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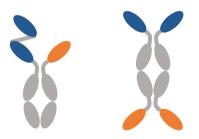




# Leading the Next Wave of Antibody Therapeutics in Oncology and Immunology

### **Differentiated Portfolio**

- Novel molecules leveraging HBM's industry-leading platforms
- Unique immune cell engagers
  leveraging proprietary HBICE™ platform
- Close to market assets addressing high unmet medical needs





### **Innovative Business Model**

- Accessing to world-class innovation through collaborations with top-notch academics
- Co-discovery with industry partners to build an extended portfolio
- Technology licensing generating near and long-term revenue



















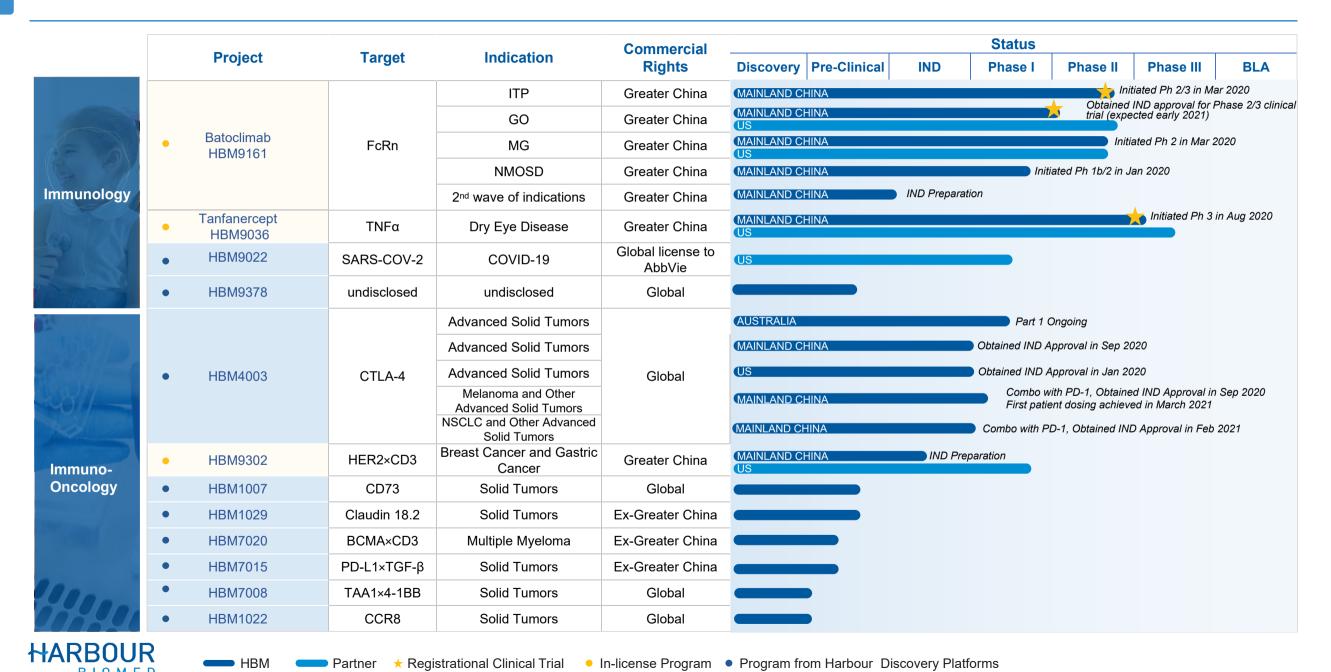


### **Industry Leading Discovery Platforms**

- Harbour Mice® platforms including H2L2 & HCAb
- HBICE™ (HCAb Based Immune Cell Engagers) platform
- Single B cell technology



### A Robust Portfolio of Clinical and Pre-clinical Programs



### Significant Project and Financial Achievements in 2020

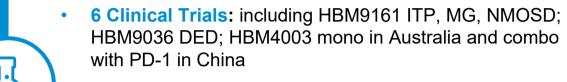
### **Discovery Advancement**





- 3 Bispecific Antibodies: including HBM7008 (TAA1×4-1BB), HBM7015 (PD-L1×TGFβ) and HBM7020 (BCMA×CD3)
- 1 Co-Discovery: HBM9378

### **Clinical Progress**



- 7 IND Approvals: including 4 for HBM4003, 2 for HBM9161 and 1 for HBM9022
- 1 Breakthrough Therapy Designation: HBM9161 MG

### **Global Collaboration**

COVID-19 Neutralizing Antibody
 Out-license



 Strategic Co-Development & Out-license Collaboration



 Strategic Co-Discovery Collaboration



### **Financial Strength**

• Revenue: 14.1 million USD (+160% vs. 2019)

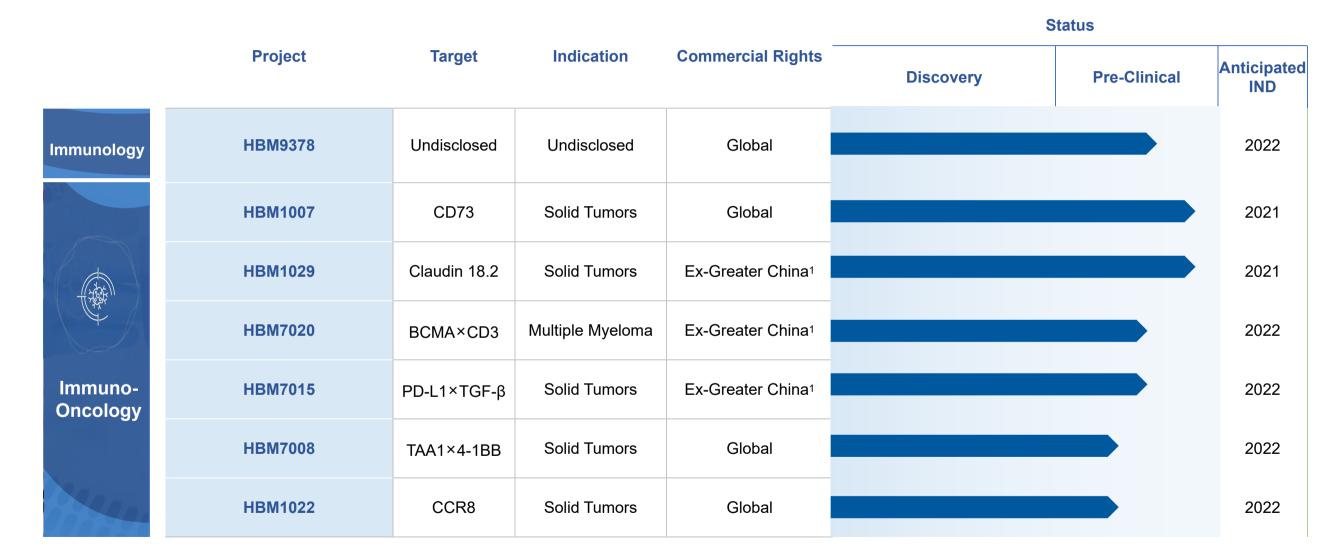


- **R&D Expenses: 55.2** million USD (+12% vs. 2019)
- Cash and Bank Balances: 356.8 million USD
- IPO Listing: December 10<sup>th</sup>, 2020 HKEX





### First-in-class and Best-in-class Preclinical Assets

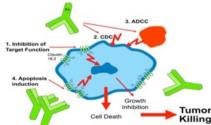




<sup>(1)</sup> Greater China rights out-licensing to Hualan Genetics

### **Next-Gen Monoclonal Antibody Therapies**

#### **HBM1022 HBM1007** (CCR8) (CD73) A fully human mAb against CD73 generated A fully human mAb to selectively kill Claudin **Asset** Anti CCR8 mAb potently antagonize CCL1-CCR8 from our H2L2 Platform 18.2 positive tumor cells, particularly for gastric Overview binding and deplete CCR8-expressing cells cancer or GEJ (1), and pancreatic cancer Indication **Solid Tumors Solid Tumors Solid Tumors IND Plan** 2022 2021 2021 First reported cross-reactive antibody binding to Fully human rare allosteric inhibitor for Fully human CLDN18.2 antibody with high human and cynomolgus CCR8 with antagonistic CD73 enzyme with unique epitope binding affinity, strong ADCC and CDC antifunction on CCL1-CCR8 axis tumor activities vs. competition High potential as mono - and/or Only mAb shown to have anti-tumor efficacy in Potential to become a differentiated combination therapy in patients with high animal models instead of using surrogate tool therapeutic CD73 expression antibody Highlights 1. High CCR8 expressing Tregs allow for Tumor



**HBM1029** 

(Claudin 18.2)

GEJ: Gastro-oesophageal junction

Anti-tumor effect



## **Next-Gen HBICE™ Bispecific Antibody Therapies**

Asset Overviev
Indication
IND Plar
Highlight

### HBM7008 (TAA1 x 4-1BB)

TAA x 4-1BB HBICE™-based bispecific T cell engager

**Solid Tumors** 

ND Plan 2022

- First-in-class bispecific based on HBICE™ platform
- Activate on 2<sup>nd</sup> signal stimulation specifically in tumor microenvironment to inhibit tumor growth, and potentially translate to better safety

### HBM7020 (BCMA x CD3)

BCMA x CD3 HBICE™-based bispecific T cell engager

Multiple myeloma

#### 2022

- New generation BCMAxCD3 bispecific with 2+1 format and optimized CD3 activity
- High tumor killing specificity with less cytokine storm risk.

### HBM7015 (PD-L1 x TGF-β)

Bifunctional fusion protein, consisting of a fully human IgG1 mAb against PD-L1 and the soluble extracellular domain TGF-β

**Solid Tumors** 

#### 2022

- Better PD-L1 activity and TGF-β blocking potency than competitor drug
- No-linker design and fully human derived sequence shows good druggability

**HCAb-based symmetric format** 



**HCAb-based "2+1" format** 



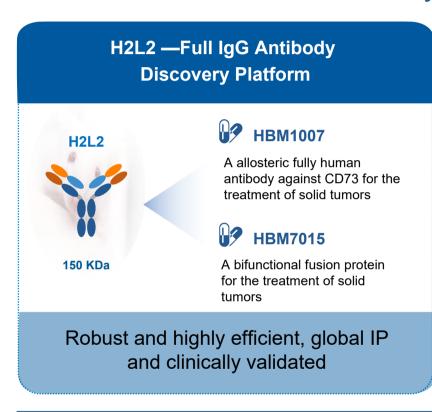
Fully human bifunctional protein

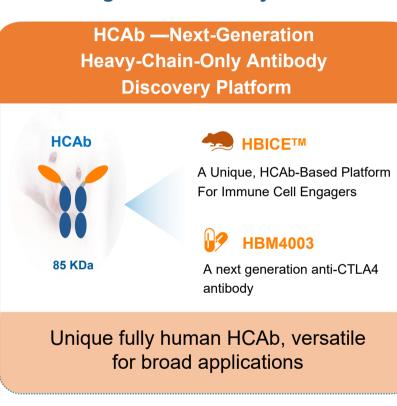


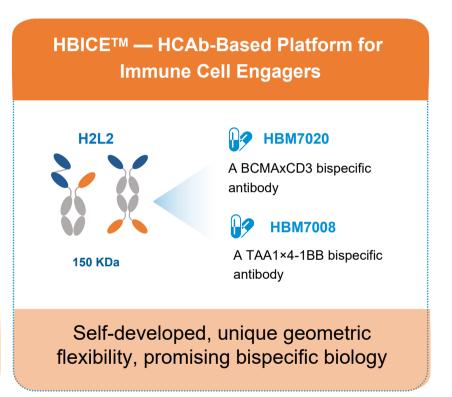


### **Integrated Platforms Enable Continuous Invention of Novel Molecules**

Harbour Antibody Platforms Combined with Single B Cell Cloning Offers A Complete and Advanced Technology Solution for Consistently Discovering Next-Gen Fully Human Antibody Therapeutics







### Antibody generation with Single B Cell cloning method in 3-5 months\*

Animal Immunization
1-2 months

SBC

1 -2 weeks

**SC Sequence** 

(1-2 weeks)

Recombinant Antibody
(4-5 weeks)

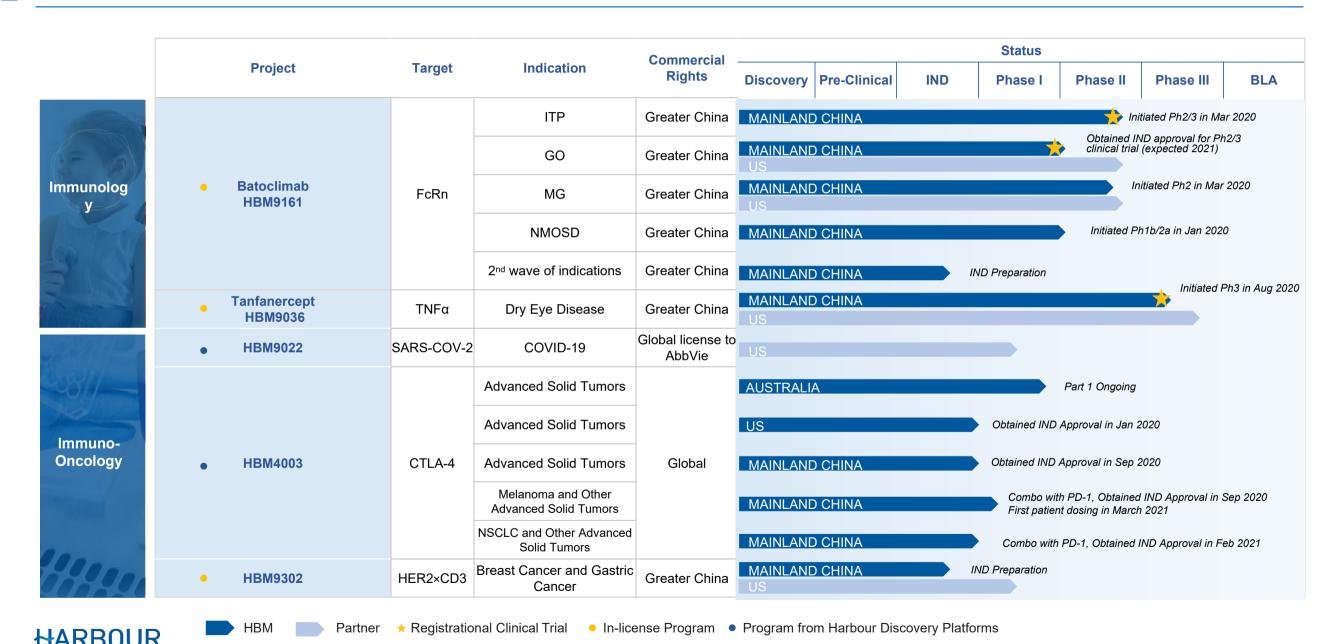
Lead Characterization

1-2 weeks



### First-in-class and Best-in-class Clinical Assets

BIOMED





# HBM4003: Next-Gen HCAb Anti-CTLA4 Antibody with Potential to Become the Cornerstone of Immuno-Oncology Therapy

### **Mechanism of Action**

1

Inhibition of negative signaling from the interaction of CTLA-4 and the co-stimulatory molecule B7

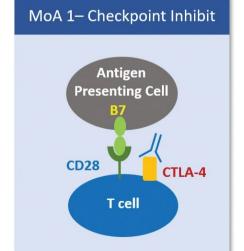
2

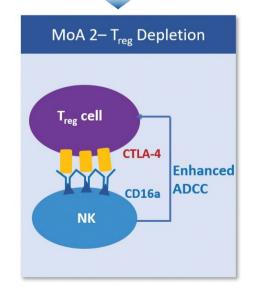
Depletion of immune suppressive regulatory T cells (Treg) through enhanced ADCC **Current Treatment and Limitation** 

Yervoy (ipilimumab) is the only marketed anti-CTLA-4 drug and has many limitations, and there remains significant unmet medical needs for the next generation anti-CTLA-4 antibodies

Significant Toxicity in Combotherapy

Limited Efficacy and Applications





Potential advantages of HBM4003 over competing anti-CTLA-4 molecules

Increased potential to deplete intra-tumoral Treg cells via **enhanced ADCC strategy** to break the significant immune-suppressive barrier of anti-cancer immunotherapies in solid tumors

Promising safety profile resulting from the reduced drug exposure in the serum

**Extensive combination potential** with other anti-tumor or immunomodulatory antibodies, vaccines, and targeted therapies

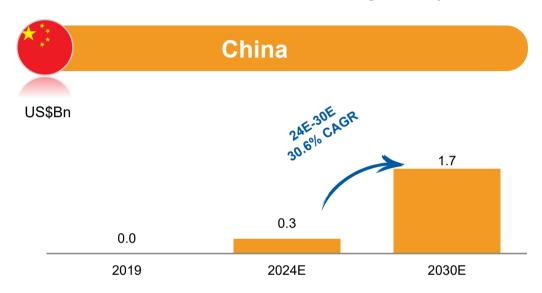




# HBM4003: Next-Gen Anti-CTLA4 Antibody with Potential to Become the Cornerstone of Immuno-Oncology Therapy

### **Market opportunities for HBM4003:**

The launch of innovative CTLA-4 antibodies with higher safety and better efficacy and targeting more indications will drive the growth of the CTLA-4 market globally

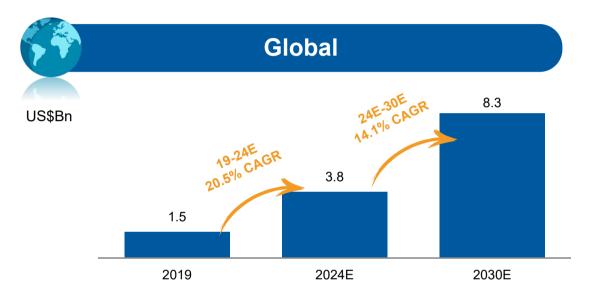


### **HBM Strategy and Plan**

### Milestones

- ✓ IND approval in US and China (mono therapy)
- ✓ IND approval in China (combo with PD-1 for melanoma and other advanced solid tumor)
- ✓ IND approval in China (combo with PD-1 and chemotherapy for NSCLC and other advanced solid tumor )
- ✓ MAD finished in AUS (mono therapy)



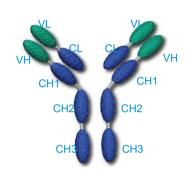


### **Catalysts**

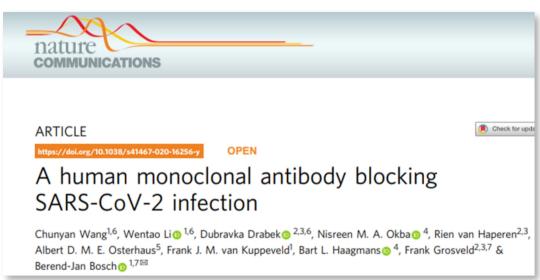
- Dose expansion kick-off globally of both mono therapy and combo with PD-1 for melanoma and other advanced solid tumor
- The 1<sup>st</sup> readout for mono therapy Ph 1 & presentation at global conference (ESMO, CSCO 2021)
- Global initiation of combo with PD-1 and chemotherapy for NSCLC and other advanced solid tumor

# HBM9022: A Cross-reactive Neutralizing Antibody to Treat COVID-19 Out-licensed to AbbVie

### **Discovered with our Harbour H2L2 Platform**



Has shown extremely promising properties in late-stage preclinical settings to block infection by SARS-CoV and SARS-CoV-2



Nature Communications, 11:Article 2251, 2020 https://www.nature.com/articles/s41467-020-16256-y.pdf

### **A Potential Drug to Treat COVID-19**

- A fully human, neutralizing antibody co-discovered by Harbour BioMed Utrecht University and Erasmus Medical
- Offers potential to prevent and/or treat COVID-19, and possibly other future emerging diseases in humans caused by viruses from the Sarbecovirus subgenus
- Targets a conserved region of the virus' spike protein and uses a mechanism that is independent of receptor-binding inhibition

Entered License agreement with AbbVie and Started Ph1 globally by AbbVie







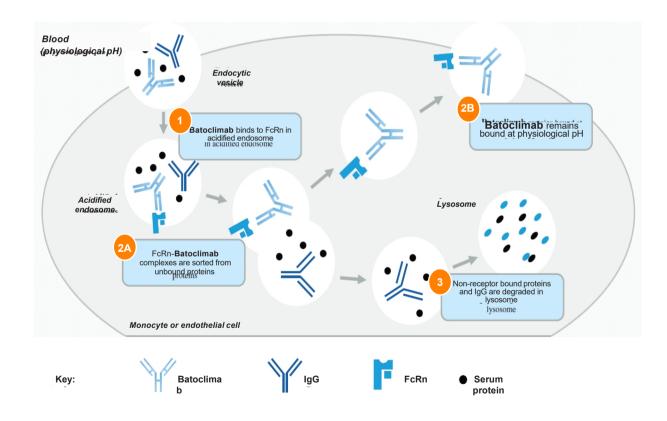




# Batoclimab (HBM9161): A Breakthrough Therapy for IgG Mediated Autoimmune Diseases with a Portfolio-in-a-product Approach

### **Mechanism of Action**

Batoclimab is designed to selectively bind to and inhibit FcRn, thus blocking the recycling of IgG antibodies





### **Current Standard of Care**

Current treatments for patients with serious autoimmune diseases primarily include plasmapheresis and intravenous immunoglobulin ("IVIg")

#### **Plasmapheresis**

A process that separates blood cells from the plasma, removing antibodies, and returning them back into the body

#### IVIq

A process that intravenously injects antibodies collected from more than 1,000 blood donors to interfere with autoantibodies and relieve symptoms

### **Competitive Advantages**

A more effective and differentiated treatment for autoimmune diseases

Strong Efficacy	<ul><li>✓ Potent &amp; dose-dependent IgG reduction</li><li>✓ Clinical POC established across indications</li></ul>
Safety	<ul> <li>✓ Full human IgG with low immunogenicity risk</li> <li>✓ Less likely to lead to inflammation with reduced effector function</li> <li>✓ Well tolerated, majority of AEs are mild and/or moderate</li> </ul>
Convenient Treatment	<ul> <li>✓ Fixed-dose subcutaneous injection</li> <li>✓ Possible for patient self-administration</li> <li>✓ Improved patient compliance</li> </ul>



# Batoclimab (HBM9161): A Breakthrough Therapy for IgG Mediated Autoimmune Diseases with a Portfolio-in-a-product Approach

#### A Pipeline-in-a-product:

60~70 pathogenic IgG mediated autoimmune diseases

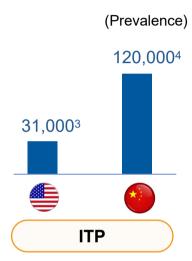
Immune Thrombocytopenia
Myasthenia Gravis
Neuromyelitis optica spectrum disorders
Graves' Ophthalmopathy
Multiple Sclerosis Scleroderma
Rheumatoid Arthritis Lupus

Rheumatoid Arthritis Lupus
Anca Vasculitis
Pemphigus
Bullous Pemphigoid
Epidermolysis Bullosa Acquisita

...

# **China's Fast-Grow Market Opportunity in Autoimmune Diseases**





### **HBM Strategy and Plan**

### Milestones

- 1 trial completed with positive data published (Ph1)
- 3 Trials ongoing: NMOSD(Ph1b/2a), MG(Ph2), ITP(Ph2/3)
- 1 Breakthrough Therapy Designation application (MG)
- 1 new IND approved (Ph2/3 GO)

# 2021

- MG Ph2 completion, and Ph3 initiation
- o BTD achieved
- o MG Ph2 outcome to be published
- ITP Ph2 completion, and Ph3 initiation
- New IND(Ph 2b) approval
- o ITP Ph2 outcome to be published
- GO Ph2/3 initiation
- · NMOSD PoC achieved and BTD application
- IND applications for 2<sup>nd</sup> wave of indications

# 2022-2023

- BLA for treatment of MG, ITP, NMOSD, GO
- Commercial launch
- Indications expansion

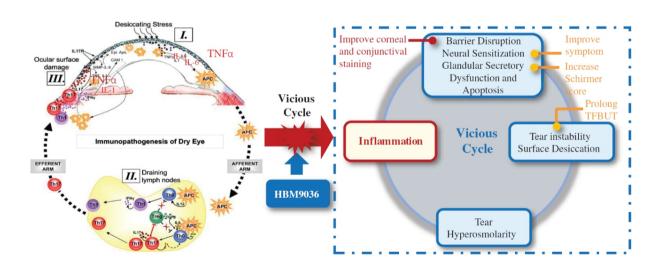


- (1) International consensus guidance for management of myasthenia gravis, 2016
- (2) Nationwide population-based epidemiological study of myasthenia gravis in Taiwan, 2010
- (3) Prevalence of immune thrombocytopenia: analyses of administrative data, 2006
- (4) The Epidemiology of Immune Thrombocytopenia in Taiwan, 2018

# Tanfanercept (HBM9036): A Differentiated Therapy to Treat the Growing Prevalence of Moderate-to-severe Dry Eye Disease

### **Mechanism of Action**

Tanfanercept is a potential differentiated therapeutic option for treating moderate-to-severe dry eye disease (DED). It is a molecularly engineered tumor necrosis factor receptor 1 fragment, produced by modification of the TNF-  $\alpha$  binding region of the TNF-  $\alpha$  receptor site. It is potent in binding and blocking TNF-  $\alpha$ , resulting in suppressed inflammation after topical use.



### **Current Standard of Care**

Limited treatment options with only one approved anti-inflammatory DED drugs in China - Cyclosporin

Artificial tear for lubrication

Autologous serum/ secretagogue/ systemic anti-inflammatory

### **Competitive Advantages**

Special TNF-α target with clearly demonstrated effectiveness



### **Comfortable**

similar drop comfortable score with placebo

**Excellent Safety Profile** 



### 4 weeks vs. 3-6 months

From initiation of treatment show reduction in clinical signs (Tranfanercept vs. Competitors)

**Rapid Onset** 



# Tanfanercept (HBM9036): A Differentiated Therapy to Treat the Growing Prevalence of Moderate-to-severe Dry Eye Disease

### **Huge Unmet Medical Needs in China**

**DED Market Size in China** 





**Aging Population** 



**Deteriorating environmental** pollution



Increase in autoimmune diseases



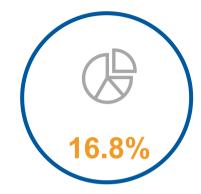
**Contact lens wear** 



**Digital Screen Time** 



adults impacted by DED



of total China adult population

### **HBM Strategy and Plan**

2020

- Received approval from the NMPA on registrational Ph3 trial design and BLA strategy
- Published Ph2 trial data of China at "Chinese Ophthalmological Society"

2021

 Achieved first dosing of Ph 3 clinical trial in March 2021

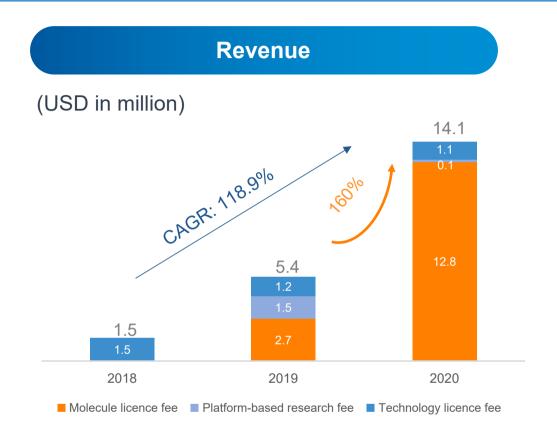


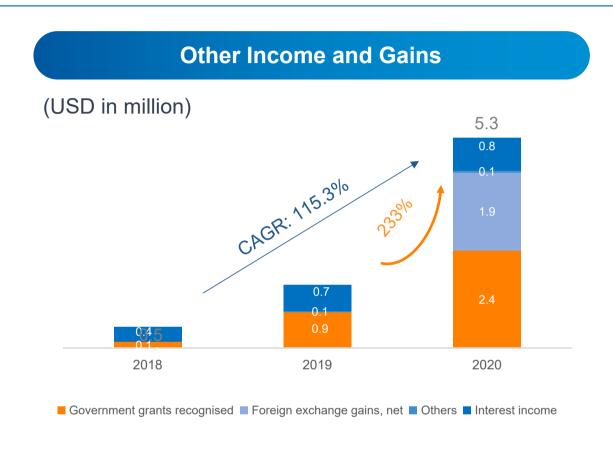
**BLA** submission





# Year-on-year Revenue Increased Owning to Business Collaborations and Out-licensing Activities







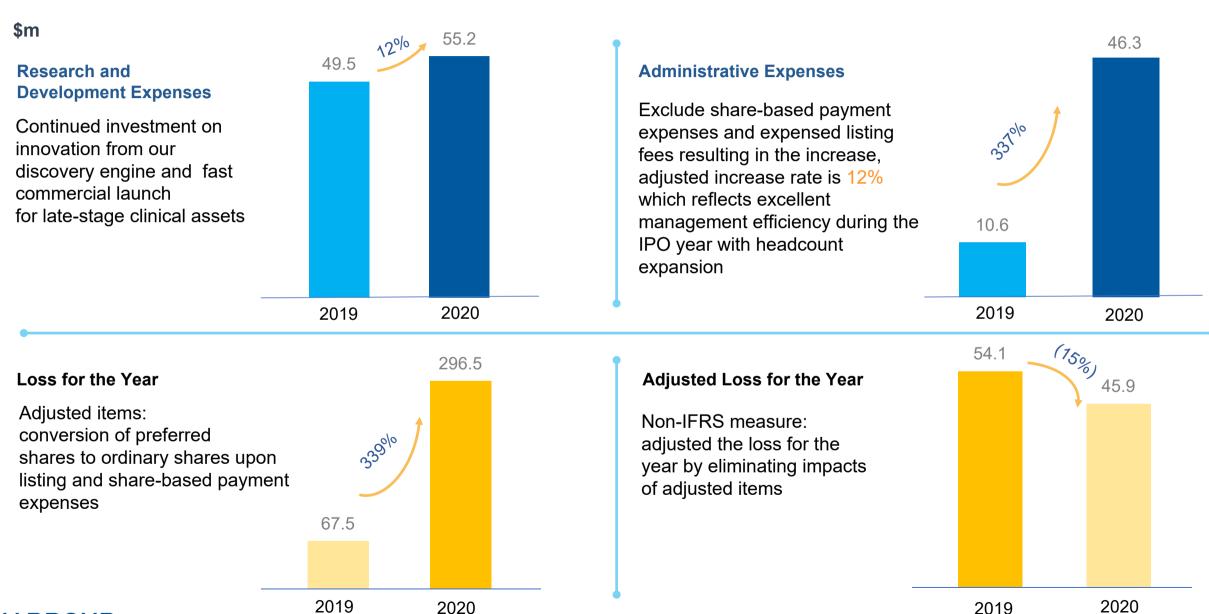
Expanded business collaborations with leading academic institutions and select industrial partners across the world reflects in our rapidly increasing revenue y-o-y



The government grant obtained due to the advancement of research pipelines results in the increase in other income and gains

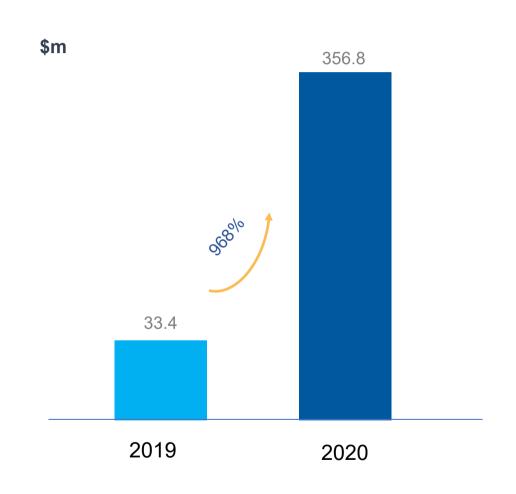


### **Expenses and Loss for the Year**





### **Cash Position**





A healthy cash position of over \$350M at the end of 2020 supporting us through the development of core late-stage clinical assets and early commercial launch.



We will continue to monitor the use of cash and maintain a healthy liquidity for our operations.



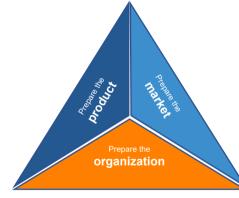




### A Defined Roadmap Towards a Fully Integrated Biopharma Company

2021 2022 2023 • 2 assets in pivotal phase 3 • 2 BLA submissions • 2 product launch **Products** trials • 1 asset in pivotal phase 3 trial • 2 BLA submissions • 2 new clinical stage assets Multiple pivotal trials • 5 new clinical stage assets ✓ Team assembled with launch experience and expertise at

Commercialization



- global and local level
- ✓ Launch readiness efforts launched planning, tracking and assessment
- Ongoing KOL engagement to identify and fill knowledge gaps

**Manufacturing** 





In-house Manufacturing





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# HARBOUR BIOMED





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