

# Supplementary Information for Financial Results Q3 FY12/24

Nov. 12, 2024



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

**Chiome Bioscience Inc.**



- 1. Overview of Q3 FY12/24 “Financial results”**
- 2. Overview of Q3 FY12/24 “Operation highlights”**

## **Appendix.**

**Corporate information**

**Pipeline information**



# Overview of Q3 FY12/24 “Financial results”

# Financial results: Profit and Loss



(JPY in millions)

	Q3 FY2023	Q3 FY2024	Increase (decrease)	Main reasons for increase / decrease
Net sales	524	422	(101)	
Drug Discovery & Development	-	2	2	Material supply under the MTA
Drug Discovery Support	524	419	(104)	Temporal decline in business volume due to the organizational changes at the client side
COS/SGA	1,429	1,343	(85)	
R&D Expense	803	743	(59)	Decrease in CMC costs, e.g., manufacturing cost of study drugs
Other costs	626	599	(26)	
Operating Loss	(905)	(920)	(15)	
Ordinary Loss	(916)	(914)	1	
Net Loss	(918)	(915)	2	

# Financial results: Balance Sheet



(JPY in millions)

	As of Dec. 31, 2023	As of Sep. 30, 2024
Current assets	1,629	1,559
(Cash on hand in banks)	1,325	1,241
(Other current assets)	303	317
Non-current assets	122	134
<b>Total assets</b>	<b>1,751</b>	<b>1,693</b>
Current Liabilities	539	423
Non-current liabilities	54	55
<b>Total liabilities</b>	<b>593</b>	<b>478</b>
Total net assets	1,157	1,215
<b>Total liabilities and net assets</b>	<b>1,751</b>	<b>1,693</b>



# Overview of Q3 FY12/24 “Operation highlights”



**SD (stable disease) assessment with tumor shrinkage in a Malignant Melanoma patient from the first part of CBA-1205 Phase 1 study, has been lasting over 39 months.**

⇒ **Decision made to implement the melanoma part for potential indication of CBA-1205.**

*\*Final analysis results yet to be completed.*

**In the CBA-1535 Phase I Clinical Study, a change in blood biomarkers indicating the activation of T-cells, which is the concept of this antibody, has begun to show. No development concerns on safety, only minor adverse events observed at present.**

**In the drug discovery projects, due diligence and negotiation on financial terms are ongoing with pharmaceutical companies to obtain out-licensing contracts in the current financial year.**

**Some revenue recorded under conclusion of MTAs.**

**Through business alliance agreement with Kidswell Bio Corporation, we entered the new biosimilar business.**

**Selection/negotiation started for a partner company responsible for development and sales.**

# Operation Highlights



## Drug Discovery and Development – Pipeline

### CBA-1205

- ✓ SD (stable disease) assessment with tumor shrinkage in a Malignant Melanoma patient from the first part of CBA-1205 Phase I study, has been lasting for more than 39 months. Dosing is still ongoing.
- ✓ Decision was made to set a melanoma cohort.

### CBA-1535

- ✓ The safety, T cell activation that is the concept of this study drug, and initial efficacy are evaluated by stepwise dose escalation for patients with solid tumors.
- ✓ No development concerns on safety, only minor adverse events observed at present.

### License candidate

- ✓ Out-licensing activities with several drug discovery projects in preclinical stage are ongoing.
- ✓ Under CDAs, discussions, MTA evaluations and negotiations on financial terms are in progress.
- ✓ Presented research results of each project at domestic and international conferences.

## New Business

### Biosimilar business

- ✓ Business alliance agreement with Kidswell Bio Corporation. To secure a new source of revenue, selecting/negotiating a partner company started to establish biosimilar business using our clinical/CMC related functions.

## Drug Discovery Support Business

### Deals with pharmaceutical companies

- ✓ Net sales of 3Q FY12/2024 were ¥419 million.
- ✓ Net sales lower than the same period last year mainly due to an organizational changes within a client company.
- ✓ Entrustment Agreement with Takeda Pharmaceutical Company Limited, drug discovery support services implemented.
- ✓ Business alliance agreement with Merck Ltd., Japan, aiming to expand sales channels for antibody generation contracted services.
- ✓ Towards steady growth of this business, new negotiations to expand business opportunities are in progress.



# Drug Discovery and Development - Pipeline



## Outsourced Clinical Studies

Code	Target	Therapeutic Area	Basic research, Drug Discovery	Preclinical Study	Phase 1	Clinical Study Entity	
ADCT-701 (LIV-1205 ADC)	DLK-1	Oncology /ADC				(NCT06041516)	National Cancer Institute

## In-house developed product

★ **First in class**    ★★ **World first drug discovery modality moving into clinical phase**

Code	Target	Therapeutic Area	Basic research, Drug Discovery	Preclinical Study	Phase 1	Status	
★ CBA-1205 (ADCC enhanced)	DLK-1	Oncology				(jRCT2080225288)	Phase 1
★★ CBA-1535 (Tribody™)	5T4×CD3×5T4	Oncology				(jRCT2031210708)	Phase 1

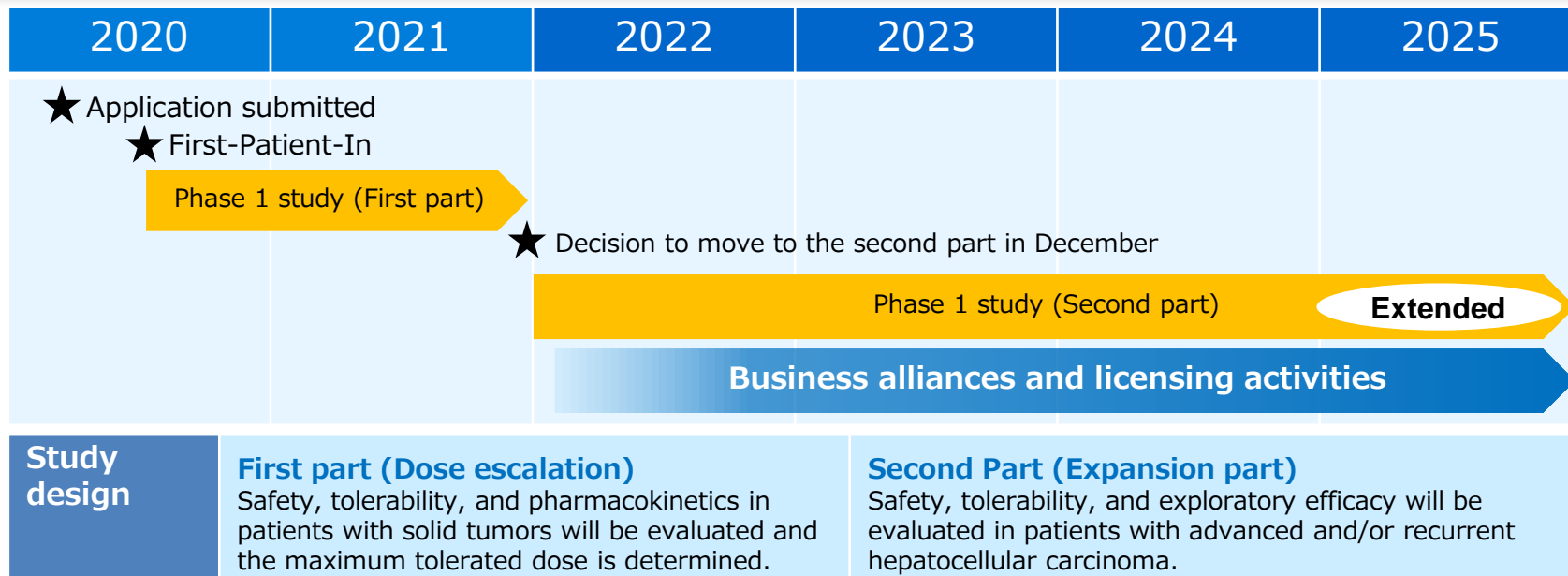
## License candidate and drug discovery project

Code	Target	Therapeutic Area	Basic research, Drug Discovery	Preclinical Study	Phase 1	Status
★ PCDC	CDCP1	Oncology/ADC				Licensing opportunity
PTRY	5T4×CD3×PD-L1	Oncology				Data is being obtained for outsourcing
BMAA	SEMA3A	Renal and other diseases				Licensing opportunity
LIV-2008 /2008b	TROP-2	Oncology				Licensing opportunity
PFKR	CX3CR1	Autoimmune disease				Licensing opportunity
PXLR	CXCL1/2/3/5	Oncology				Licensing opportunity
Discovery PJ/ Drug discovery research	Undisclosed	Oncology, Ophthalmology, etc.				—

# CBA-1205 Phase 1 study



**Duration of SD in a melanoma patient has exceeded 3 years  
⇒Open a part for melanoma patients**



- No serious adverse event reported
- SD (stable disease) assessment with tumor shrinkage in a Malignant Melanoma patient from the first part of CBA-1205 Phase I study, has been lasting over 39 months. Dosing is still ongoing.

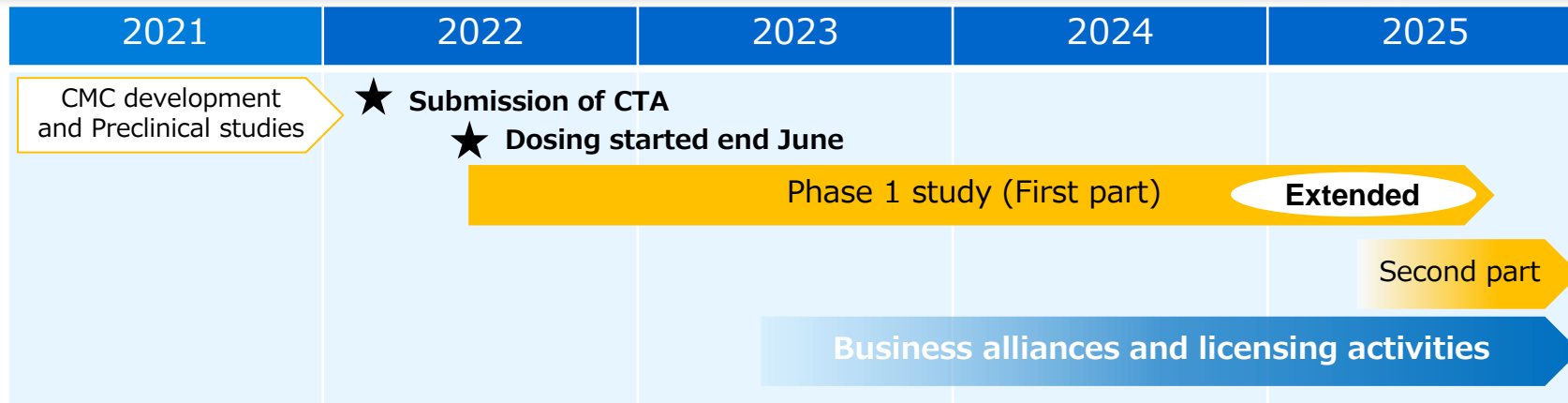


Decision made to open a part for melanoma patients.

- 1 PR(Partial Response: tumor shrinkage of 30% or more) was confirmed in hepatocellular carcinoma in the second part of the study.
- Manufacturing 2<sup>nd</sup> batch of study drugs to secure longer-term dosing cases.
- Analyzing the scientific relationship between PR cases and the dosing of the study drug to verify its therapeutic potential.
- Amended the enrollment criteria in the second part and extended the study period
- Assess the potential of CBA-1205 in melanoma that may increase the product value in out-licensing.



## The first part of CBA-1535 Phase I study is in progress



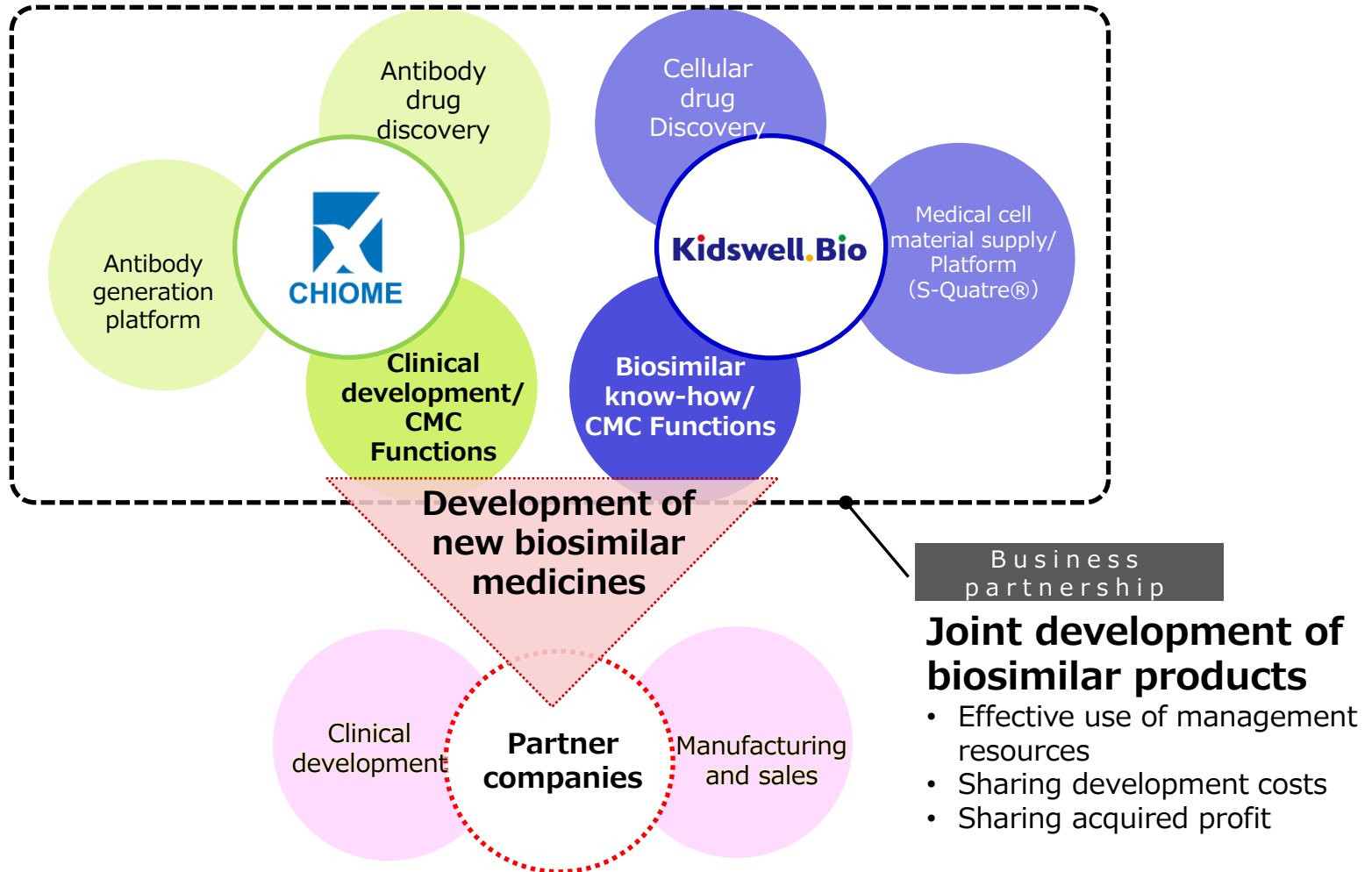
Study design	First part (single agent)	Second part (combined use with cancer immunotherapy drugs)
	<p>Target: Solid cancer patients</p> <ul style="list-style-type: none"> <li>Starting to administer a low dose in increments to find the maximum dose that can be safely administered.</li> <li>Evaluate initial drug efficacy signals</li> </ul>	<p>Target: Solid cancer patients</p> <ul style="list-style-type: none"> <li>Administer the dose that was confirmed to be safe in the first part in increments.</li> <li>Find the maximum dose that can be safely administered when combined with cancer immunotherapy drugs (IOs)</li> <li>Evaluate early drug efficacy signals when combined</li> </ul>

- The dosage is gradually increased. Beginning to see reactions in patients' blood, but there have been no safety concerns that would affect development so far.
- For possible out-licensing with only the data from the first part (single agent) study, we extended the part to enhance the data.

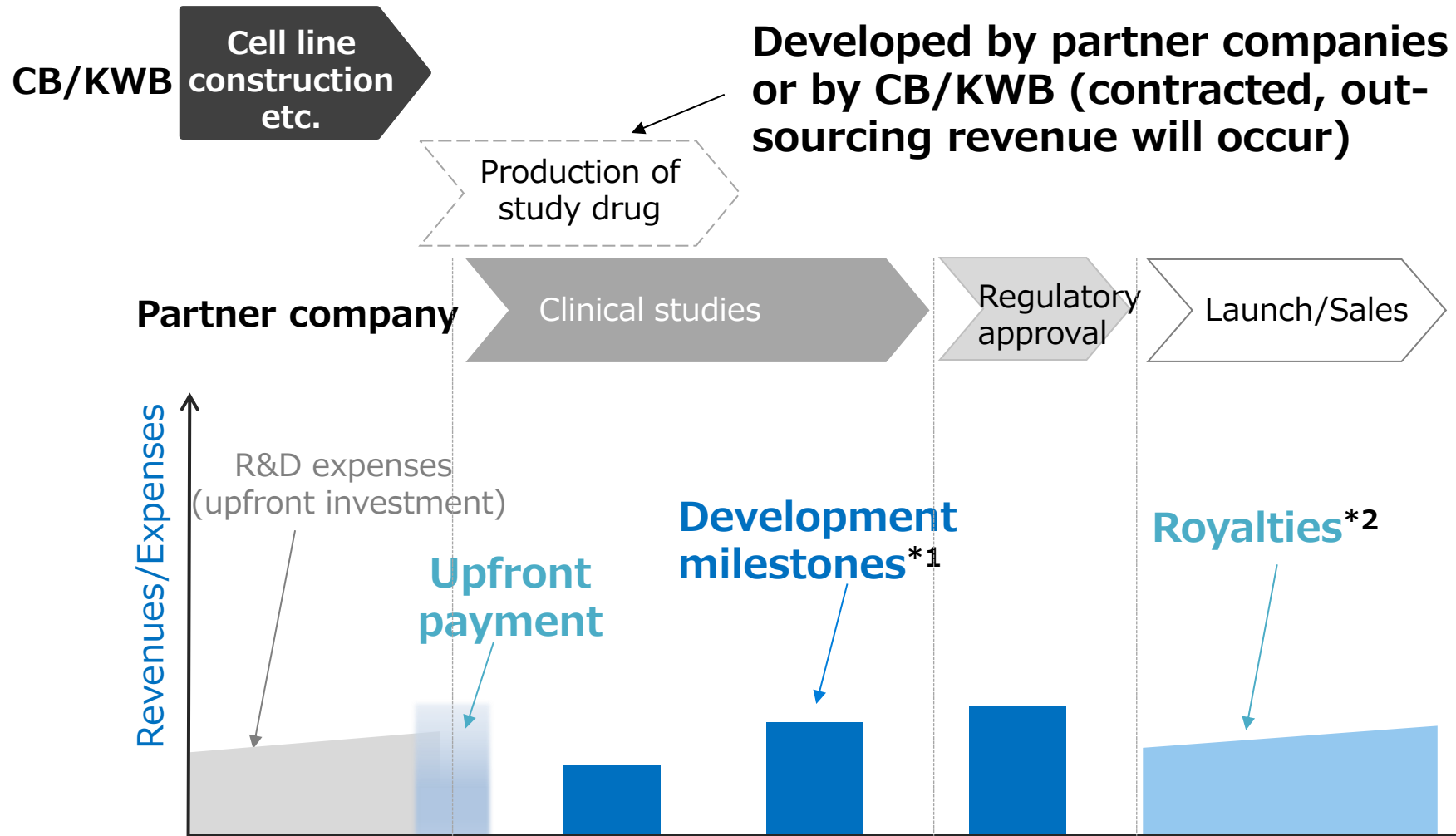
# Entering the biosimilars business



Through business alliance agreement with Kidswell Bio Corporation who has a proven record in the development of several biosimilar products, our company has entered the new biosimilars business. Aiming for securing new sources of revenue and solve social issues leading a reduction of social security costs.



# Business model for biosimilar drug development



CB: Chiome Bioscience Inc.

KWB: Kidswell Bio Corporation

\*1 Milestones: Income received by licensee at each milestone after out-licensing through the progress of clinical studies and others.

\*2 Royalties: Income received as a percentage of the sales amount after a product is launched.

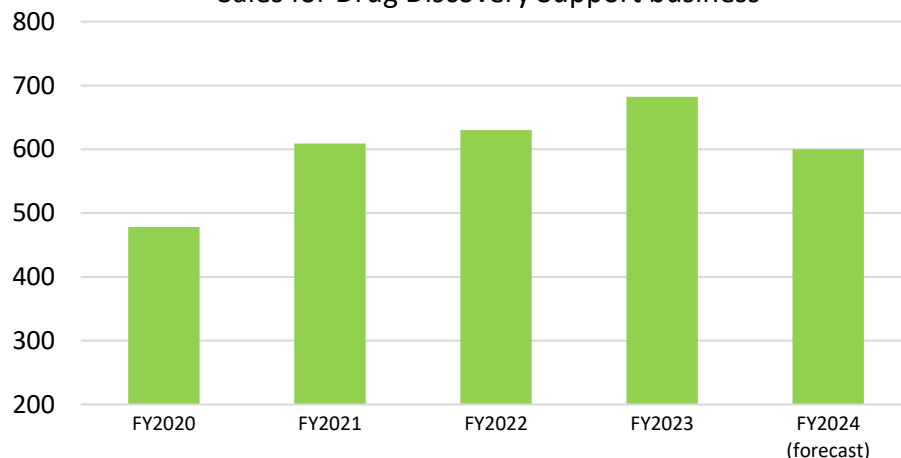
# Drug Discovery Support business



- Net sales of 3Q FY12/2024 were ¥419 million.
- Net sales lower than the same period last year mainly due to an organizational changes within a client company.
- A business agreement with Takeda Pharmaceutical Company Limited which had been worked on a spot base is developed into a new entrustment agreement.
- To strengthen the marketing & sales force in the antibody generation services, business alliance agreement with Merck was concluded.
- Towards steady growth of this business, new negotiations to expand business opportunities are in progress.
- Forecast net sales of ¥600 million in the drug discovery support business in FY12/2024

JPY in millions

Sales for Drug Discovery Support business



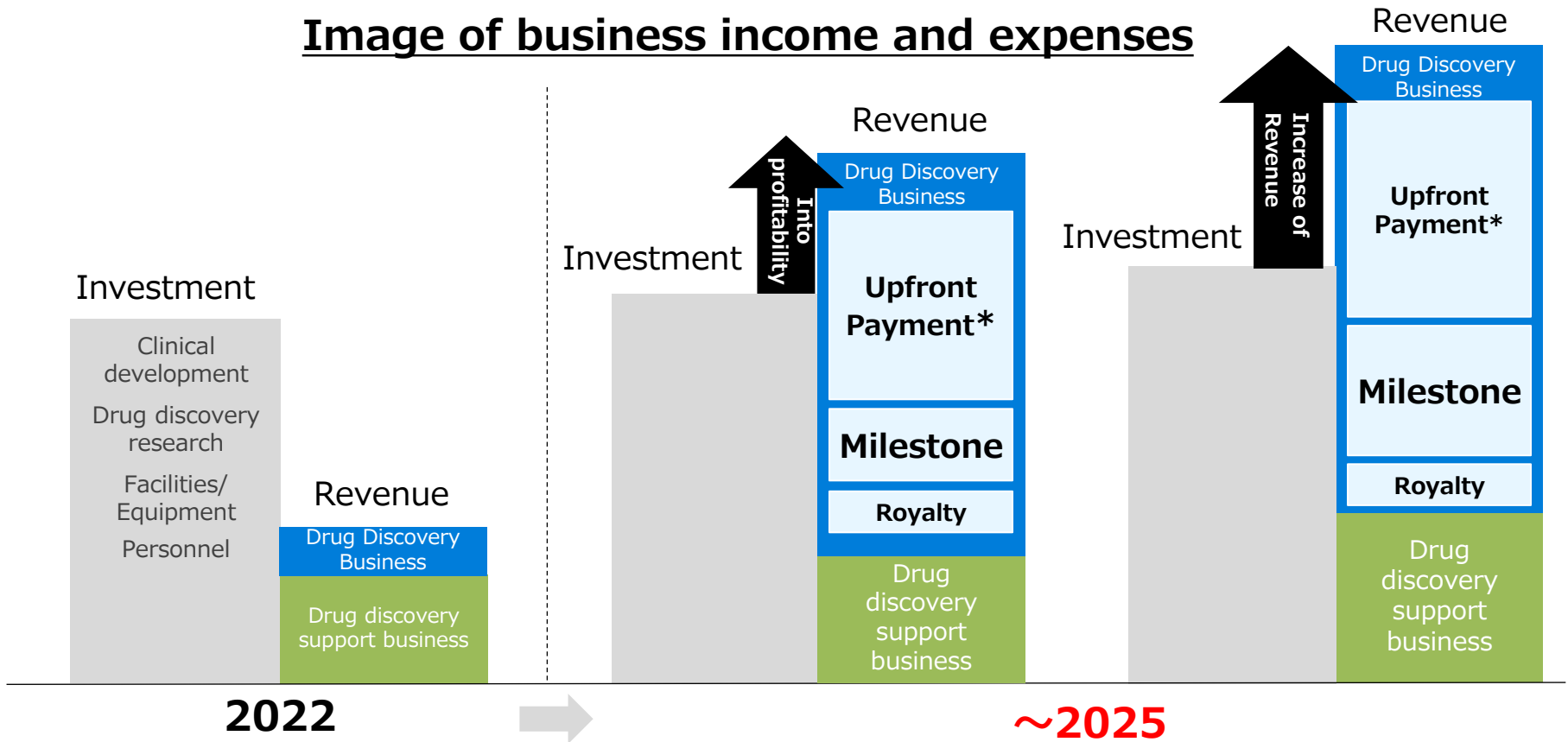
Major clients	Contract date
Chugai Pharmaceutical Co., Ltd.	Jun. 2011
Chugai Pharmabody Research Pte. Ltd	Aug. 2012
Mitsubishi Tanabe Pharma Co., Ltd. TANABE RESEARCH Laboratories U.S.A., Inc.	Dec. 2016
Ono Pharmaceutical Co., Ltd.	Oct. 2018
Kyowa Kirin Co., Ltd.	Jul. 2019
Takeda Pharmaceutical Co., Ltd.	Feb. 2024
Merck Ltd. (Japan)	Sep. 2024

# Image of transitioning to profitability



Transition from **investment phase** to **revenue phase** by out-licensing in-house products

## Image of business income and expenses



\*On assumption of out-licensing either CBA-1205, CBA-1535 or PCDC. On assumption of out-licensing agreement with milestone income

At the time of publication of this material, the actual out-licensing agreement terms and conditions, such as licensees and various amounts, have not yet been determined. This material was created to show the profitable image of our company.



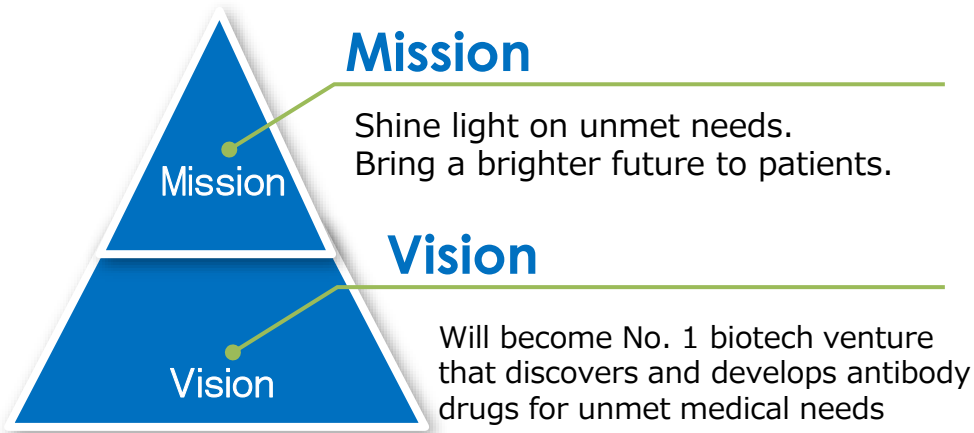
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## **Appendix. Corporate information**





## 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>  
3-12-1Honmachi, Shibuya-ku, Tokyo  
<Drug Discovery Laboratories>  
2-13-3 Nogawahonchou, Miyamae-ku,  
Kawasaki-city, Kanagawa
- **Number of Employees :**  
67 (As of Sep. 30, 2024)
- **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.



## 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.

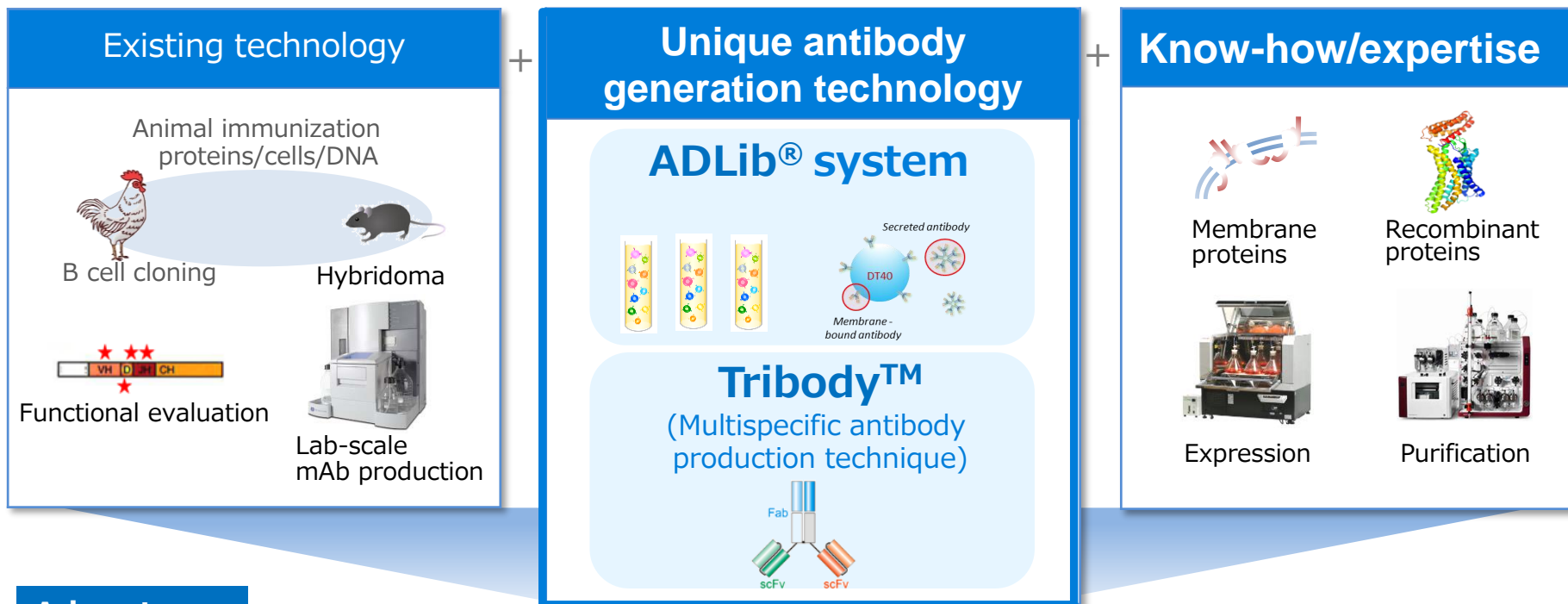
## Drug Discovery Support business

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)



### Advantage

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.

Promoting two businesses by using our technology platform

Drug Discovery and Development

Drug Discovery Support

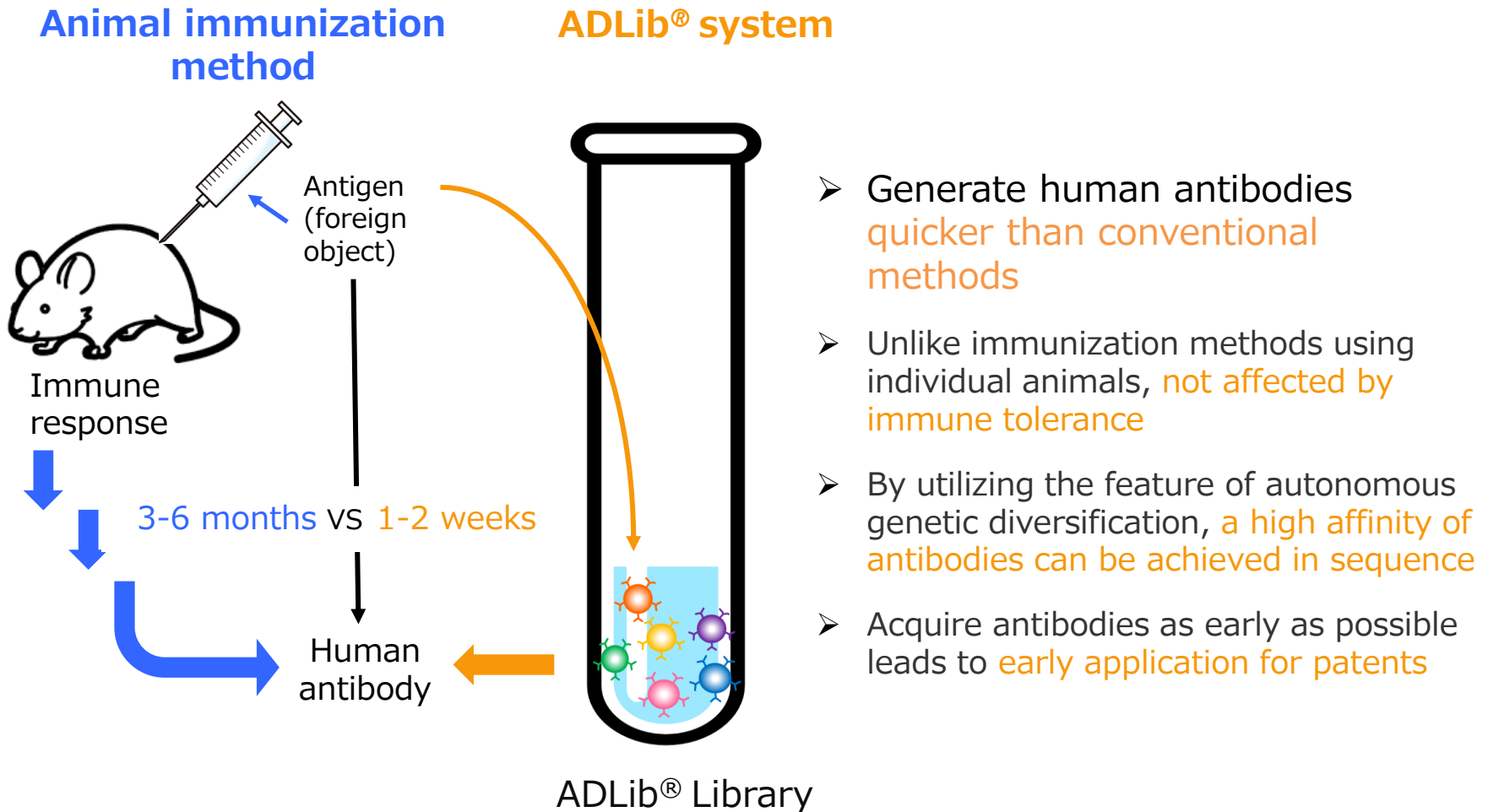
Business responsible for growth

Business that earns stable revenue

# Core technology that support 2 businesses: ADLib<sup>®</sup> System



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

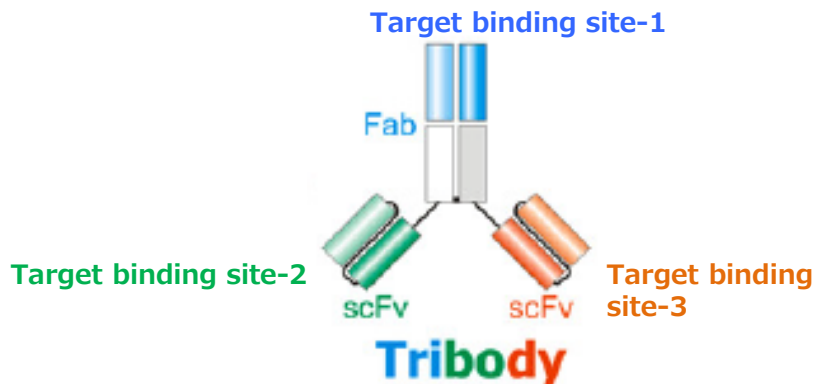




Technology that enables the generation of multi-specific antibodies, each molecule has three binding sites.

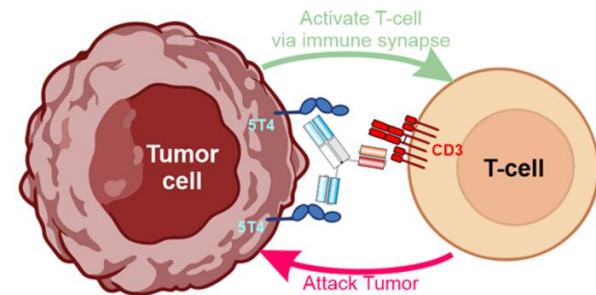
## What is Tribody™

There are three different antigen binding sites in one molecule, and this makes it possible to combine different functions.



## Example of drug candidate substance creation using Tribody™

Example of utilization in our in-house product (CBA-1535)



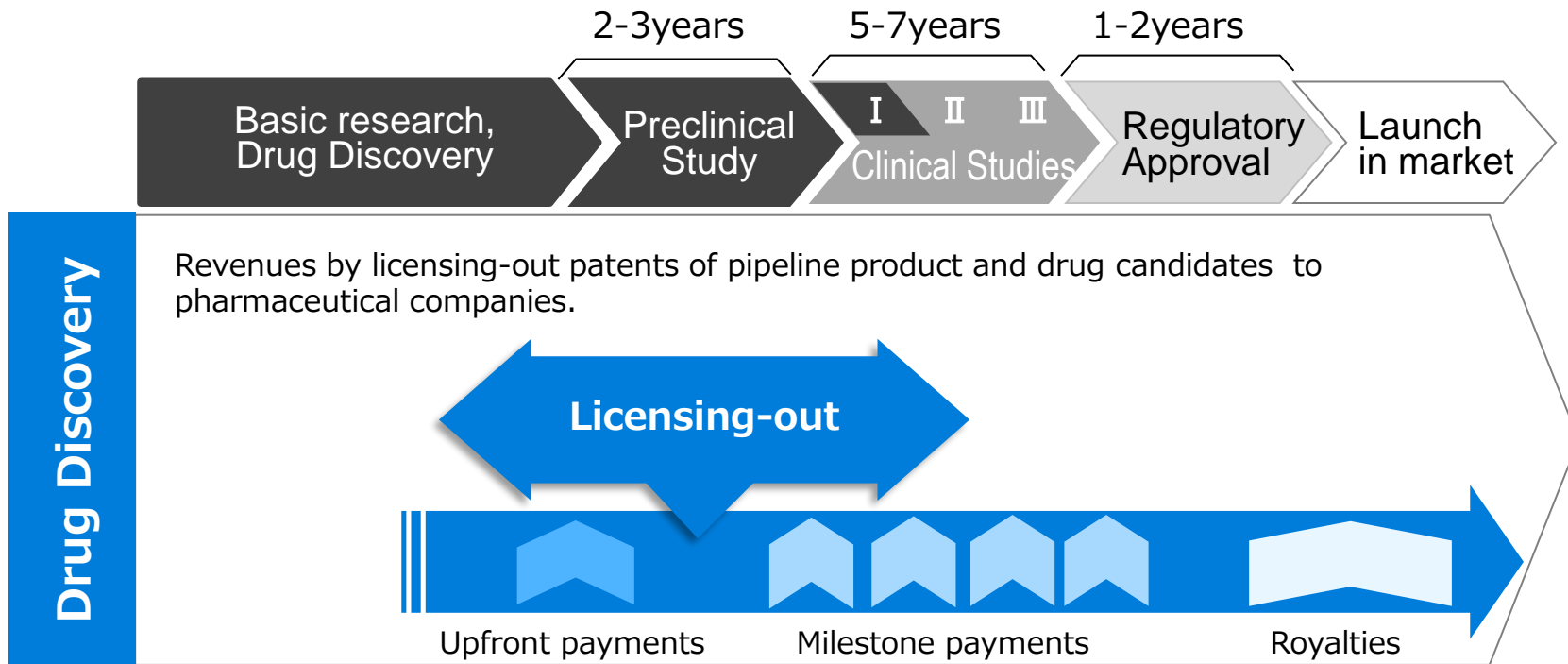
Two hands firmly hold the **target** and pull the **cancer-attacking cells** close to the cancer cell with a third hand

Various applications are possible depending on the target/binding method.

# Revenue Model



## Drug development process and Chiome's revenue model

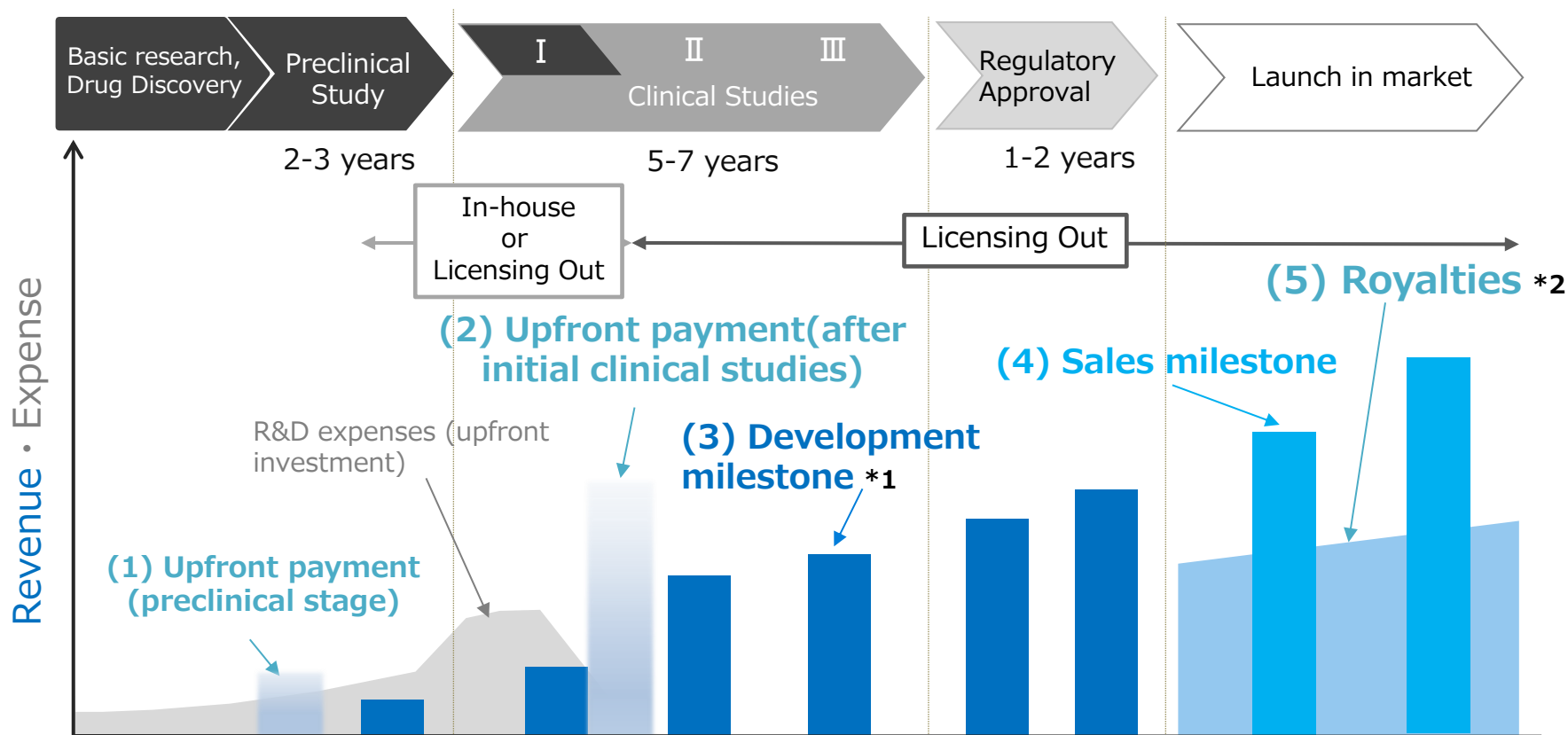


Major clients	Contract date
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Ono Pharmaceutical Co., Ltd.	Oct. 2018
Kyowa Kirin Co., Ltd.	Jul. 2019
Takeda Pharmaceutical Co., Ltd.	Feb. 2024
Merck Ltd. (Japan)	Sep. 2024

# General image of revenue in the drug discovery business



As the stage progresses, the amount received in each milestone increases.



The above is the image of earnings to explain the Pharmaceutical Licensing Agreement. The actual agreements may vary in terms of the upfront payment, milestone stages and number/amounts of milestones, and royalty rate for each contract.

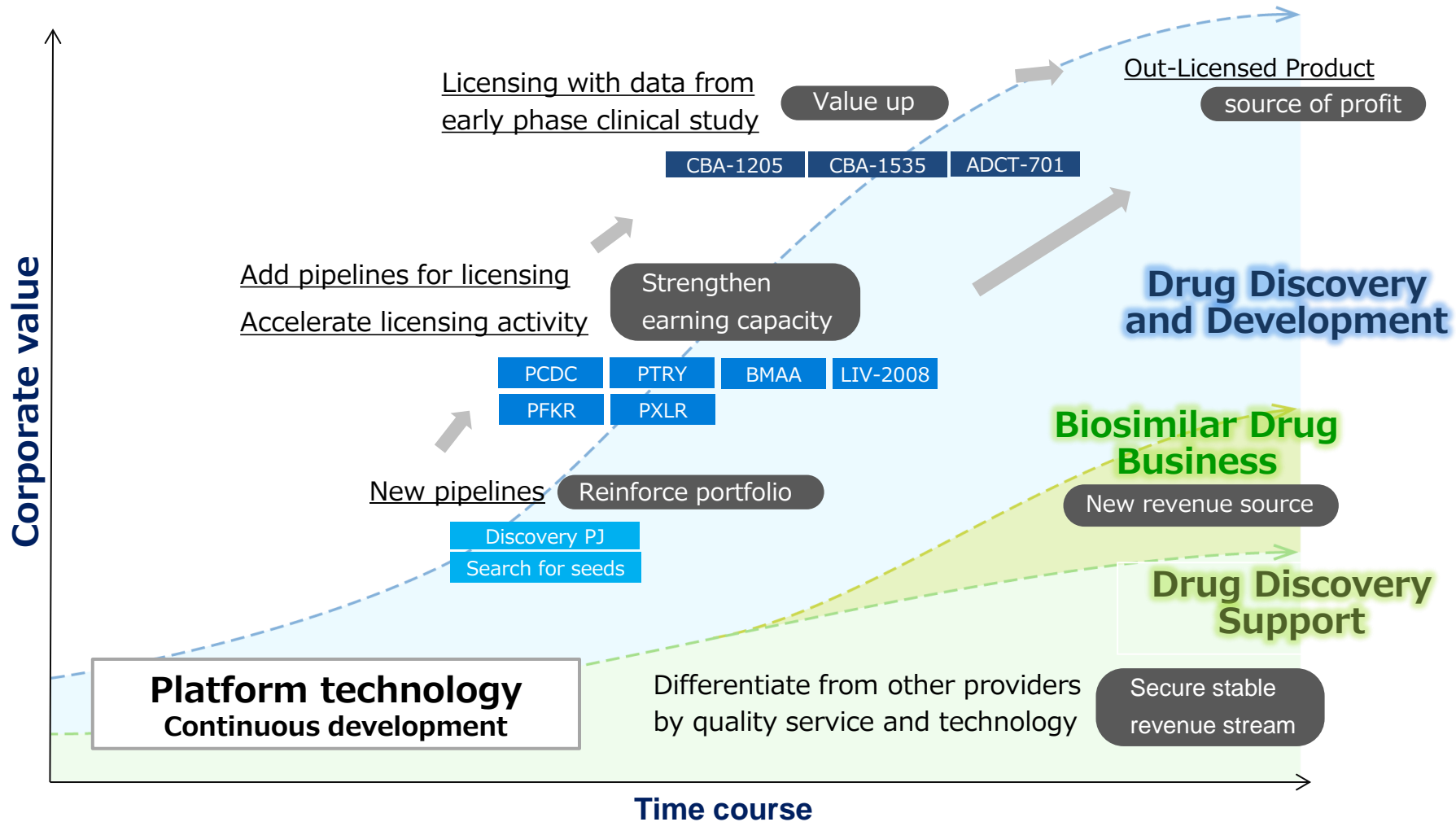
\*1 Milestone: Income received by the licensee at each milestone after out-licensing through the progress of clinical studies and others.

\*2 Royalty: Income received as a percentage of the sales amount after a product is sold (launched)

# 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.







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## Appendix. Pipeline information

# ADCT-701 Outsourced Clinical Studies

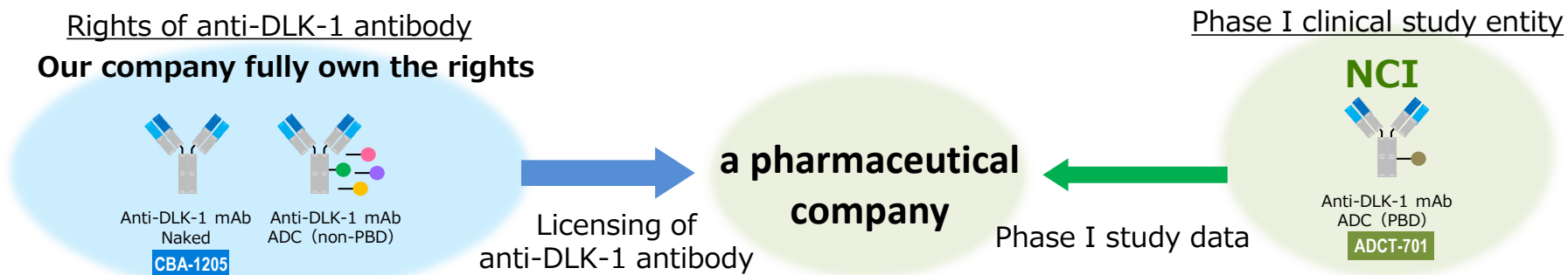


## ADCT-701 (Humanized anti-DLK1 antibody ADC)

<b>Therapeutic Area</b>	Liver cancer, lung cancer, neuroblastoma etc.
<b>Origin</b>	An Antibody Drug Conjugate (ADC) form of LIV-1205 that was licensed out to Switzerland-based ADC Therapeutics SA in September 2017.
<b>Patent</b>	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)
- ✓ National Cancer Institute (NCI) completed IND submission in the USA, **the first dose for neuroendocrine tumor started in July 2024.**
  - [Antibody Drug Conjugate ADCT-701 in Neuroendocrine Tumors and Carcinomas - Full Text View - ClinicalTrials.gov](#)
- With the termination of the agreement, our company will reserve all rights related to anti-DLK-1 antibody. If a pharmaceutical company proceeds development of ADCT-701 using the Phase I study data by NCI, a license agreement will be concluded between the company and us.

## Anti-DLK-1 antibody and its relation





First in class

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

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

### Phase I clinical study

First part: Evaluate the safety in patients

- **No serious adverse reaction reported.**
- **SD (stable disease) evaluation with tumor shrinkage has been continued in a patient with Melanoma and the continuous dosing period has exceeded more than 39 months. Dosing is still ongoing.**

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

- **One PR(Partial Response) case has been confirmed and longer duration of response is expected.**
- **Decision to add a development part for melanoma patients**

# CBA-1205 First part of Phase 1 study (Safety)



No toxicity of Grade 3 or higher were observed  
High level of safety was confirmed

## CBA-1205 Related Adverse Events

Adverse Events (AE)	Dose (mg/kg)							Total (n=22)
	0.1	0.3	1	3	10	20	30	
	(n=3)	(n=3)	(n=3)	(n=4)	(n=3)	(n=3)	(n=3)	
Patients with CBA-1205 Related AEs	1	0	2	3	1	3	3	13
Grade 1-2	1	0	2	3	1	3	3	13
≥ Grade 3	0	0	0	0	0	0	0	0
Dose Limiting Toxicity	0	0	0	0	0	0	0	0
Serious Adverse Events	0	0	0	0	0	0	0	0
Death	0	0	0	0	0	0	0	0
Treatment Discontinuation	0	0	0	0	0	0	0	0

(As of Jun. 30, 2024)

Only Grade 1 (mild) or Grade 2 (moderate) study drug related adverse events were reported at each dose. No Grade 3 (severe or medically significant but not immediately life-threatening) or higher serious toxicity findings were reported. No adverse reactions that would have stopped dosing were reported, and the high safety of CBA-1205 was confirmed.

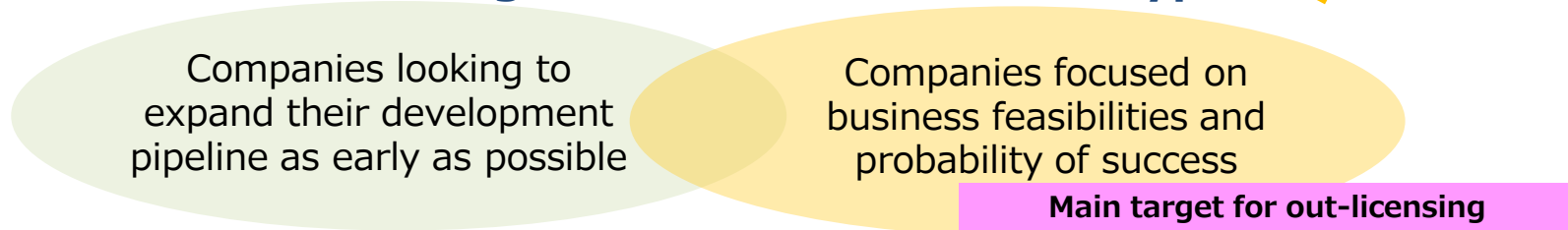
# CBA-1205 Out-licensing plan



2020	2021	2022	2023	2024	2025
P1 First Part		P1 Second Part			

Targeted time frame for out-licensing

## Out-licensing candidates: 2 different types



Possible points for evaluation and consideration

- 1<sup>st</sup>-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

≤

Upfront payment

- **Promote out-licensing activities, while conducting Phase 1 second part**
- **Aiming to obtain several effective cases for hepatocellular carcinoma and melanoma patients (PR and CR) to maximize the amount of upfront income in out-licensing.**

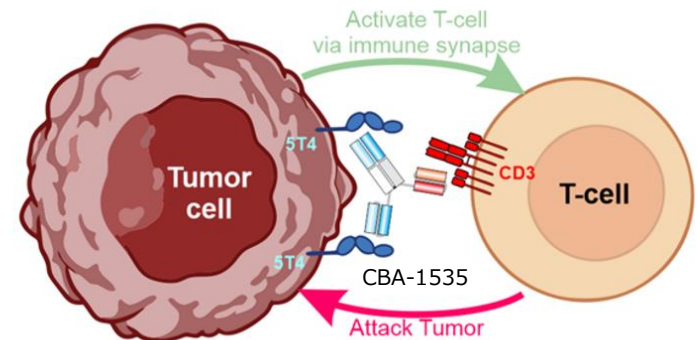


## CBA-1535 (Humanized anti 5T4 & CD3 trispecific antibody)

<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 trispecific 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, EU China etc.

Phase I study: Dosing for patients has started in the first part for safety and initial drug efficacy evaluation.

Study sites: National Cancer Center Hospital  
Shizuoka Cancer Center





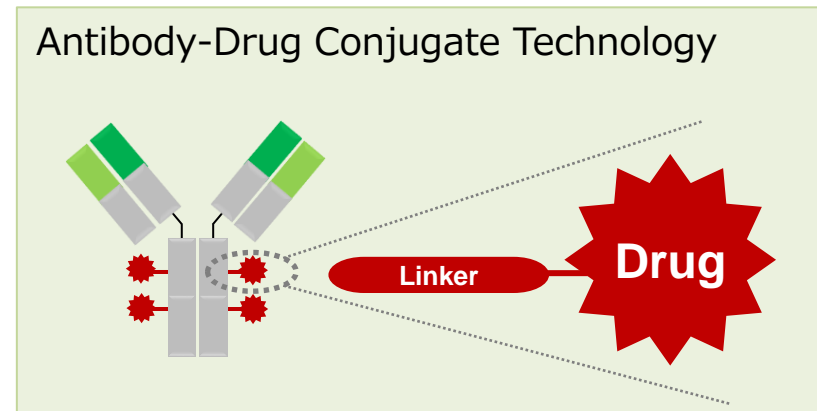
## PCDC (humanized anti-CDCP1 antibody for antibody drug conjugate)

<b>Origin</b>	Humanized anti-CDCP1 antibody discovered by Chiome's proprietary antibody technologies.
<b>Therapeutic Area</b>	Solid tumors (lung, colorectal, pancreatic, breast, ovarian etc.)
<b>Expectation</b>	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.
<b>Patent</b>	Granted in China. Pending in Japan, US, Europe etc.

- Promoting out-licensing activities, mainly in the field of ADC
- Progressing in contacting out-licensing candidate companies in Japan and abroad at conferences such as BIO International.

### Out-licensing strategy/target

As the development needs for combining the ADC technology and our antibodies are in higher demand in out-licensing candidate companies, we will prioritize our out-licensing activities with companies with ADC technologies who need antibodies for ADC.



# PTRY -Licensing-



## PTRY (humanized antibody 5T4/CD3/PD-L1 multi-specific antibodies)

Target molecules : 5T4×CD3×PD-L1

### Origin

Therapeutic antibodies for cancer treatment using Tribody™ technology consisting of three binding sites. Therapeutic antibodies for cancer treatment targeting antigen-binding sites 1) solid tumor expressing 5T4, 2) T-cell engager CD3, and 3) immune checkpoint inhibitor PD-L1.

### Therapeutic Area

Malignant mesothelioma, small cell lung cancer, non-small cell lung cancer, Triple Negative Breast Cancer (TNBC) etc.

### Expectation

A new study drug for patients who have not responded adequately to standard cancer immunotherapy. It is also expected to be useful in contributing to the healthcare economy by reducing drug prices.

### Patent

Patent application completed



**The results of the joint research with Ceinge Biotechnologie Avanzate (“Ceinge”) in Italy were published in the Journal of Experimental & Clinical Cancer Research, and Cancers.**

[Passariello et al. \(2022\). Novel tri-specific tribodies induce strong T cell activation and anti-tumor effects in vitro and in vivo. \*Journal of experimental & clinical cancer research\* : CR, 41\(1\), 269.](#)

[Manna et al. \(2023\). A Comparison of the Antitumor Efficacy of Novel Multi-Specific Tribodies with Combinations of Approved Immunomodulatory Antibodies. \*Cancers\*, 15\(22\), 5345](#)



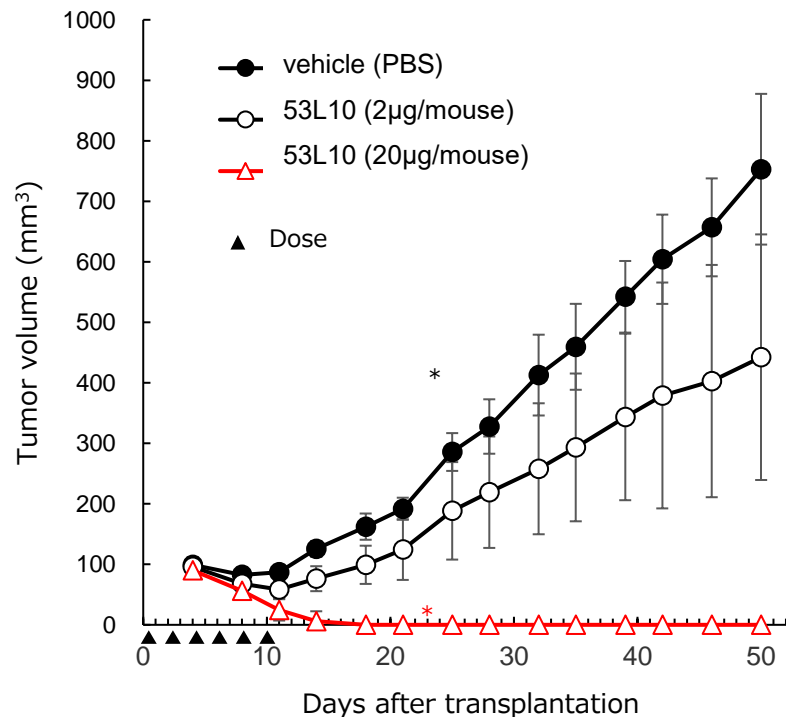
# PTRY Efficacy of the drug in vivo



## 5T4×CD3×PD-L1 demonstrated strong anti-tumor activities

<In vivo drug efficacy data in lung cancer models> Passariello et al. *J Exp Clin Cancer Res* (2022) 41:269

53L10 = PTRY  
(5T4×CD3×PD-L1)



Focus on development and out-licensing as a next-generation pipeline of CBA-1535

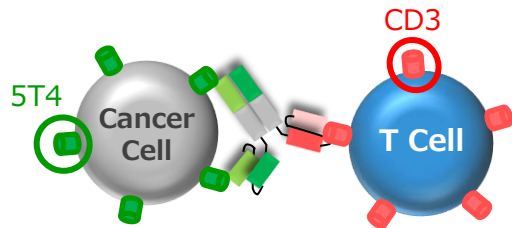
# Potential applications for Tribody™



By varying combination of targets and number of binding

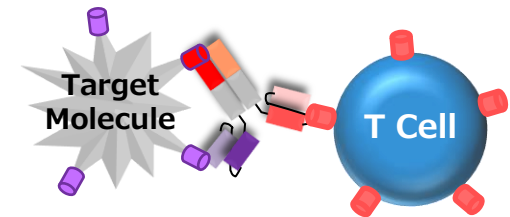
- 1) More effective than normal antibodies are expected
- 2) Co-administration of multiple drugs  $\Rightarrow$  single drug administration (merits such as patients' QOL, healthcare economic benefits are expected)

## CBA-1535 (currently in Phase 1)

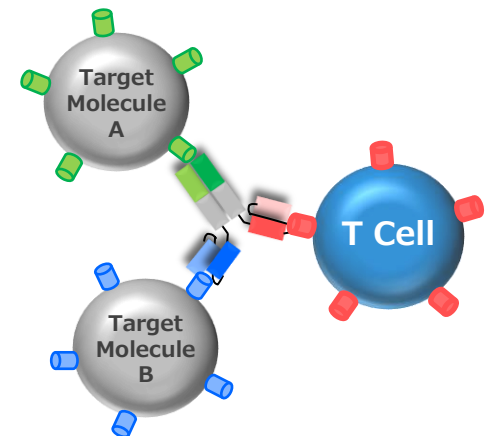
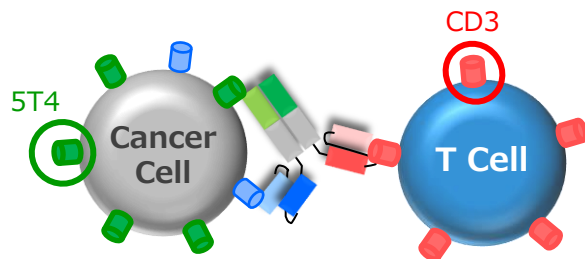


Varying combination of targets and number of binding

## Target other than 5T4



## Next generation of CBA-1535

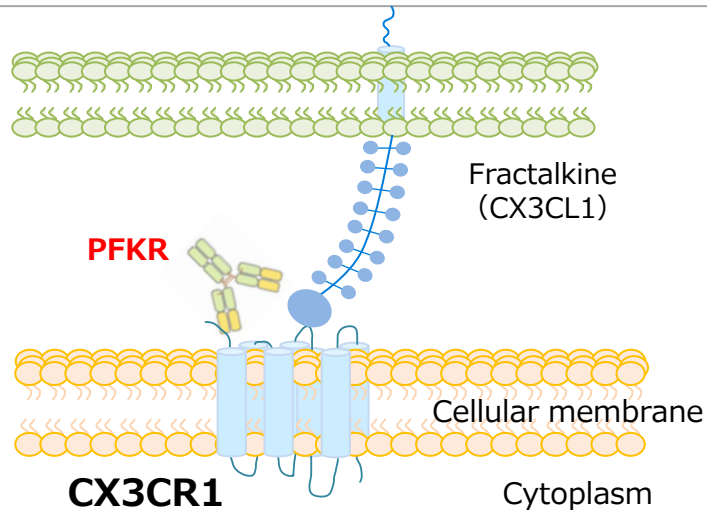




# PFKR -Licensing-

## PFKR (humanized anti-CX3CR1 antibody) target molecules: CX3CR1

<b>Origin</b>	Functional inhibitory antibody of Fractalkine (CX3CL1) receptor and a therapeutic antibody that inhibits disease progression of autoimmune neurological diseases, etc.
<b>Therapeutic area</b>	Secondary Progressive Multiple Sclerosis (SPMS), neurodegenerative disorder etc.
<b>Expectation</b>	SPMS is an intractable form of multiple sclerosis and is a disease with a need to develop high safety and effective therapeutic agents. By suppressing cytotoxic Eomes-positive CD4+T cells function which are considered directly related to lesions in SPMS (demyelination, neurodegeneration), expected to inhibit the progression of symptoms.
<b>Patent</b>	Patent application completed
<b>Joint development partner(s)</b>	National Center of Neurology and Psychiatry



CX3CR1 is a type of G protein-coupled receptor (GPCR), and its ligand, Fractalkine (CX3CL1), causes the migration of CX3CR1-expressing cells to inflammatory sites.

In cytotoxic Eomes positive CD4+T cells, which are considered directly related to lesions in SPMS (demyelination, neurodegeneration), CX3CR1 is expressed in many.

A paper suggesting that Eomes positive CD4+T cells are involved in the pathogenesis of ALS and Alzheimer's disease patients was published in March 2024 by the joint research partner.

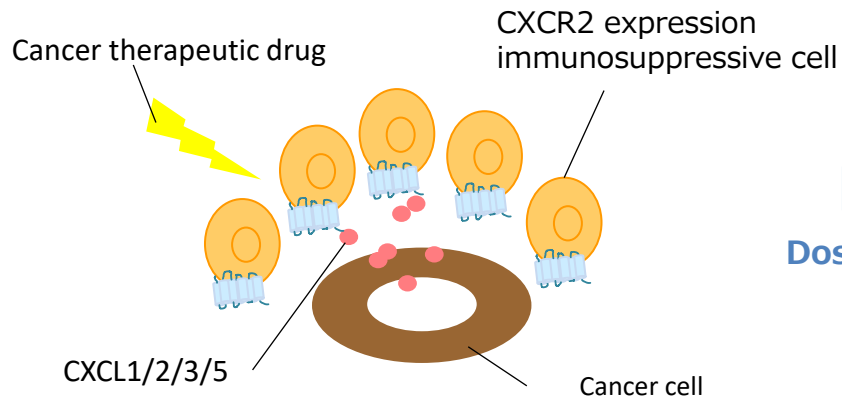
# PXLR -Licensing-



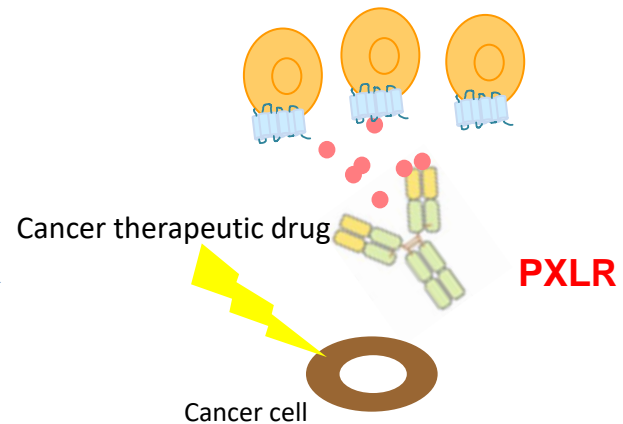
**PXLR (humanized anti-CXCL1/2/3/5 antibody)** Target molecules: CXCL1/2/3/5

<b>Origin</b>	Functional inhibitory antibody for CXCL1/2/3/5, chemoattractant of CXCR2 expressing cell. Cancer therapeutic antibody that improves drug-resistant cancer microenvironment
<b>Therapeutic area</b>	Solid tumors (gastric, breast, ovarian etc.)
<b>Expectation</b>	Cancer cells express CXCL1/2/3/5 and attract immunosuppressor cells that cause the drug-resistant environment. Dosing PXLR antibody will reduce immunosuppressor cells. It is expected to overcome drug-resistance and inhibit the recurrence of cancers.
<b>Patent</b>	Patent application completed.
<b>Joint development partner(s)</b>	Osaka Metropolitan University

## Drug resistant environment



## Weakening of drug-resistant environment



CXCL1/2/3/5 is a ligand of CXCR2, G-protein-coupled receptor (GPCR), and is involved in various tumorigenesis and formation processes. Cancer cells attract immunosuppressive cells with CXCL1/2/3/5 and create a drug-resistant environment. PXLR weakens drug resistant ability of cancer cells by binding to CXCL1/2/3/5.



## BMAA (Humanized anti-Semaphorin3A antibody)

<b>Origin</b>	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.
<b>Therapeutic Area</b>	Renal and other diseases
<b>Expectation</b>	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.
<b>Patent</b>	Granted in Japan, US and Europe etc.

- The research data of inhibitory effect on pathological condition in a mouse model using anti-Semaphorin 3A antibody was presented in domestic/international conferences. It was joint research with a research group of the Department of Nephrology, Rheumatology, Endocrinology and Metabolism at the Okayama University Graduate School of Medicine, Dentistry and Pharmaceutical Sciences.

The 83rd Annual Meeting of the Japanese Cancer Association (June, Domestic meeting, Yokohama)

Kidney Health In Aging and Aged Societies (September, International Conference, Kyoto)

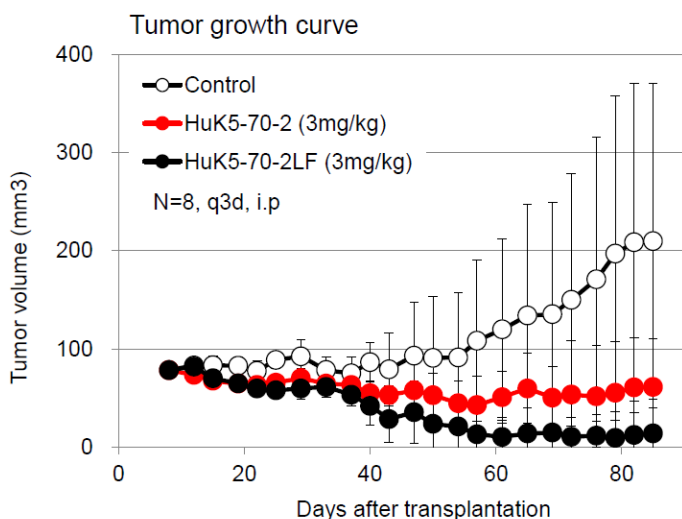
# LIV-2008/2008b -Licensing-



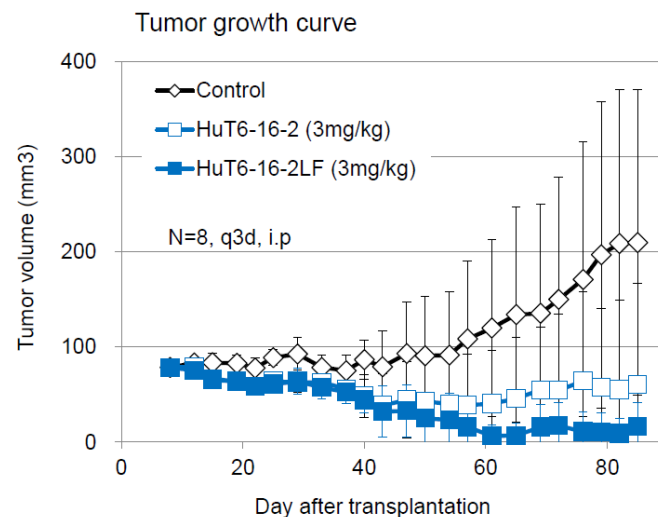
## LIV-2008 (Humanized anti-TROP2 antibody)

<b>Therapeutic Area</b>	Breast cancer (TNBC), lung cancer, colorectal cancer etc.
<b>Expectation</b>	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.
<b>Patent</b>	Granted in Japan, US, EU, China etc.

In vivo drug efficacy data in breast cancer models (LIV-2008) In vivo drug efficacy data in breast cancer models (LIV-2008b)



Antibody: HuK5-70-2 & HuK5-70-2\_LF  
Animal model: MDA-MB-468 (Human, TNBC) /nude mouse xenograft treatment model



Antibody: HuT6-16-2 & HuT6-16-2\_LF  
Animal model: MDA-MB-468 (Human, TNBC) /nude mouse xenograft treatment model

### Out-licensing activities for this antibody

Currently promoting out-licensing activities including investigation of therapeutic methods by combining this antibody with other technologies



**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**







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