



# Financial Results Q2 FY12/18

Aug 14, 2018



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

**Chiome Bioscience Inc.**



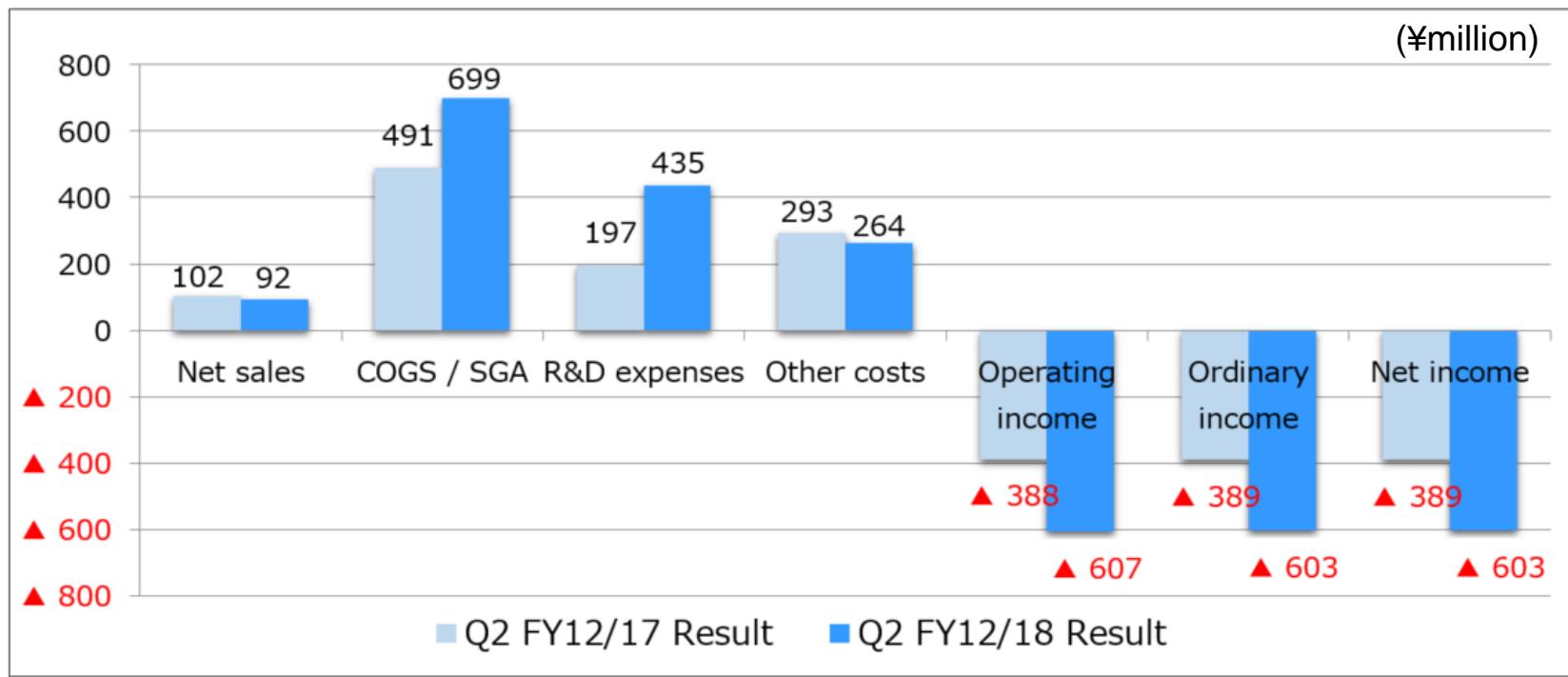
- 1. Overview of Q2 FY12/18 “Financial results”**
- 2. Overview of Q2 FY12/18 “Operation highlights”**

## **Appendix. Corporate information**

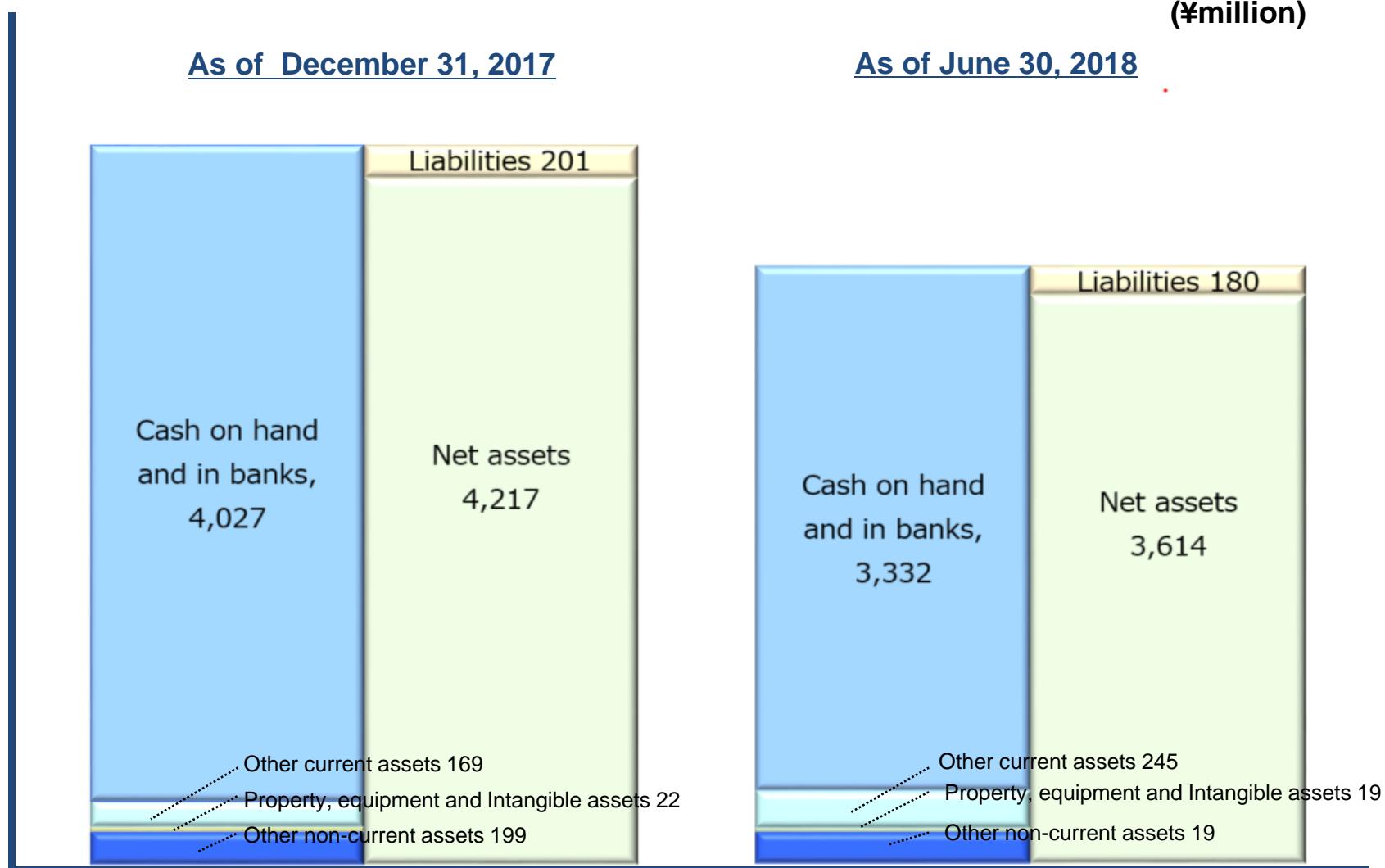


## **Overview of Q2 FY12/18 “Financial results”**

## Financial results: Profit and Loss



- Net Sales 92 million yen  
Drug Discovery and Development (DDD): Upfront payment associated with the Option License Agreement with SemaThera Inc.  
Drug Discovery Support (DDS) : Mainly consists of sales from Chugai Pharmaceutical Group.
- R&D expenses 435 million yen  
Expenses of CMC development to manufacture CBA-1205 (LIV-1205Naked) for clinical development, collaborative research with research institutes for drug discovery and technology development were posted.





## **Overview of Q2 FY12/18 “Operation highlights”**



## Business Segment

### Drug Discovery and Development Business

To discover and develop novel antibody drugs in-house or in collaboration with a partner up to late pre-clinical stage which enables to prepare data package for IND or early clinical stage in therapeutic areas where high unmet medical needs exist. The drug candidates will be out-licensed to pharmaceutical company under appropriate financial conditions such like upfront, milestone, and royalty payments etc.

- Maintaining and improving our antibody generation capabilities and expanding the drug discovery pipeline
- Putting in place a system for early clinical development

### Drug Discovery Support business

To provide “fee-for-service” to pharmaceutical and diagnostics company, and academia to support their research works. Main line of this business is 1) to generate a monoclonal antibody for their targets by our proprietary platform, and 2) to express, culture, and purify proteins including antigen and antibody.

- Enhancing outsourced services
- Acquiring new customers



## BMAA (Humanized anti-Semphorin3A antibody)

- ✓ Being evaluated by SemaThera Inc under the option agreement\*.
- ✓ SemaThera Inc. will decide whether or not to exercise the option right during an evaluation period specified in the Agreement.

Origin	<ul style="list-style-type: none"><li>• A humanized antibody generated using the ADLib® System.</li><li>• Demonstrated as a selective antibody possessing functional inhibitory activity through collaboration with Professor Yoshio Goshima in Yokohama City University.</li></ul>
Target	Semaphorin3A, SEMA3A
Therapeutic Area	Diabetic macular edema (DME)
Expectation	To be applied in a wide range of disease areas including inflammatory and CNS diseases which involve SEMA3A.
Patent	Granted in Japan and US; applications submitted in Europe

\*Chiome has granted SemaThera Inc. an exclusive option right to obtain a worldwide exclusive license to develop the antibody as a therapeutic and/or diagnostic agent for diabetic macular edema and other diabetic complications including non-ophthalmic diseases.

Unmet needs that we should satisfy : 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.



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

- ✓ Preclinical development to enter into clinical trials is proceeding on track.
- ✓ ADC Therapeutics presented encouraging preclinical data for its new investigational programs ADCT-701 at the American Association for Cancer Research (AACR) Annual Meeting 2018

**Title :**

ADCT-701, a novel pyrrolobenzodiazepine (PBD) dimer-based antibody-drug conjugate (ADC) targeting DLK-1-expressing tumors.

**Highlight :**

ADCT-701 demonstrated potent and specific in vitro and in vivo anti-tumor activity in DLK1-expressing cancer-derived models and it was stable and well tolerated in rats.

<https://adctherapeutics.com/downloads/1529348412.pdf>

\*Chiome granted ADCT a worldwide exclusive license with a right to sublicense, develop, manufacture, and commercialize an ADC format of LIV-1205, which is coded "ADCT-701".

**Unmet needs that we should satisfy :** Providing therapeutics that are effective for patients who have not seen sufficient efficacy using standard treatment methods for solid tumors, including liver cancer.



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

- ✓ CMC process development for clinical trials is ongoing and the GLP toxicology testing is scheduled as planned.
- ✓ Started consulting with CRO and KOL toward clinical development.
- ✓ Results of the collaborative research with Niigata University related to DLK-1 were published in the journal “Oncotarget” (U.S.)

Title:

Clinical outcome of hepatocellular carcinoma can be predicted by the expression of hepatic progenitor cell markers and serum tumour markers

Key points of research findings:

- Hepatocellular carcinoma in which plural hepatic progenitor cell markers including DLK-1 are expressed is found to have high malignancy and poor prognosis.
- Expression of DLK-1 positive in hepatocellular carcinoma is the highest among hepatic progenitor cell markers. If classification of hepatocellular carcinoma and therapeutic effect with antibody targeting DLK-1 is shown, it is expected to contribute in the treatment of hepatocellular carcinoma with high malignancy.

Oncotarget 2018, Vol. 9, pp:21844-21860 (<https://doi.org/10.18632/oncotarget.25074>)

\*With the progress of CMC development, the clinical development code of LIV-1205 has been changed to “CBA-1205”.

Unmet needs that we should satisfy : Providing new therapeutics for highly malignant tumors without effective therapeutic drugs including hepatocellular carcinoma.



## Discovery projects

- ✓ Expanding pipelines
  - Strengthen internal R&D activities toward novel drug candidates.
  - Launch new collaborative research projects with domestic research institutions for new drug discovery and development targeting unmet medical needs.(4 projects launched by the end of 2Q.)
- ✓ Establish collaborative research with external institutions to broaden technology portfolios. (2 projects launched by the end of 2Q.)

< technology portfolios >

Preparation of recombinant proteins	MAb Generation Platform	MAb Engineering
Expression Recombinant proteins  Membrane proteins 	ADLib® system Secreted antibody DT40 Membrane-bound antibody Animal immunity B cell cloning 	Affinity maturation Function evaluation  Lab-scale MAb Production 



## Out-Licensed Product

Code	Target	Therapeutic Area	Basic research, Drug Discovery	Preclinical Study	Clinical Trials	Partner
ADCT-701 (LIV-1205 ADC)	DLK-1	Oncology /ADC				

## Pipelines

Project	Target	Therapeutic Area	Basic research, Drug Discovery	Preclinical Study	Clinical Trials	Status
CBA-1205* <sup>1</sup> (LIV-1205Naked)	DLK-1	Oncology				Developing in-house
LIV-2008 /2008b	TROP-2	Oncology				Licensing opportunity
BMAA	SEMA3A	DME, Others				SemaThera (Exclusive option agreement)
Discovery PJ (8) * <sup>2</sup>	Undisclosed	Oncology infectious/rare diseases				—

\*1 The clinical development code of LIV-1205 has been changed to “CBA-1205”.

\*2 5 joint studies in 8 discovery projects.



## Conduct business with pharmaceutical companies, etc.

- ✓ Implementation of antibody generation and custom protein services oriented towards academia, research institutions and pharmaceutical companies.

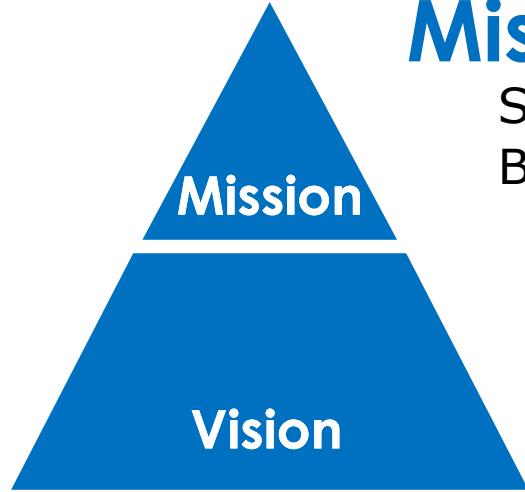
## Efforts to boost sales

- ✓ Marketing activities to acquire new clients.  
→Began new transactions with major domestic pharmaceutical companies.

- ◆ Major business partners on Drug discovery support business (as of August 2018)
  - Chugai Pharmaceutical Co., Ltd.
  - Chugai Pharmabody Research Pte. Ltd.
  - Mitsubishi Tanabe Pharma Corporation
  - Tanabe Research Laboratories U.S.A., Inc.
  - Kyowa Hakko Kirin Co., Ltd. (Started in 2Q 2018)
  - Ono Pharmaceutical Co., Ltd. (Started in 2Q 2018)



## Corporate information



## Mission

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

## Vision

Will become No. 1 biotech venture that  
discovers and develops antibody drugs  
for 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.



## Chiome Bioscience

### Drug Discovery & Development

#### Development of therapeutic drug and diagnostic agent

<Focused area>

- Oncology
- Rare diseases
- Designated refractory diseases

Growth

Promote drug development through partnership

### Drug Discovery Support

#### Contract service for drug discovery

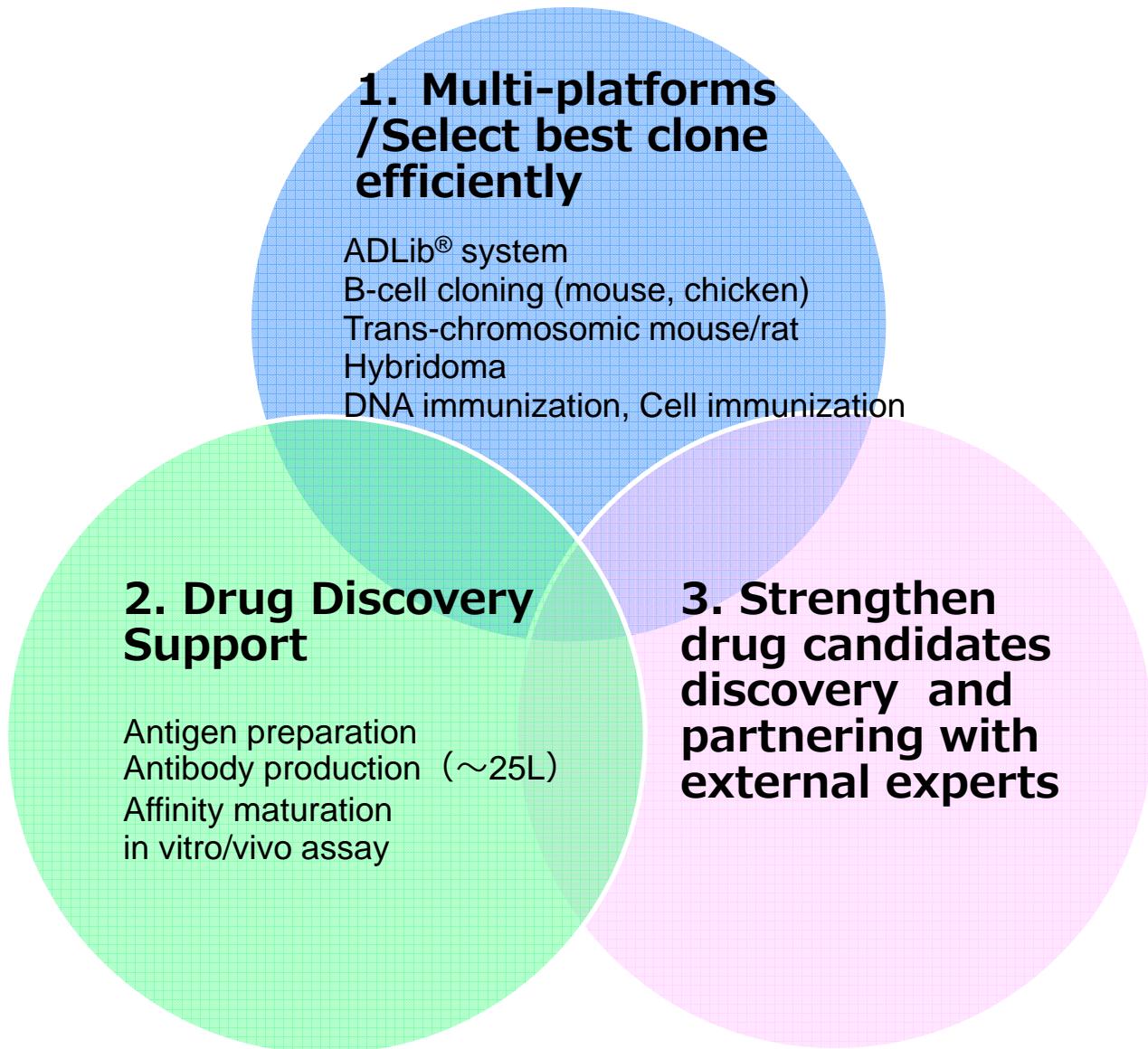
- Antibody generation (ADLib®/B-cell cloning)
- Antigen preparation
- Antibody supply

Continuity

Obtain constant revenue

Make contributions to patients and community by continuously developing therapeutic candidates against unmet medical needs

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





As of June 30, 2018

Name	Chiome Bioscience Inc.				
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.				
Address	Headquarters, Research Laboratories	Sumitomo-Fudosan Nishi-shinjuku bldg. No.6, 3-12-1 Honmachi, Shibuya-ku, Tokyo 151-0071 Japan TEL:+81-3-6383-3561 (reception)			
	Drug Discovery Laboratories	Teikyo University Biotechnology Research Center 1F 907 Nogawa, Miyamae-ku, Kawasaki-city, Kanagawa 216-0001 Japan			
Date of Establishment	February 8, 2005				
Capital	5,454 million yen (As of Mar.31,2018)				
Number of Employees	48 (As of June 30,2018)				
Directors and Corporate Auditors	President, Chief Executive Officer Executive Director, Chief Financial Officer, Head of Corporate Planning Officer Executive Director Executive Director Audit & Supervisory Board Member Audit & Supervisory Board Member Audit & Supervisory Board Member	Shigeru Kobayashi, M.E. Arihiko Bijohira Akiyuki Furuya Kunihiro Ohta, Ph.D. Ken-ichiro Saitoh Yasuhiro Tsuji, Ph.D. Nobuo Taguchi			
Major shareholder	Miraca Holdings, Inc. Matsui Securities Co. Ltd., Daiwa Securities Co. Ltd.,				



**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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- 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.