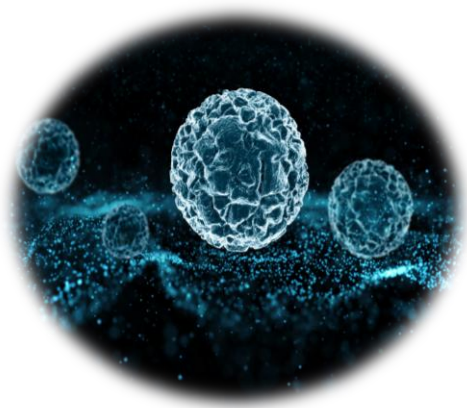
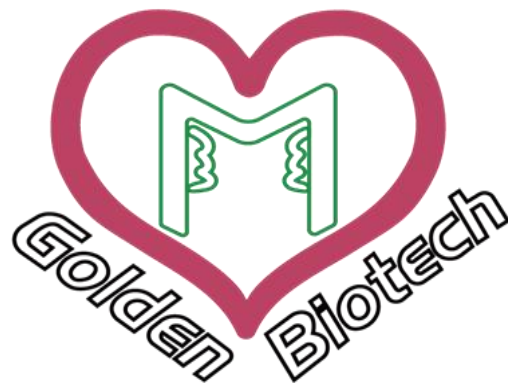


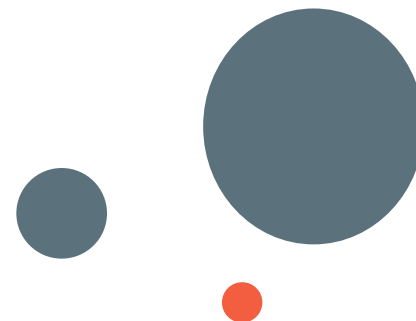
Focusing on microRNA drug development



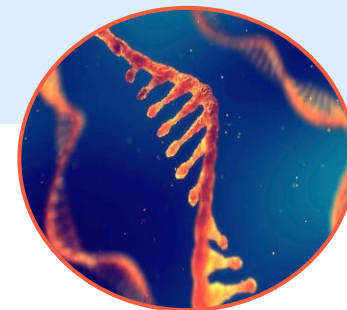
创新
驱动



用心
制药

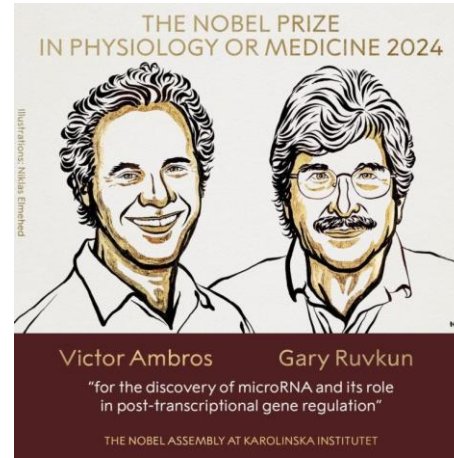


Golden Biotech Limited



Promise of miRNA therapeutics

- MiRNAs regulate **more than 60% of genes of human genome**.
- Dysregulation of miRNAs causes major diseases like cancer and inflammation.
- MiRNA represents promising therapeutic target for



2024 Nobel Prize in Physiology or Medicine

Rapid Market Growth

12.6%

Global miRNA market
CAGR

(Grandview Research)

21%

Asia-Pacific Growth
Rate Forecast

(2025-2034)

**3.64
Billion**

Projected Market Size
(USD) by 2030

(Grandview Research)

The miRNA drugs market is experiencing rapid growth and is expected to reach USD 3,644.1 million by 2030 at a CAGR of 12.6%. North America currently holds the largest market share, while Asia-Pacific will be the fastest-growing region.

Technology platform

miRNA Drug Development

1

- 1) AI-driven discovery of small molecule miRNA modulators.
- 2) AI-designed miRNA mimics/inhibitors—enables novel therapies for cancer and other unmet medical needs.
- 3) PDEV delivery systems

PDEV (plant-derived extracellular vesicles)

2

- Naturally occurring lipid nanoparticles.
- A breakthrough in miRNA delivery.
- Overcoming LNP patent barriers:

Commercialized PDEV products

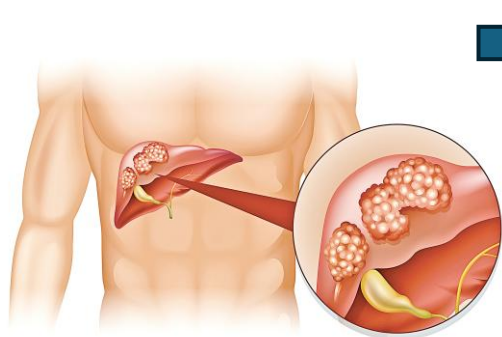
3

PDEV based medical aesthetics and nutraceuticals.

1. Small molecule MicroRNA modulator for **liver cancer**, Pre-IND
2. **Inhaled EV-microRNA** drug for **Chronic obstructive pulmonary disease (COPD)**, Pre-IND
3. EV-microRNA nasal spray for allergic Rhinitis, PCC
4. PDEV eye drops for **eye diseases**, Pre-IND
5. Ethanol-Free PDEV-Encapsulated minoxidil for hair lost

Pipelines						
Indications	delivery system	Mode of administration	PCC	Pre-IND	IND	Phase I - Phase III
Liver cancer	Proprietary	Oral				
COPD	Proprietary	Inhalation				
Dry eye syndrome	Proprietary	Eye drops				
Rhinitis	Proprietary	Nasal Spray				

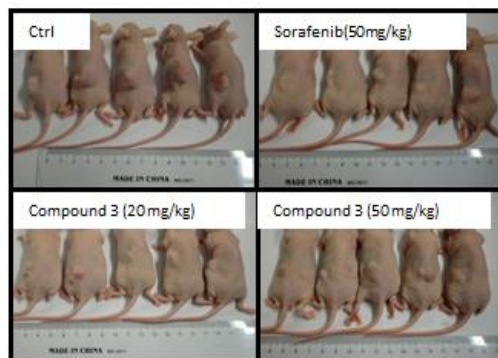
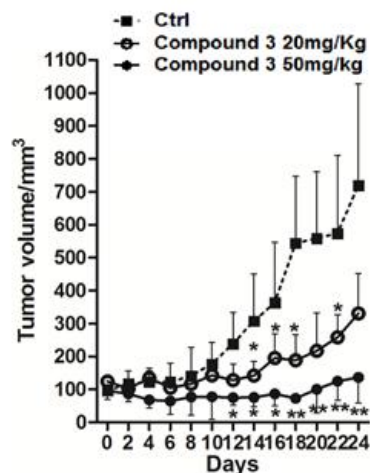
Pipeline 1 – Liver Cancer



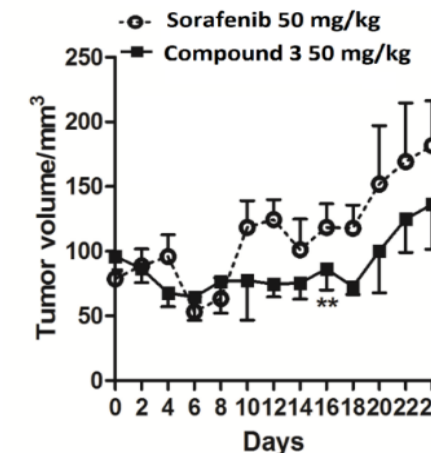
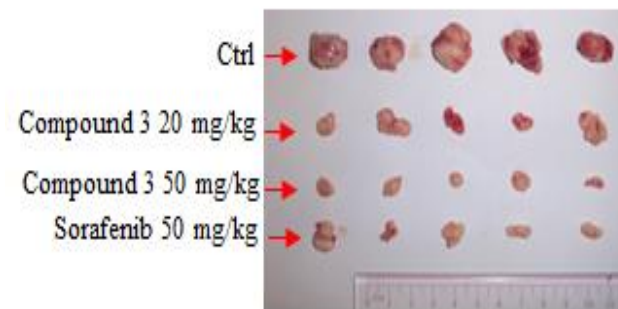
Targeted drugs for HCC: Huge Unmet Need, Massive Market, Bright Future

Hepatocellular carcinoma (HCC) causes over 900,000 cases and 830,000 deaths annually, with a 60-70% recurrence rate post-surgery. Standard treatments like **Sorafenib** face resistance within 18 weeks, and PD-1/PD-L1 inhibitors show <15% response rates. **Compound 3** targets PD-L1 via the miR-34a-PD-L1 pathway.

dose-dependent



Compound 3 v.s. Sorafenib



- Administered orally, once every other day, at the same dose, Compound 3 has a stronger anti-cancer effect than Sorafenib!
- Much less toxic than Sorafenib; In vitro tumor inhibitory activity is higher than lenvatinib!

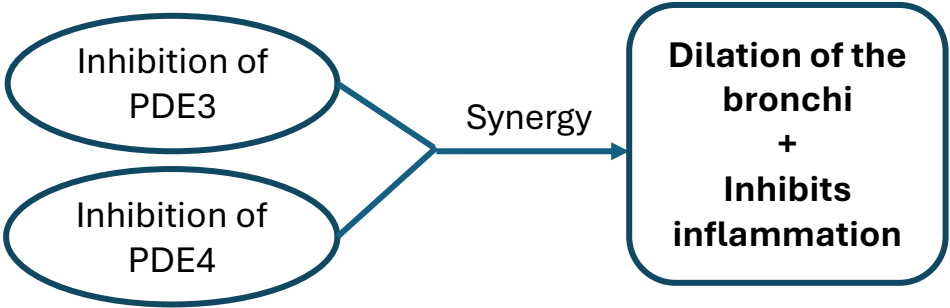
COPD ranks as the third leading cause of death globally, affecting over 500 million people worldwide.

Table 1 COPD drugs under development targeting IL-33, ST2, and TSLP

Target	Drug name	R&D enterprises	COPD R&D stage
IL-33	Itepekimab	Sanofi / Regeneron	Phase III
IL-33	Toreleumab	AstraZeneca	Phase III
IL-33R	TQC-2938	Chia Tai Tianqing Pharmaceutical Group	Clinical application
IL-33	SB-1000	Shanghai Bio Inhibitors	IND approved
IL-33	QX-007-N	Transcenta Holding	Clinical application
ST2	Etrolizumab	Amgen / Roche	Phase III
ST2	9MW-1911	Maxwell Biotech	Phase II
TSLP	Mapig, also known as	Amgen / AstraZeneca	Phase III
TSLP	ecleralimab	Novartis	Phase II
TSLP	BSI045P	Bio-Thera Solutions / Chia Tai Tianqing Pharmaceutical Group	Phase II
TSLP	MK-8226	Merck & Co., Inc. (Known as MSD outside the U.S. and Canada)	Phase II
TSLP/IL-13	CM512	Transcenta Holding	Clinical application
TSLP	QX008N	Transcenta Holding / Joicare Pharmaceutical Group	Phase I
TSLP	SHR-1905	Jiangsu Hengrui Pharmaceutical / Aiolos Therapeutics	Clinical application
TSLP	HBM-9378	Harbour BioMed / Kelun-Biotech	Clinical application

Most Drugs Target
Inflammation Only Airway
Smooth Muscle Remains
Unaddressed

GB innovation:
EV-microRNA inhalation inhibits
PDE3 & PDE4 simultaneously



➤ EV-microRNA inhalation achieves dual bronchodilatory and anti-inflammatory effects through dual inhibition of PDE3/PDE4



Allergic rhinitis (AR): affects approximately **400 million** people globally—a **chronic condition triggered by allergens**, with rising prevalence and significant quality-of-life and economic impact.

EV-microRNA Spray

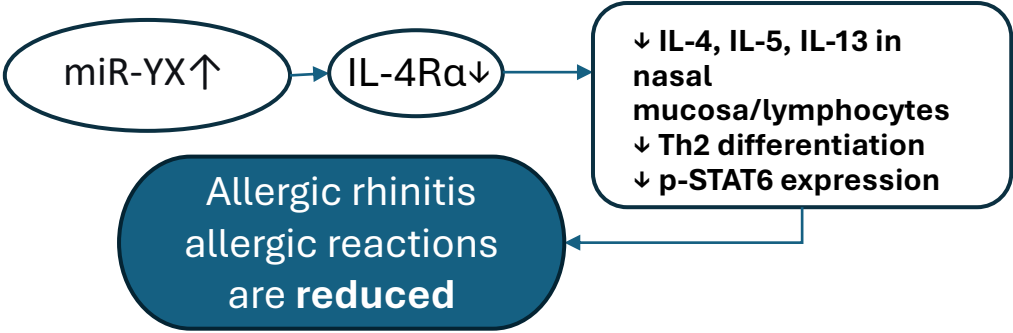
 **Precision Targeting:** Intranasal delivery reaches nasal mucosa directly.

 **Sustained Release:** EV platform enables prolonged drug action.

 **Upstream, Broad-Spectrum Inhibition**

miR-YX↓ IL-4Rα → ↓ p-STAT6 → ↓ IL-4, IL-5, IL-13

Up-regulation of miR-YX significantly improves all symptoms in animal models (sneezing↓, inflammatory factors↓, tissue damage↓)

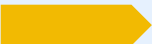
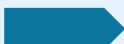


Characteristics	Traditional medicine	miRNA therapy
Mechanism	Symptom relief	Etiological treatment
Targeted	Non-specificity	Highly specific
Persistence	Short-term	Long-lasting
Security	Side effects are common	Higher expectations
Regulation ability	Limited	Systemic immunomodulation



Extracellular Vesicle (EV)-Based Formulations for Ophthalmic Small Molecule Delivery

Ophthalmic pipelines

Indications	delivery system	Mode of administration	PCC	Preclinical	Pre-IND	IND	Phase I - Phase III
Dry Eye Disease (DED)	Proprietary	Eye drops					
Myopia Prophylaxis & Progression-Delaying	Proprietary	Eye drops					
Presbyopia	Proprietary	Eye drops					

Pipeline 4 – EV eye drops for Myopia & Presbyopia

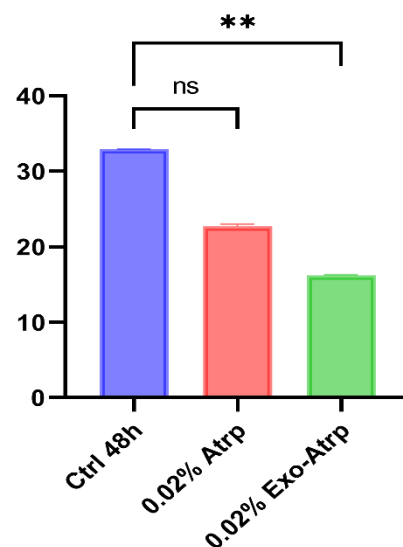
GB New Formulation: Controlled release with extended efficacy and reduced daily dosage.

New GB Formulation for Myopia: EV-Encapsulated Atropine

Current Solution:

Low-Concentration Atropine (0.01%–0.05%)

- **Effectiveness:** Only delays progression by 30–50%.
- **Issues:** Low pediatric compliance; **no patent protection** for plain atropine; high market saturation.



GB Formulation: Global patent for novel formulation; Sustained release; Preservative-free

EV-Encapsulated Pilocarpine

Presbyopia Drug Market

Market Outlook:

- Growth: \$0.5B (2023) → **\$3B (2030)**.
- **CAGR: 28%**.

High prevalence: 83% among ages 45–55.

First Mover: Vuity (Pilocarpine)

- Approved by FDA in 2021.
- Onset: 15–30 mins; Duration: 6 hours.

Clinical Limitations:

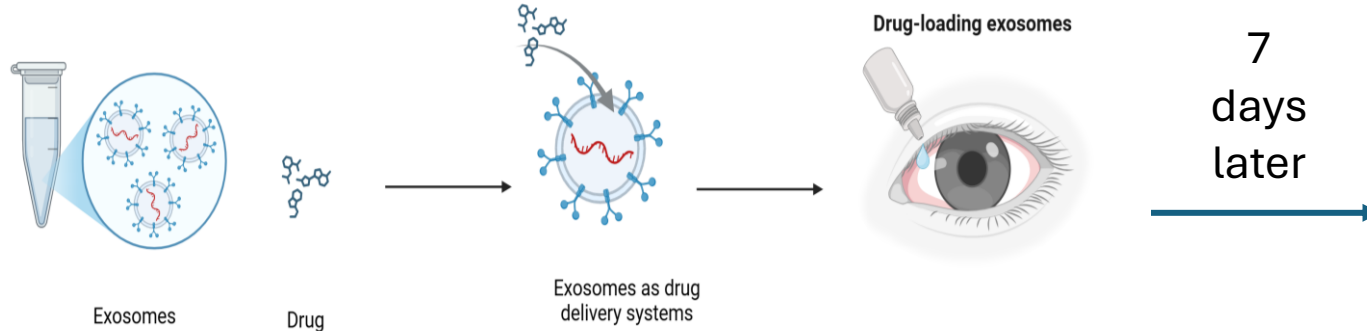
Low Permeability: Only 8–12% corneal penetration.

Short Half-life: ~2 hours (requires 2–3 doses/day).

Enhanced corneal permeability;
Controlled release

Pipeline 4 – EV eye drops for Dry Eye Syndrome

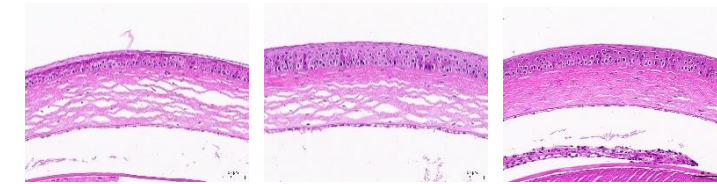
Extracellular vesicles (EV) suppress inflammation by inhibiting macrophage-associated inflammatory cytokines, including **TNF- α** and **IL-1 β** .



Advantages of the new formulation based on EV delivery system:

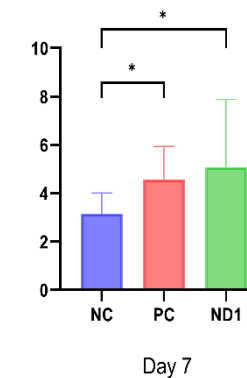
(1) Faster absorption, quick relief; (2) Controlled release, fewer daily doses; (3) Sustained release, long-lasting effect; (4) Dual action, relieves dry eye + eye fatigue.

Other clinical advantages: No preservatives, high safety.



NC PC ND1

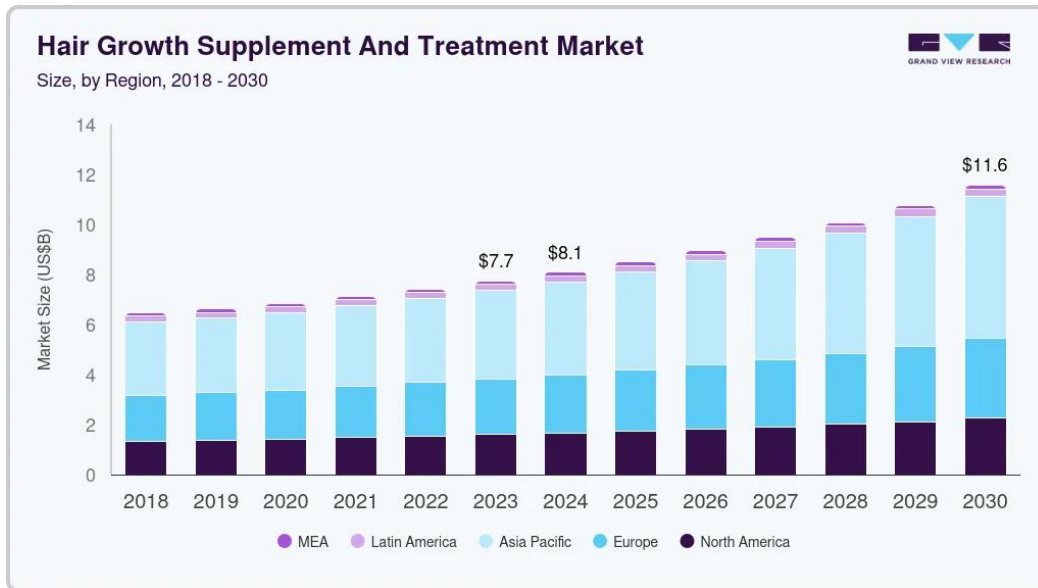
Corneal HE results



The new drug (ND1) treated with **better corneal condition** and **higher tear secretion** after 7 days of treatment

Pipeline 5-Hair Regrowth-Minoxidil Formulation

Hair Growth Supplements & Treatments



Minoxidil is an effective treatment with a 2025 global market of ~**\$1.74 Billion**.

Minoxidil's "Ethanol Pain Points"

- ⚠ High Irritation
- 💧 Penetration Bottleneck
- 🚫 Low Compliance

GB New Formulation: Ethanol-Free! PDEV-Encapsulated Drug with Microneedles

✅ PDEV-encapsulated Minoxidil eliminates alcohol-induced irritation, significantly reducing transdermal sensitivity.

⬇ Synergy between PDEV and microneedling maximizes drug penetration for superior therapeutic efficacy.



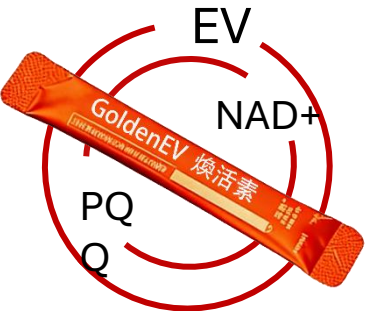
Commercialized Products Based On PDEV Technology

Golden GynoBio



- ✓ Sustained Moisturization
- ✓ Antibacterial
- ✓ Enhances Elasticity
- Anti-aging

GoldenEV Health Care Series



GoldenEV Rejuvesol

- ✓ Easy Absorption
- ✓ Antioxidant
- ✓ Cell Energy Activation

GoldenEV Essence Series



- ✓ Smooths away lines
- ✓ Brightens your glow
- ✓ Quenches your skin



- ✓ Fights fine lines
- ✓ Reverses aging
- ✓ Retains skin hydration



- ✓ Diminishes wrinkles
- ✓ Enhances skin elasticity
- ✓ Repairs skin damage



GoldenEV EyeCare+

- ✓ Antioxidant
- ✓ Fatigue Relief



GoldenEV GinkgoMind

- ✓ Promotes Cerebral Circulation
- ✓ Enhances Cellular Vitality



Prof. Chen Yangchao

Tenured professor of Faculty of Medicine, CUHK

Academic Committee Member, Beijing Municipal Key Laboratory of Gastrointestinal Tumor, The Third Hospital of Pekin University

Academic Committee Member, Guangdong Provincial Key Laboratory of Gastrointestinal Tumor, Seventh Affiliated Hospital of Sun Yat-sen University

Xinglin Chair Professor, Guangzhou University of Traditional Chinese Medicine

Council member of Hunan Province Overseas Friendship Association

Scientific and technological consultant of the People's Government of Jilin City, Jilin Province

Talent Recruitment Ambassador of Yongzhou Municipal People's Government, Hunan Province

Member of the Chinese People's Political Consultative Conference of Yantian District, Shenzhen

Actively Engaged in RNA technology and anti-cancer therapeutics for long, and has secured 9 Hong Kong RGC projects, 3 HMRF grants (Hong Kong Food and Health Bureau), 3 Hong Kong Innovation and Technology Fund (ITF) grants, 4 National Natural Science Foundation of China (NSFC) grants, 3 industry-sponsored projects and 2 international projects. He has published over 130 research papers on RNA technology and cancer biology in international journals such as *Nature Communications*, *Gastroenterology*, *Hepatology*, *Cancer Research*, etc.

In 2009, he received a \$100,000 award from "Grand Challenge Exploration" from Bill & Melinda Gates Foundation; In 2014, he won the Collaborative Research Award from CUHK. In 2022, he won the AACR Best Paper Award from American Association for Cancer Research. He is a grant reviewer for European Science Foundation, World Cancer Research Fund, Italian Ministry of Health, Polish National Science Foundation, Macau Science and Technology Development Fund, University of Macau Multiple Year Research Grant, National Natural Science Foundation of China and Shenzhen Science and Technology Innovation Commission. Served as The editor-in-chief of *Current Cancer Therapy Reviews*; Editorial board member of international journals such as *Int J Biol Sci*, *Biosensor*, *World J Gastroenterology*; He is reviewer for international journals such as *Gut*, *Cancer Research*, *Molecular Therapy*, etc. He has been invited to deliver plenary talks at international and national academic conferences for many times.

Core Team Members



Ms. Li Yang

**Finance & Business Management
Co-Founder & General Manager**

Responsible for the company's strategy, financing, etc., and manage the company's daily operations.



Dr. Wang Yixin
Technical Director

Honorary postdoctoral fellow of CUHK, Ph.D. from the Faculty of Medicine of HKU, participated in the establishment of multiple models for the screening of Novel coronavirus drugs, and has extensive experience in the field of drug research and development. She has published over 10 papers in international journals.



Ms. Chen Jinheng

**Bachelor of Commerce
Business Development Manager**

Over 10 years of experience in international trade and cross-border e-commerce, with extensive experience in e-commerce, international trade, and business promotion.



Dr. Hu Xiaomin
Director of R&D

Honorary postdoctoral fellow of CUHK, master of chemical biology from Xiamen University, and doctorate of the Faculty of Medicine of HKU, she has deep expertise in the field of tumor multiomics and tumor immunotherapy drug development. She has published 9 papers in international journals.



Prof. Stephen Chan
Medical Consultant

Professor of Oncology at Prince of Wales Hospital of CUHK, an internationally renowned gastrointestinal oncologist. He has published over 100 papers in internationally renowned journals and presided over more than 10 clinical trials of anti-cancer drugs.



Ms. HE Xincheng
**Master of Science
R&D members**

Master of Biochemistry and Biomedical Sciences from CUHK, responsible for laboratory and product-related progress follow-up.

Technical support from Prof. Chen's team at
Faculty of Medicine of CUHK



Honoring
Yangchao Chen, PhD

Most-Cited Article
Published in 2020

Cancer Research

AACR American Association
for Cancer Research

Professor Chen's team's
work on RNA technology
won AACR (American
Association for Cancer
Research) Most-Cited
Article Publication
Award in 2022



Ask Join us in leading the miRNA Therapeutics revolution

Financing Terms

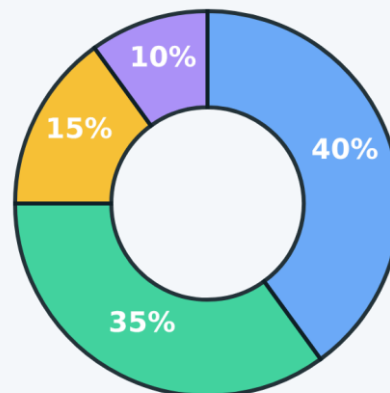
 **Financing Requirement**
\$15.0 Million

 **Equity Release**
≈20%

Why now

- Rapidly growing global miRNA market.
- Proprietary EV delivery platform solves key industry bottlenecks.
- Multiple Pro-IND assets ready for clinical translation.
- First-mover advantage in miRNA-based COPD and ocular diseases.

Fund Utilization Plan



● Liver Cancer Project

IND Application: \$3.6 Million (40%)

● COPD Project

Pre-clinical Research & CMC: \$3.15 Million (35%)

● Early Pipeline Exploration

Platform Optimization: \$1.35 Million (15%)

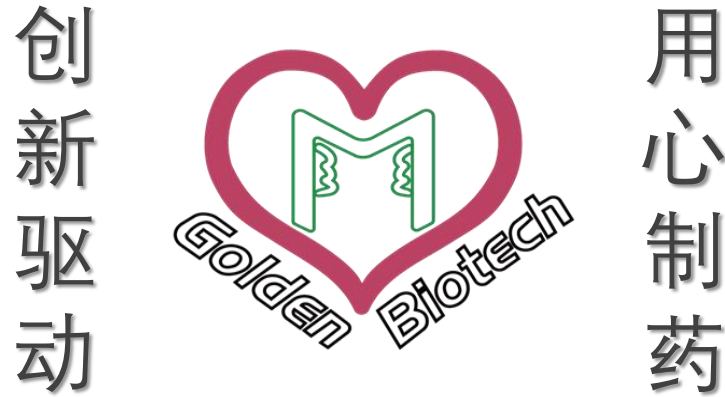
● Operations & Team Expansion

Daily Operations & R&D: \$0.9 Million (10%)

How to engage

- ✓ We are open to equity investment, strategic partnership, and co-development collaborations.

Aspired to be the world Leading biotech focusing on miRNA therapeutics



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