FY2025/3 1st Half Business Results
November 18, 2024

Perseus Proteomics Inc.

(Securities code: 4882)

Contents

01 About Perseus Proteomics

02 Progress of FY2025/3 Plans

03 Topics

04 FY2025/3 1st Half Business Results

05 Future Goals and Plans to Achieve them

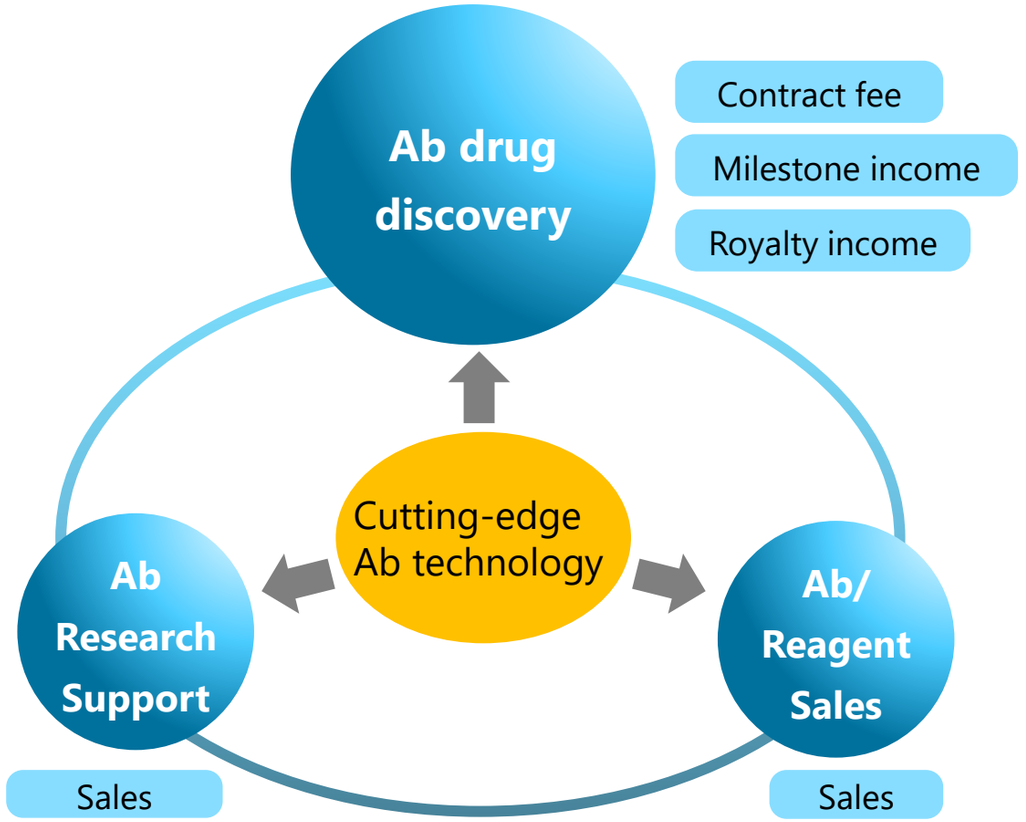
01 About Perseus Proteomics

Company outline

We contribute to global healthcare with cutting-edge antibody technology

Company name	Perseus Proteomics Inc. (PPMX)
Established	February 2001
Business	● Antibody (Ab) drug discovery ● Ab research support ● Ab/reagent sales
Securities code	TSE 4882
Office	HQ/Laboratory: 30-1 Nihonbashi-Hakozakicho, Chuo-ku, Tokyo, Japan Nagoya Laboratory: 2-22-8 Chikusa, Chikusa-ku, Nagoya-shi, Aichi, Japan
Capital	2,436 million yen*
Employee	29*

*as of Sep.30, 2024



02

Progress of FY2025/3 Plans

Progress of FY2025/3 plans

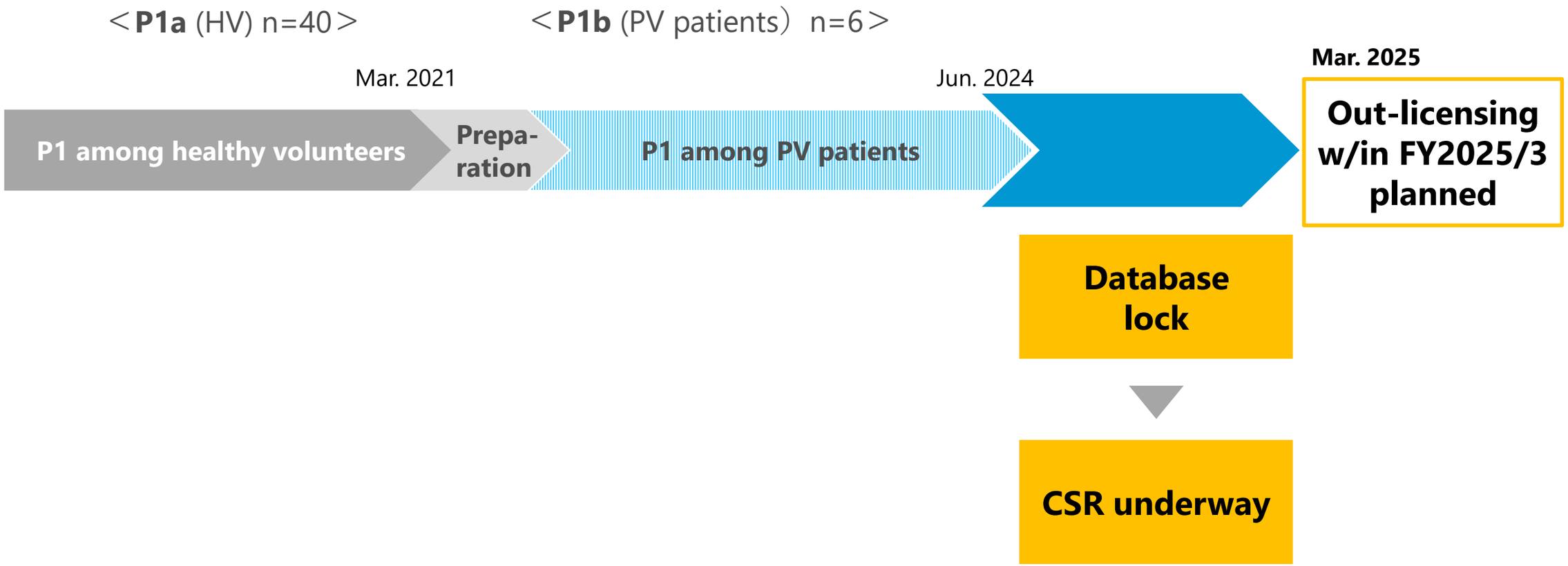
FY2025/3 Plans	Progress of 1st half
1 **PPMX-T003: Finish polycythemia vera (PV) P1, Out-license in FY2025/3**	• Completed PV patients P1 (Database locked, CSR underway) • Licensing activities ongoing
2 **PPMX-T003: Finish investigator-led P1/2 for Aggressive NK-Cell Leukemia (ANKL)**	• Investigator-led P1/2 ongoing • Support promotion of P1/2
3 **PPMX-T002: Out-license in FY2025/3**	• Licensing activities ongoing
4 **PPMX-T004: Conduct preliminary toxicity studies Start non-GLP toxicity studies**	• Studying optimization of balance between efficacy and toxicity through preliminary toxicity studies • Non-GLP toxicity studies in FY2026/3~

Pipeline

Code	Indication	R&D		Clinical trial			Approval	Market size（2024 forecast）
		Drug discovery	Non-clinical	P1	P2	P3		
PPMX-T003	PV				～FY2025/3 Out-licensing			USD 1,923 M＊1
	ANKL							—
PPMX-T002	Solid tumor (ovarian cancer, etc.)	RI Ab（Y）			～FY2025/3 Out-licensing			USD 5,430 M＊2
		RI Ab（Ac）						
PPMX-T004	Solid tumor (ovarian cancer, etc.)	ADC						USD 5,430 M＊2
		ADC						

＊1　Total of seven main markets (JP, US, EU5), Source: Global Information “Polycythemia Vera Treatment: Besremi, Jakafi, and Rusfertide Analysis”
＊2　Source: Evaluate Pharma Ovarian Cancer WW Market Value (2021), ovarian cancer only

1 PPMX-T003: PV
P1 finished, licensing activities ongoing



1 PPMX-T003: PV
PPMX-T003 attracts attention at 66th ASH meeting/exposition, etc.

PPMX-T003 presentation in/after Apr. 2024

	JP	Jul. 13 – 14, 2024	14th JSH International Symposium 2024
New	US	Dec. 7-10, 2024	**66th ASH Annual Meeting and Exposition**

Selected as presentation at the world's largest hematology society meeting/exposition in 2 consecutive years

URL: https://ash.confex.com/ash/2024/webprogram/Paper206911.html

Title: Phase I Safety Study of Anti-Transferrin Receptor 1 Antibody (PPMX-T003) in Patients with Polycythemia Vera and Erythrocythemia

- **Results of P1 among PV patients to be presented**

1 PPMX-T003 market: Position & superiority among competitive PV drugs

PV characteristics:
increase in RBC ⇒ blood viscosity↑ ⇒ thrombosis

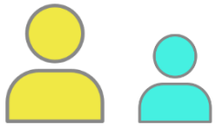
: 60~ or thrombosis in the past (certain level of AEs are tolerable) — High risk

: under 60, no history of thrombosis — Low risk

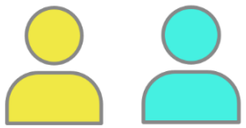
Inhibits hematopoiesis

② JAK2 inhibitor
DNA synthesis inhibitor





③ Interferon





Injection every 2 weeks

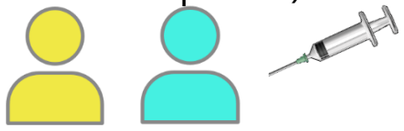
Limits progress of disease

Decrease in internal iron amount

① **Phlebotomy**



④ PTG-300(under development)



Decrease in AE

Inhibits RBC generation only

New therapy expected to improve QOL

⑤ PPMX-T003



Injection every 3 months

✔ Not cause iron deficiency
✔ Decrease in RBC only

The more RBCs decrease, the severer side effects appear.

Side effects × ⟷ △QOL lowers ○

1 PPMX-T003 market: Recent PV drug related out-licensing cases (hot market)

Time	Aug. 2023*1	Jan. 2023*2	Jan. 2024*3
Item	siRNA targeting TMPRSS6	MWTX-003/DISC-3405	PTG-300
Licensee/ Acquiree	Alnylam Pharmaceuticals (US)	Mabwell Therapeutics（CN）	Protagonist Therapeutics (US)
Licenser/ Acquirer	Agios Pharmaceuticals (US)	Disc Medicine (US)	Takeda Pharmaceutical
Indication	PV	PV, beta-thalassemia	PV
Stage	Pre-clinical	P1	P3
Contract fee (million USD）	＋Commercial milestone ＋Royalty	＋2-digit % royalty	＋Development/Commercial milestones ＋Royalty



＊1 Agios Pharmaceuticals, 2023-8-3 “Agios Announces Exclusive Worldwide License Agreement with Alnylam for Novel siRNA for the Potential Treatment of Polycythemia Vera”
＊2 Disc Medicine, 2023-1-20 “Disc Medicine Announces Exclusive Licensing Agreement with Mabwell Therapeutics for Novel Anti-TMPRSS6 Monoclonal Antibodies to Modulate Iron Homeostasis”
＊3 Takeda Pharmaceuticals, 2024-01-31 Takeda and Protagonist Therapeutics, Inc. Enter into Worldwide License and Collaboration Agreement for Rusfertide, a Late-Stage Rare Hematology Asset”

2 PPMX-T003: ANKL
Ultra-rare disease; causes to be discovered and treatment to be established

What's ANKL?

- **Poor prognosis**

  50% survival period = 58 days (about 2 months)

- **Ultra rare disease**
  - 13 cases in Japan in 2020
  - Cases seen in east Asia and Latin America
  - Cases may rise with increase in awareness of ANKL
- **Many cases in AYA generation** (age 15 to 39) and **40s**
- **No effective medical drug available**

Subsidy from AMED*

FY2023/3:	58M yen	Received
FY2024/3:	107M yen	Received
FY2025/3:	110M yen	Planned
Subsidy (max) total:	275M yen	

* Through Project Promoting Support for Drug Discovery Support Program for Orphan drug prior to the Designation

2 PPMX-T003: ANKL Investigator-led P1/2 (n=7) continued

2022/03 2023/09 2025/03

ANKL basic research (Tokai Uni)
PPMX-T003

Development (Tokai Uni+PPMX)

Investigator-led P1/2 clinical trial (Hiroshima Uni+PPMX)

Clinical trial notification submitted (Prof. Ando at Hiroshima Uni)

FPI (2 subjects administered)



- **7 clinical trial locations**
- **Nationwide coverage**

P1/2 finishes

Orphan drug application for approval of world-first effective ANKL drug

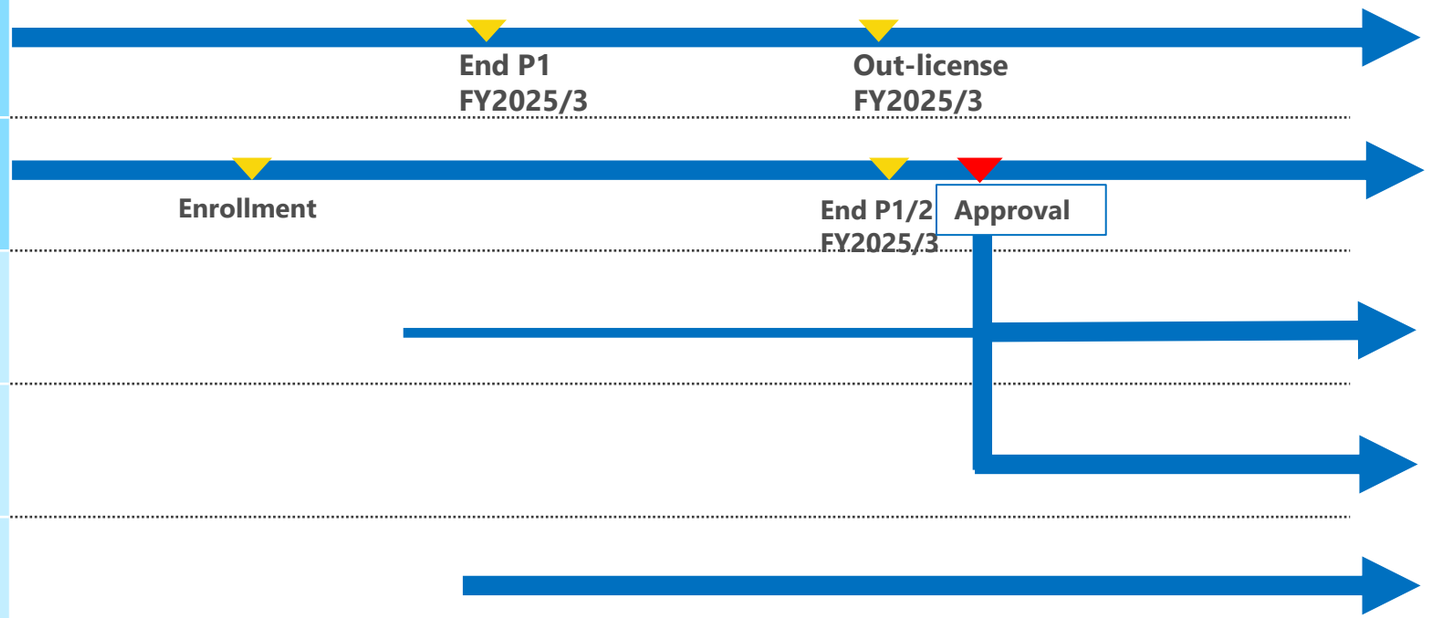
- **Clinical trial information**

jRCT
https://jrct.niph.go.jp/en-latest-detail/jRCT2061230008

2 PPMX-T003: ANKL
Expand indications of T003 through efficacy confirmation in cancer field

Indication	No. of patients	Stage
PV	300,000*1	P1 (patients)
ANKL	-	Investigator-led P1/2
AML	180,000*2	Joint research w/academia
Lymphoma	620,000*3	Joint research w/academia
Solid tumor	18.1 million*4	Joint research w/academia

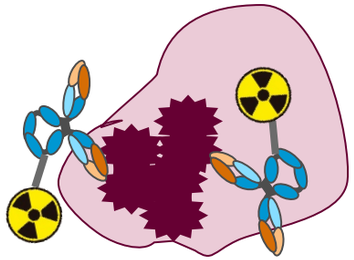
Development timeline image



Source： *1 Global Information “Polycythemia Vera Treatment: Besremi, Jakafi, and Rusfertide Analysis”
*2 Prepared by the Company based on WHO data and “Blood Reviews” Volume 36, Epidemiology of acute myeloid leukemia: Recent progress and enduring challenges”
*3 WHO *4: World Cancer Research Fund International (2020)

3 PPMX-T002:
Use Ab as is and change RI to ^{225}Ac, Licensing activities ongoing

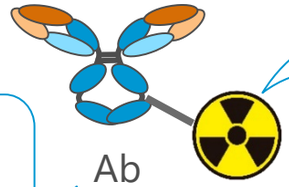
1 Function of RI labelled Ab



Cancer cells

PPMX-T002 Ab accumulates on CDH3 on cancer cells and RI kills cancer cells

2 Structure of new PPMX-T002



Confirmed accumulation on cancer cells (in P1 expansion in USA)

^{90}Y(β emitter)⇒**^{225}Ac (α emitter)** to improve efficacy

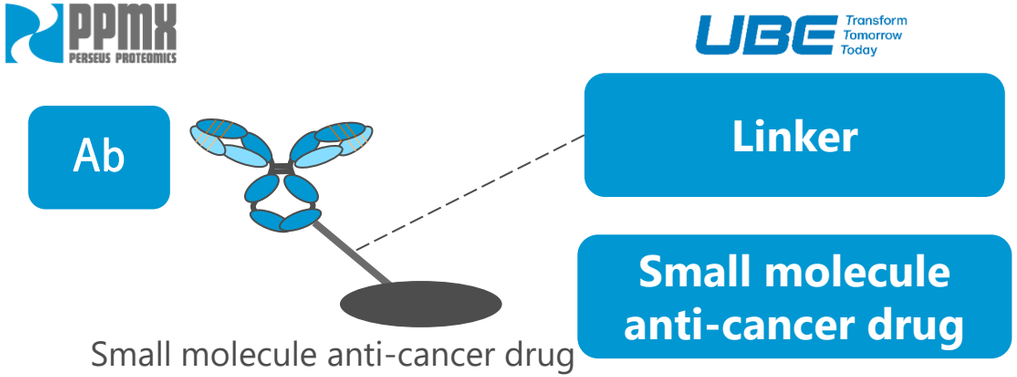
3 Achievements in first half and future strategy

Q1-Q2	Q3-Q4
Study development strategy w/licensing candidates	Determine a licensing partner
	Out-licensing

Presentation	Germany	Oct.19-23, 2024	EANM'24

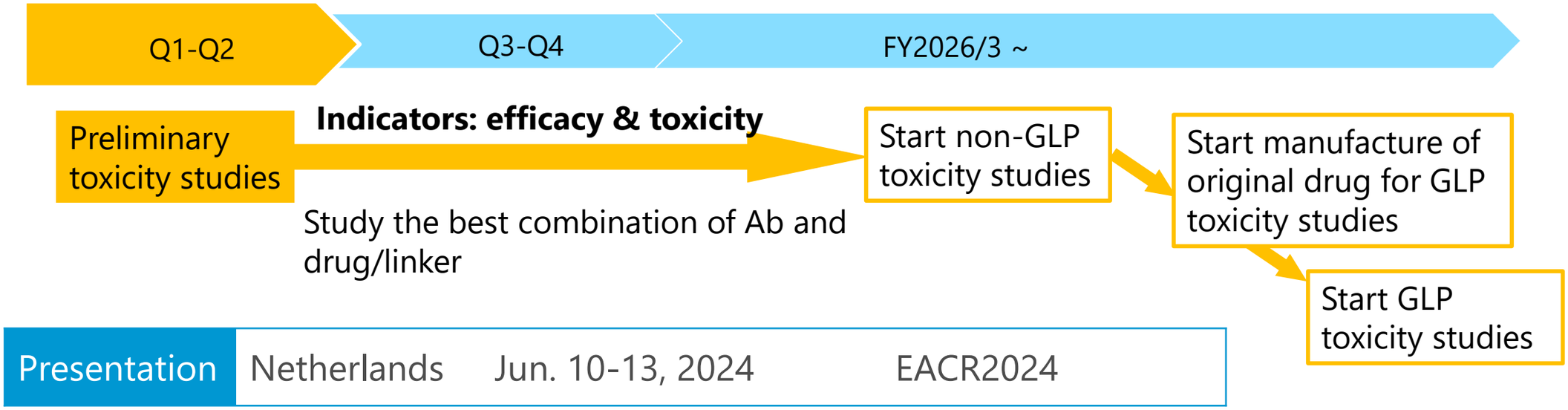
4 PPMX-T004: ADC
Preliminary toxicity studies ongoing, non-GLP toxicity studies in FY2026/3~

1 Development plan



- High stability in blood
- Separated at the intended timing to release anti-cancer drug
- Small molecule anti-cancer drug that matches antibody characteristics

2 Achievements in first half and future strategy



Presentation	Netherlands	Jun. 10-13, 2024	EACR2024

03 Topics

Joint research agreement with UBE on ADCs

UBE Transform Tomorrow Today

- Linker
- Small molecule anti-cancer drug

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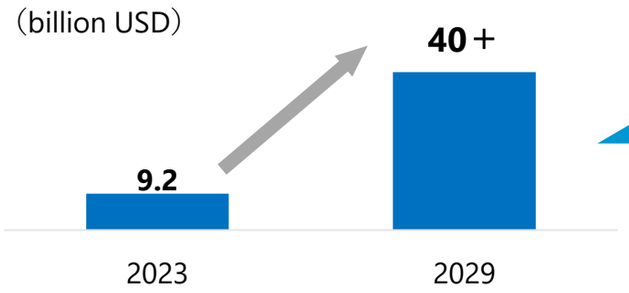
PPMX PERSEUS PROTEOMICS

- Ab technology

Academia → Seeds

UBE, PPMX → Seeds

Joint R&D on ADCs for various cancers



Global ADC market to grow as much as 4+ times by 2029

(Global Data: Mar. 2024 "Antibody-Drug Conjugates (ADC) Overview")

Ab/reagent sales and Ab research support
Aim to improve sales by introducing new products/service utilizing drug discovery technology

Ab/reagent sales　New products to be released w/in FY2025/3

- for **ADC** research
  - New Anti-MMAE Ab
  - Anti-DM1 Ab
- for **RIT** research
  - Anti-DOTA Ab
- for **disease** research
  - New Anti-GPCR Ab (planned)
  - Anti-mAQP4 Ab

Ab research support　Service menu to be expanded w/in FY2025/3

Recombinant Ab production　**Sequencing**　**Recombinant Ab generation**

Single cell cloning technology

- **Single cell gene analysis**
- **Retrieval of rare cells**
- **Cell cloning after inserting gene**

VHH Ab screening technology

- New **Recombinant Ab generation (planned)**

04 FY2025/3 1st Half Business Results

FY2025/3 1st half business results
Profit & Loss highlights

(million yen)

	FY2024/3 1st half	FY2025/3 1st half
Sales	**50**	**59**
Gross profit	45	55
SG & A	489	469
R&D costs	303	304
Other	186	164
Operating income	**(444)**	**(414)**
Ordinary income	**(429)**	**(427)**
Extraordinary loss	203	66
Net income	**(633)**	**(495)**

Ab research support
Ab/reagent sales

PPMX-T003 ANKL clinical trial
PPMX-T003 PV clinical trial

Impairment loss due to capex

- Sales: 16.6% increase year-on-year
- R&D costs: PPMX-T003 ANKL P1/2 and PPMX-T003 PV P1
  Delay in optimization of Ab and drug/linker combination PPMX-T004

FY2025/3 1st half business results
Balance Sheet highlights

(million yen)

Assets	2024/3/31	2024/9/30
Cash & deposits	1,541	2,086
Total current assets	1,650	2,148
Non-current assets	42	42
Total assets	1,693	2,191

Liabilities	2024/3/31	2024/9/30
Current liabilities	128	136
Non-current liabilities	166	216
Total liabilities	295	353
Total net assets	1,398	1,838
Total liabilities and net assets	1,693	2,191

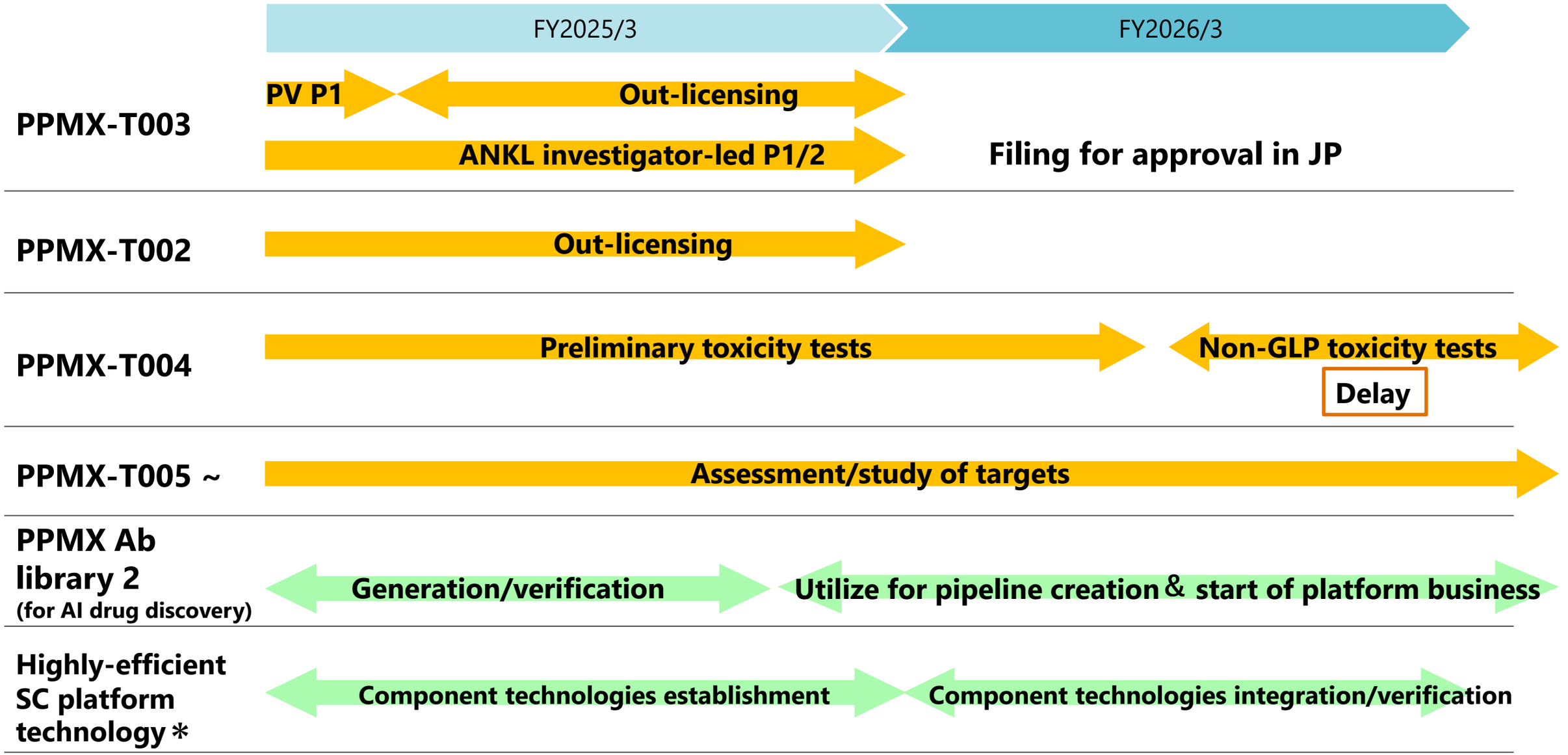
- Cash & deposits: increase by fundraising
- Non-current liabilities: long-term deposits due to PPMX-T003 (ANKL therapeutic drug development) selected as AMED program
- Capital ratio: 80.3%

Fundraising results through 28th Share Acquisition Rights issuance

28th Share Acquisition Rights	
Allotment date	2024/3/7
Allotee	Barclays Bank, plc.
Potential share	2,900,000 shares（dilution rate: 24.51% against shares outstanding as of 2023/12/31）
Issuance price	JPY 1,566,000（JPY 54 per right)
Amount (net)	Approx. JPY 950 mn
Exercise period	2024/3/8 – 7/1 (completed)
Initial exercise price	JPY 536
Amendment of exercise price	Changed to 93.5% of the share price of 1 operating date prior to the effective date
Minimum exercise price	JPY 268（50% of the share price of 2024/2/19)

05 Future Goals and Plans to Achieve them

Future growth plans



＊Selected for Tokyo Strategic Innovation Promotion Program

Future targets are highly difficult antigens
Speed of finding Abs is crucial

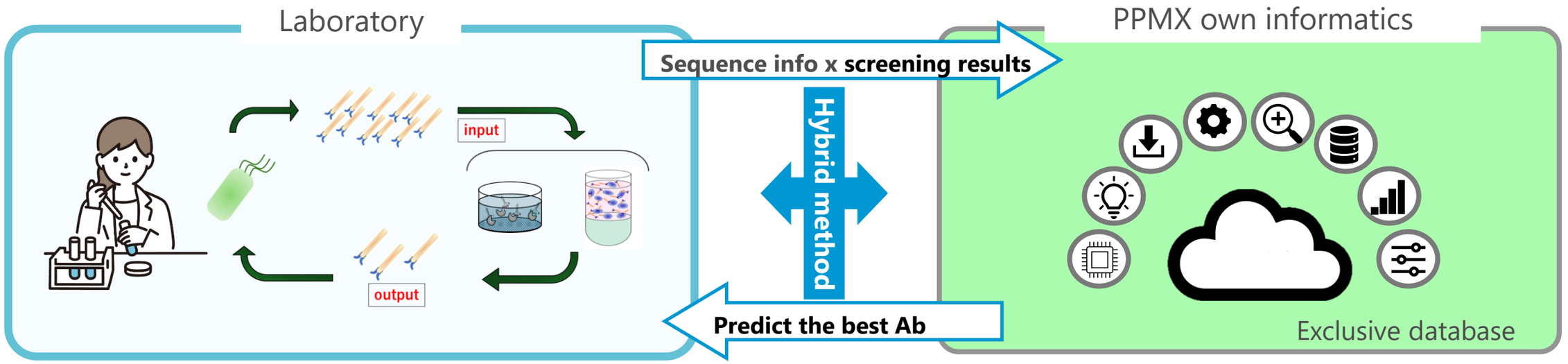
Screening Ab library at laboratory

Conventional

New

Usual antigen	✔	• Search for Ab to bind • Increase candidates • Select the best	To be assessed: 100-200 clones Generated Abs : 10-20 clones Candidates: a few clones
Highly difficult antigen	×	• Search for binding Ab • Increase candidates • Select the best	To be assessed: 100-200 thousand clones **Practically impossible** Generated Abs: 0 clone Candidates: 0 clone
	✔	•Import all screening data •Optimize* candidate search process by bioinformatics •Verify Ab by actual production of final candidate	

*Patents to be filed in FY2025/3



For highly difficult antigens: hybrid method of actual experiments and bioinformatics

PPMX Ab Library 2

PPMX Ab Library 1 (conventional)

100 times more diversity than competitors

PPMX Ab Library 2 (New)

	100 times more variety than competitors	**Renew library while maintaining the same concept**
New	**ID-tagged library**	**Acquire all sequence information conveniently**
New	**Hybridization of screening method**	**Improve screening efficiency Visualize rare clones**

Expand the range for use and prepare for AI drug discovery in the future through advancing Ab Library

＊ID-tagging of library: patents filed in FY2024/3, in silico screening: patents to be filed in FY2025/3

Achievements so far and future growth

- Clinical trial of PPMX-T003 ANKL
- Improve efficacy of PPMX-T004

- **Phage display method**
- **Hybridoma method**
- **Ab screening method (ICOS method)**

- Out-license PPMX-T002/T003
- Promote development of PPMX-T004
- Develop other ADCs or combine Abs with other modalities
- Search for Ab for new targets with academia

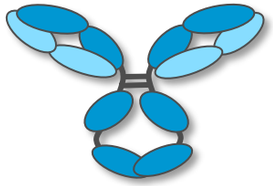
- **Improve Ab library**
- **Establish technologies for AI drug discovery**

+

Technologies described in left

Appendix

Antibody drugs

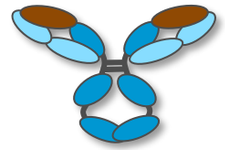


Antibody

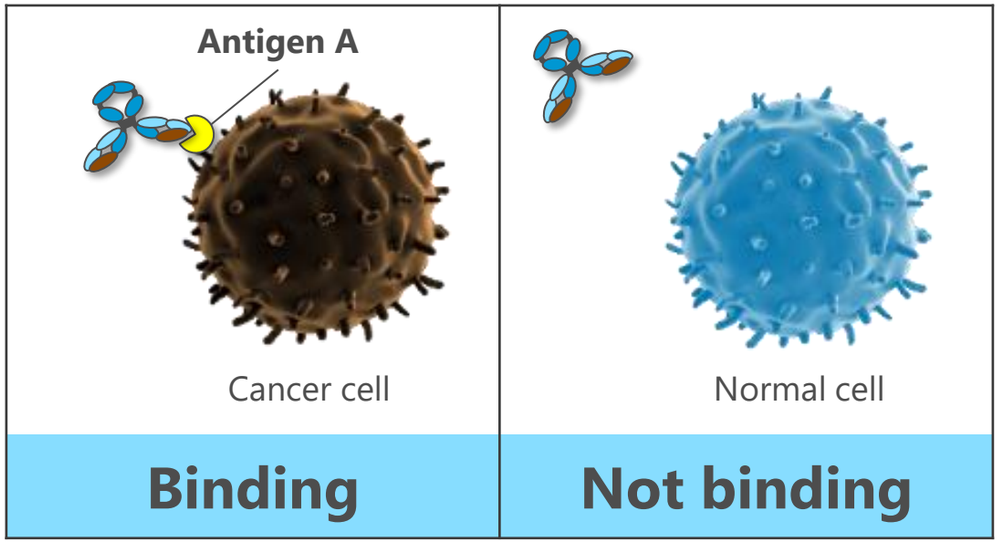
- Remove alien objects inside body
- Innate immune system
- Act on specific antigens (targets) only

⇒ ideal molecule targeting drug with few adverse effects

→ **High safety**



Antibody A



→ **Ab drug**

Medical drug consisting of antibody designed to act on disease regions only

Focus of Ab drug discovery competition
To the top of Ab biotech ventures utilizing superiority in technology

Select theme
Needs
Market superiority

→

Obtain best Ab
- Collect as many as Abs
- Select the best Ab efficiently

→

Clinical development → **Out-licensing**
Most important for business progress
Centre of business results report

Valuation of pipeline determined at this stage

Performance evaluated by progress of development

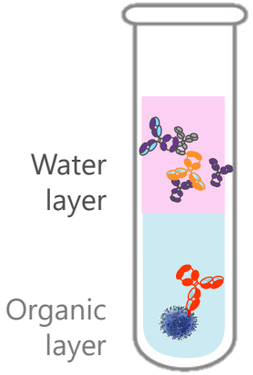
Methods to collect Abs (Utilize 3 basic Ab obtaining methods and improve continuously)

1) Recovered patients　2) Animal immune　3) Phage display method

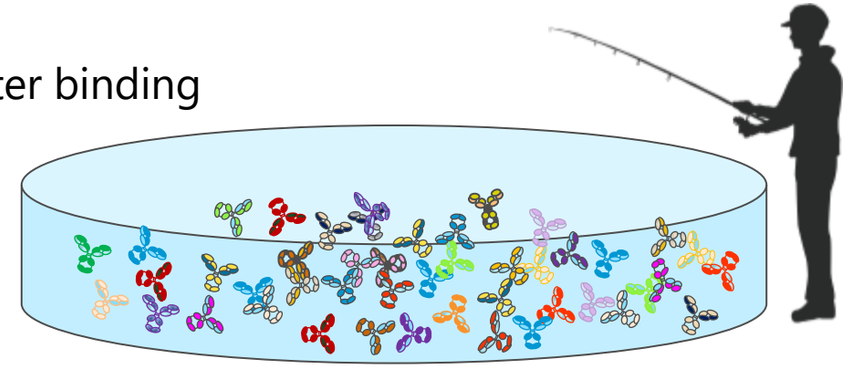
Methods to select

ICOS method using cells

Individual target fishing vs. Fishing with a fishing net to select later



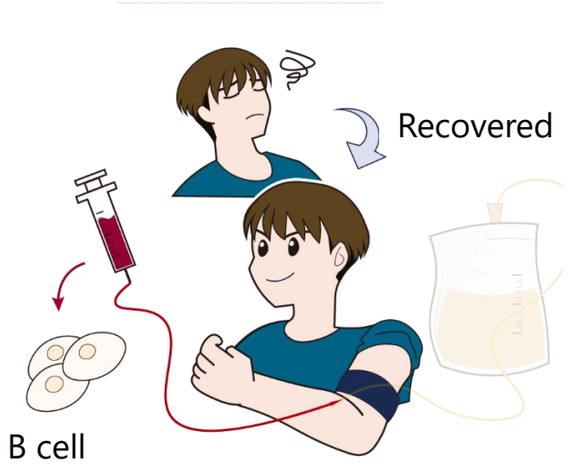
Select Ab by not only binding affinity but also functionality after binding
(enter inside of cells, bind receptors to block others, etc.)



Cover the methods to create Ab drugs and pursue cutting-edge technology

1 Recovered patients

Disease essence and clues for medical drugs

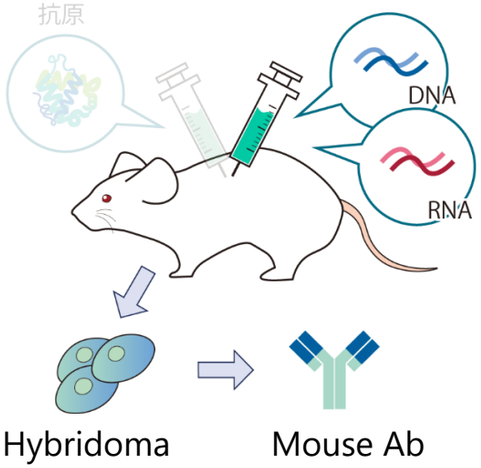


Generate Abs from one cell in blood

Single cell cloning service

2 Animal immune

Exquisite for gene manipulating drug discovery



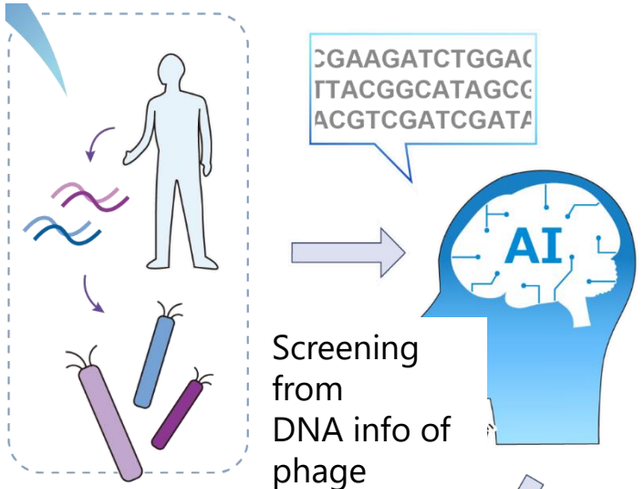
Humanization

Humanize murine Abs

Cell cloning service after inserting genes

3 Phage display method

Combine sequence info of NGS analysis and actual data



AI selects targeted Ab from library

Utilize our numerous Abs and actual data to AI

[Inquiry]
Email: ir@ppmx.com
https://www.ppmx.com/en/

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