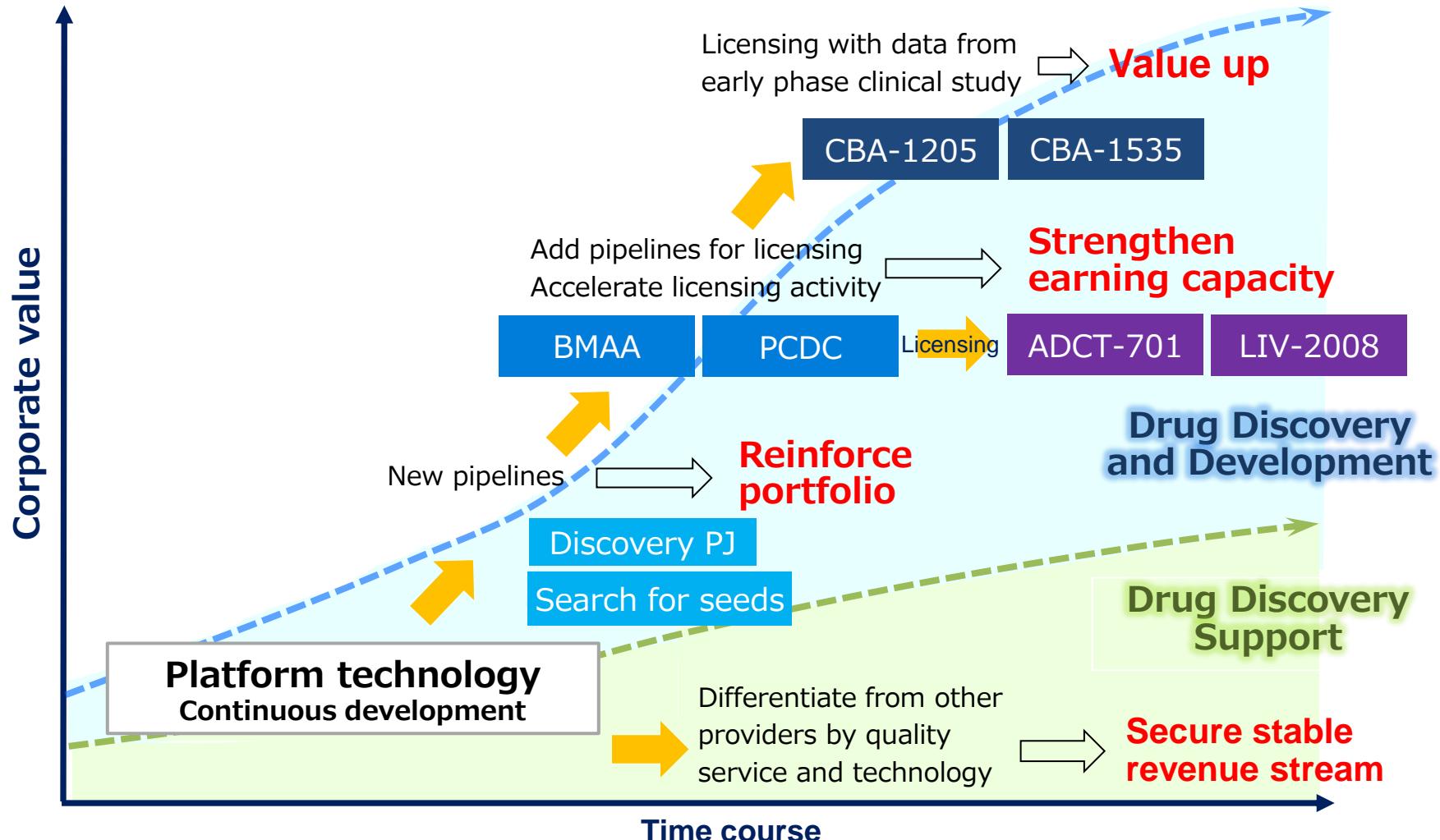
Drug development process and Chiome's revenue model



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



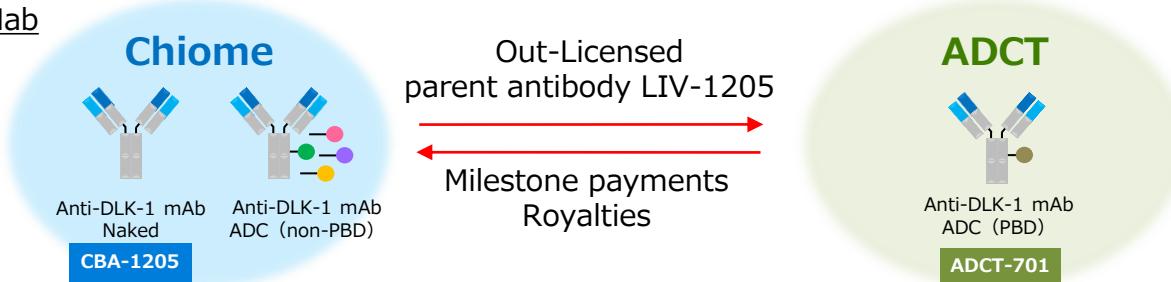
ADCT-701* (Humanized anti-DLK1 antibody ADC)



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 Clinical study for ADCT-701 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 studies in the US 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 \(windows.net\)](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 study

First part: Evaluate the safety in patients

Enrollment completed.

No serious adverse reaction reported.

Several cases were confirmed where the administration has lasted more than 6 months amongst patients who were refractory to standard treatments.

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

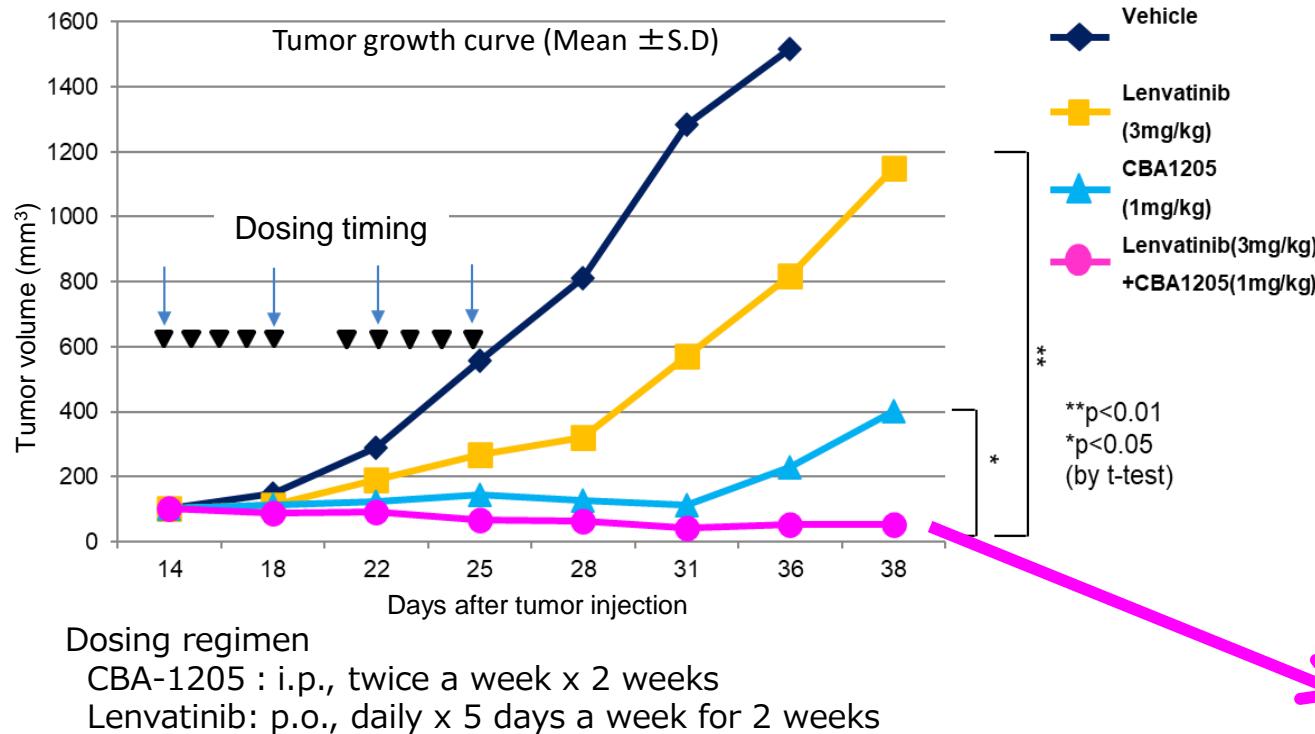
<https://www.abstractsonline.com/pp8/#!/6812/presentation/2425>

(April 2019)

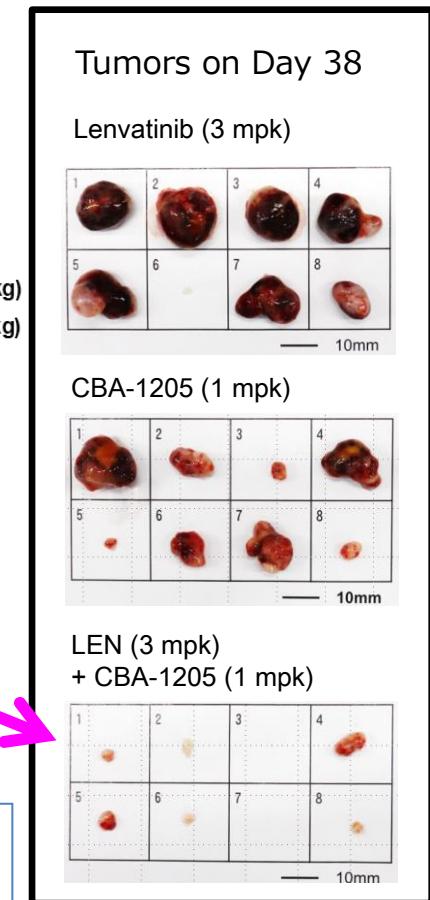


A patent application, “Combination of CBA-1205 and Lenvatinib” filed in 2019 is published

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



Patent: WO/2020/204033



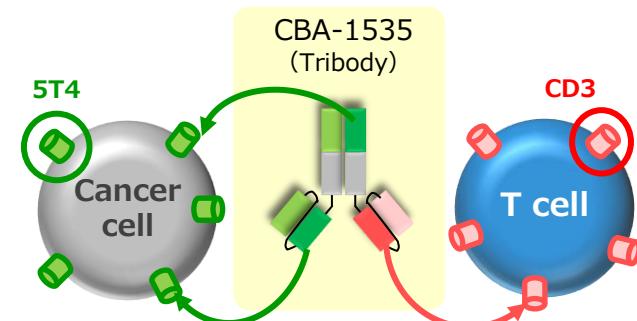
Remarkable tumor regression was observed in combination of CBA-1205 and Lenvatinib in HCC xenograft treatment model.



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

Origin	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.
Therapeutic Area	Malignant mesothelioma, small cell lung cancer, non small cell lung cancer, TNBC etc.
Expectation	First-in-class therapeutic antibody with trispecific format Offer a new treatment option for a disease which has poor prognosis and where there are only a few effective treatments.
Patent	Granted in Japan, UK, US, China. Pending in Europe etc.

- ✓ 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.
- ✓ The clinical study application was submitted on Feb. 16, 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.

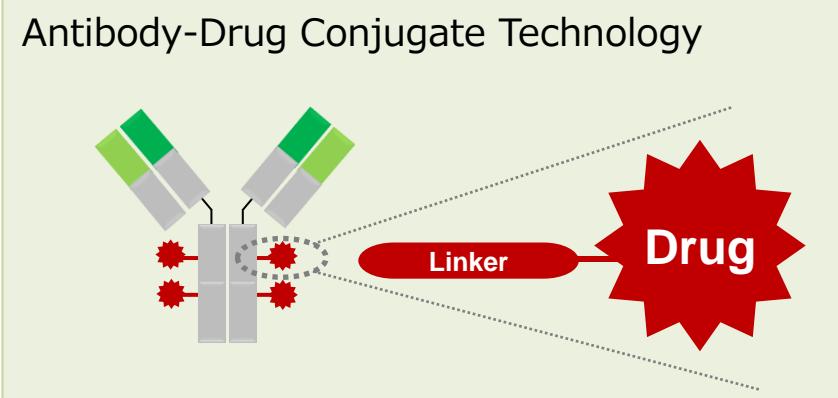


First in class

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.

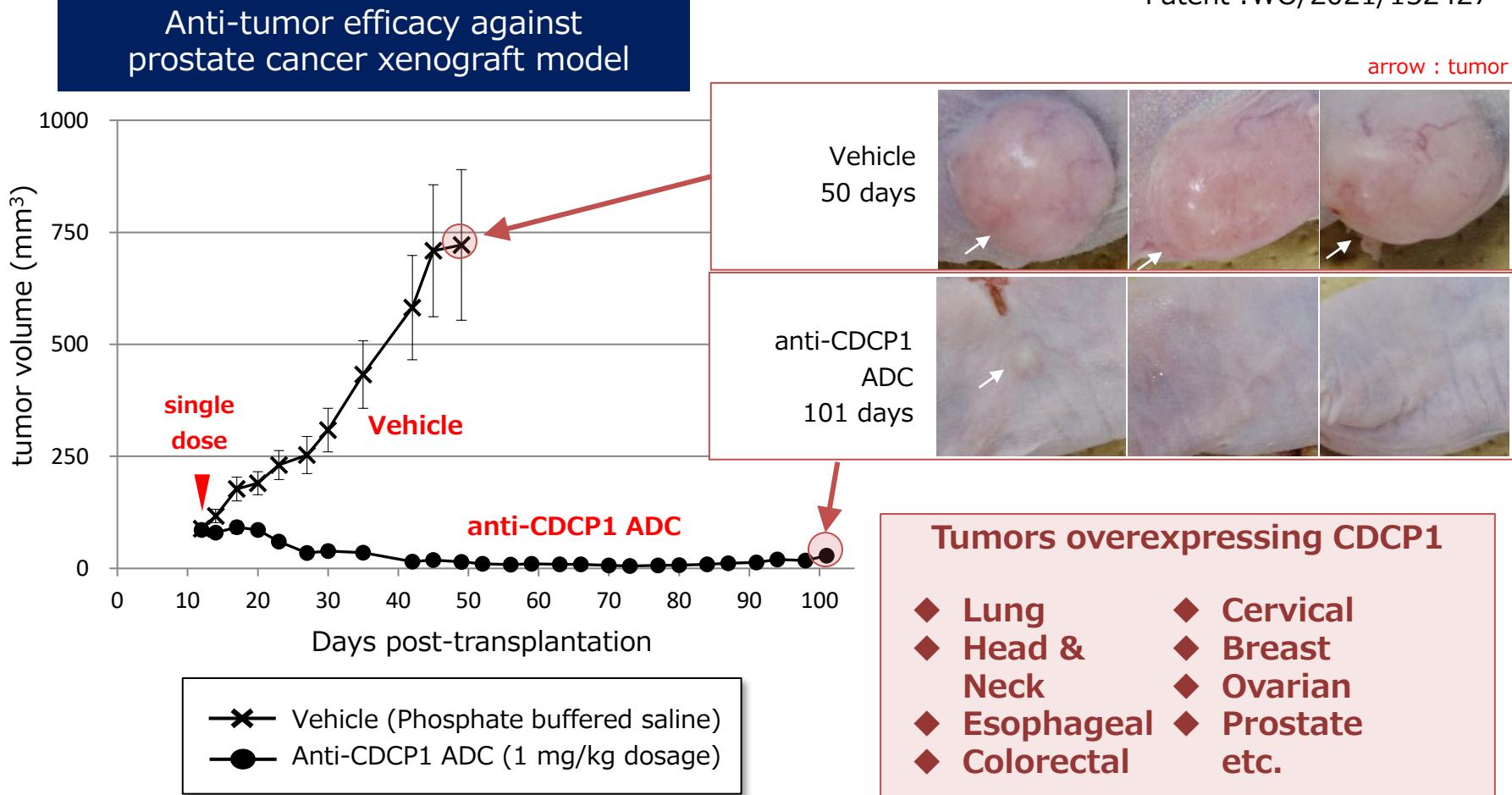
- ✓ Open for licensing opportunities as an antibody for ADC
- ✓ Additional *in vivo* efficacy/safety studies are ongoing.
- ✓ Patent application was published from WIPO (7/2021)





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





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.