

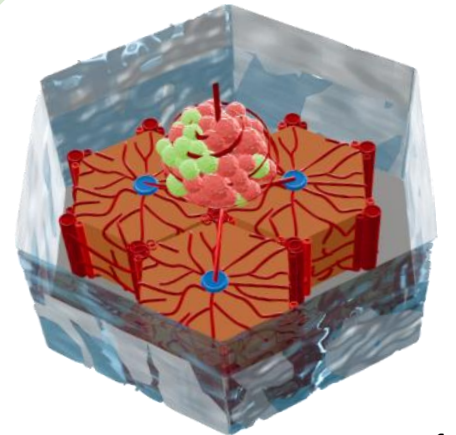


Liver-in-Cube

Next Generation Biomimetic Organ for Precision Medicine and New Drug Development

Prof. Nancy K Man
Chair Professor,
Department of Surgery
The University of Hong Kong

Founder & Director,
OncolmmuNostics Limited



World-leading Team - Key Members

Academic Leadership

Chair Professor,
Director, Clinical & Translational Research



Founder & Director



Prof. Nancy K Man

Society & Industry Recognition

President



INTERNATIONAL LIVER
TRANSPLANTATION SOCIETY



Clinical Trials & Regulatory Compliance



Prof. ACY Chan
Surgeon

25+ years of clinical research for liver surgery, transplantation and cancer with extensive experience for clinical trials on liver cancer therapies



Prof. CL Chiang
Oncologist

15+ years of clinical oncology research with extensive experience for clinical trials on liver cancer therapies

Operation



Dr. Nicholas CL Wong, COO

10+ years experience in leading the commercialization of oncology drugs from preclinical to clinical trials, completed 3 rounds of fund raising >USD\$130M, and out-licensing >USD\$30M

Computational AI



Prof. JD Zhou
Data Scientist

8+ years experience in big data analytics, medical statistics, primary care and preventive health, case-control and cohort studies

Product R&D



Dr. Jiang Liu, Scientist

15 years in liver surgery & small animal models, with extensive experience for translational & basic research in liver cancer



Dr. Oscar Yeung, CTO

15 years in cancer immunology bioprinting & bioengineering, one discovery received >450 citations and designed products received 3 patents and numerous awards

Academic Foundation of Translational Innovation

Team Achievement (2002–2026)

> 800+
Publications

> 6,000+
Total IF

> 40,000
Total Citations

> 100 International &
National Awards

3 Presidential
positions

4 International
Committee
Chairs

10 International
subcommittees
members

24 International
Consensus &
Guidelines



Prof. Kwan Man Academic Recognitions

- H-index: **76**
- **> 250** Publications
- **> 18,000** Citations
- **> 100** International & National Awards
- **3** Presidential Positions of Academic Societies



Established R&D Platforms and Resources

30-year Biobank & Database

Large Cohort

- **>12,000** patients
- **100%** follow-up (1995-2025)

Comprehensive Dataset

- **>26,000** tissue specimens
- **>274,000** liquid samples
- **Multiple-timepoint** sampling

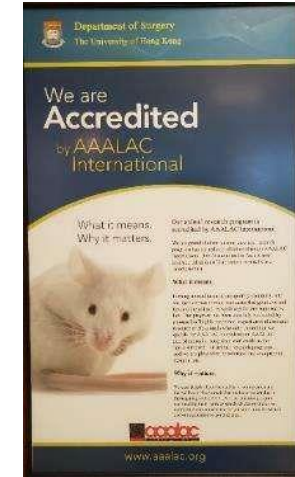
Clinical Trial Centre



LKS Faculty of Medicine
Clinical Trials Centre
香港大學臨床試驗中心

- **College of American Pathologists-**
accredited
- **Phase 1-4** trials capability
- **20+ years'** clinical trials
- **Leadership** in International
Consensus & guidelines

AAALAC-accredited Animal Laboratory



- **Large Animal Operating Theatre**
- **Small Animal Operating Rooms**
- **Various Surgical animal models**
- **PDX animal models**

The Impact and Challenges of Liver Cancer

Mortality Ranks:
3rd in World, 2nd in China

1. Liver Cancer Challenge

High Incidence

World: **866,000**

China: **368,000**

**New case number
doubles in 30 years**

The Lancet Commissions

The Lancet Commission on addressing the global hepatocellular carcinoma burden: comprehensive strategies from prevention to treatment

Stephen Lam Chan*, Hui-Chuan Sun*, Yang Yu*, Hangmei Zeng*, Hoshem B El-Serag, Jeong Min Lee, Myron E Schwartz, Richard S Finn, Jinli Seang, Xin Wei Wang, Valérie Paradis, Ghassan K Abou-Alfa, Lorenzo Rimassa, Jia-Hong Kuo, Bo-Heng Zhang, Josep M Llovet, Jordi Bruix, Terry Cheuk-Fung Yip, Vincent Wai-Sun Wong, Grace Lai-Hung Wong, Landon I Chan, Man-Qi Liu, Qiang Gao, Feng Shen, Robin Kate Kelley, Ann-Li Cheng, Masayuki Kurosaki, Hidekazu Toyoda, Wei-Xia Chen, Takamichi Murakami, Ping Liang, Jessica Zucman-Rossi, Yasuhiro Minami, Shiro Miyayama, Kuo Wang, Kwan Man, Kiyoshi Hasegawa, Qiu Li, Kazuo Tsuchiya, Li Xu, Valerie Chou, Pierre Chou, Yujin Hoshida, Amrita Lujambio, Irene Qi-Lin Ng, Michiel Sakamata, Young Nyeon Park, Thomas You, Masatoshi Kudo, Jui-Fan, Jian Zhou

2. Treatment Challenge

Low response rate

Single Drug **<20%**

Financial Burden

Up to annually
US\$200,000 per patient

5-year Recurrence Mortality after Recurrence

Up to **70%**

3. New Drug Challenge

Long R&D Cycle

>10 years

From discovery to approval

Low Success Rate

6.7%

From preclinical to approval

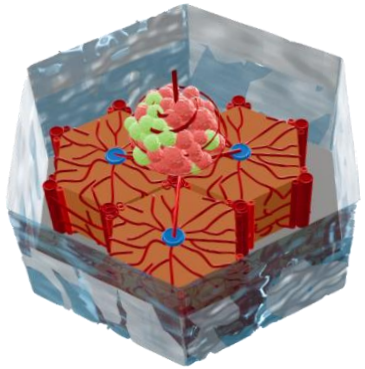
No Bionic Preclinical Model

Animal & New Approach Methodologies
cannot simulate human immune
microenvironment

Need a biomimetic model to facilitate drug personalized evaluation!

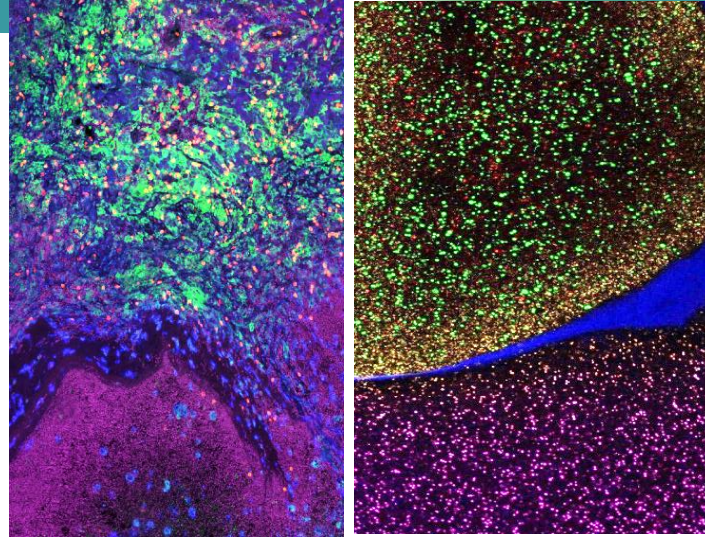
Pioneering Bioprinted Ex-vivo Liver Cancer Drug Evaluation

Liver-in-Cube (LIC)



Real Tumor

Liver in Cube



Consistency

- ✓ Structure
- ✓ Proteomics
- ✓ Genomics
- ✓ Stiffness
- ✓ Function

Unique Features & Advantages

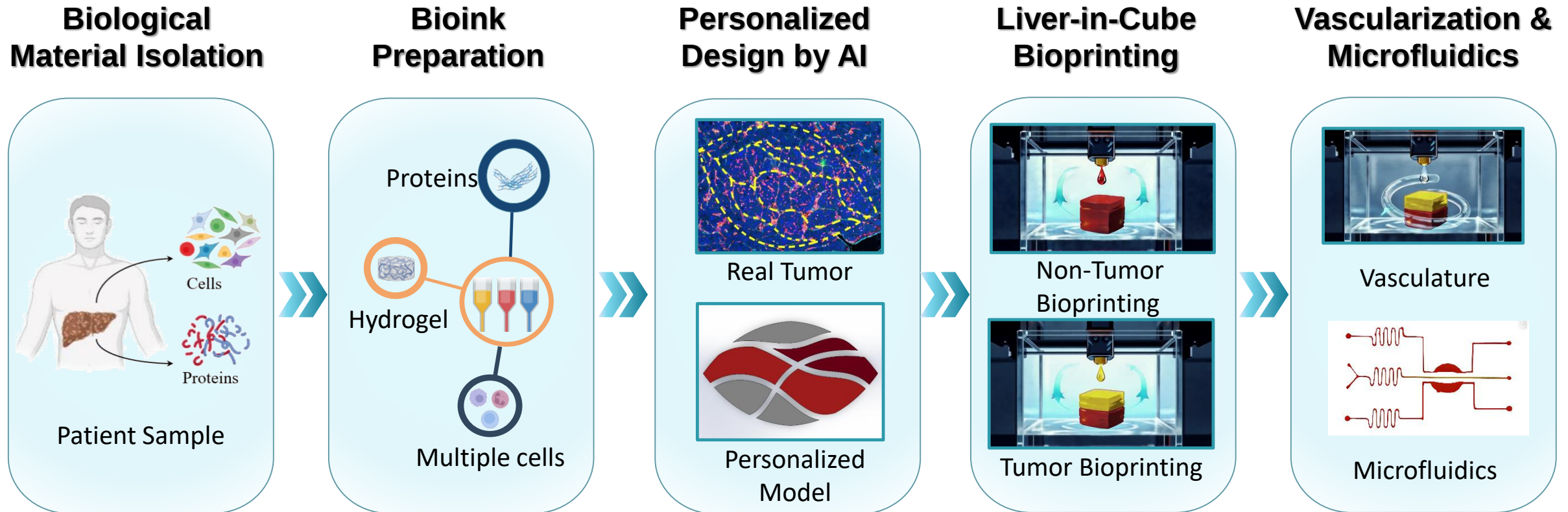
- Personalized pathologically bionic
- Save time – Identify optimal treatment < 3 weeks

Faster Evaluation

Earlier Intervention

Precise Treatment

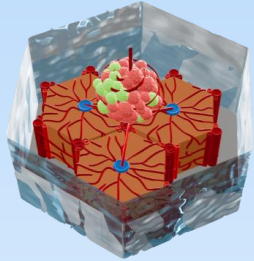
Personalized Liver-in-Cube Bioprinting Process



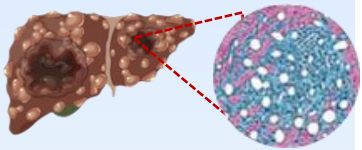
Timely and Precise Treatment within 3 Weeks

Pipelined Disease Models For Drug Development

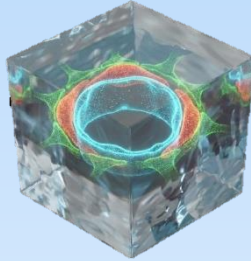
Liver-in-Cube



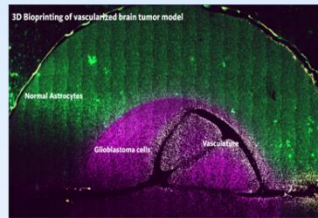
- Tumor microenvironment
- Immune component



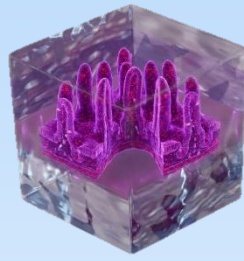
Brain-in-Cube



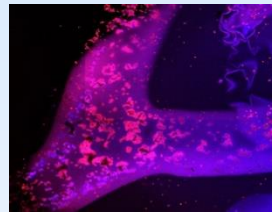
- Brain-blood barrier
- Neuro-tumor crosstalk



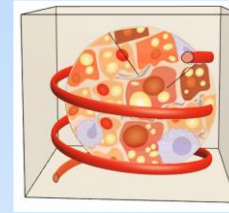
Colon-in-Cube



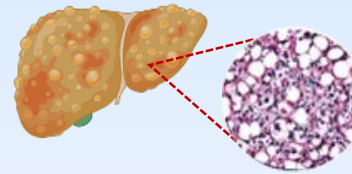
- Tumor microenvironment
- Lymphoid follicles



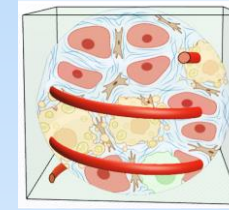
NASH-in-Cube



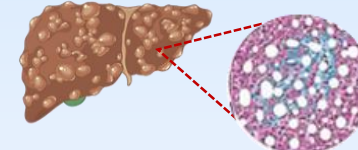
- Fatty change
- Inflammation
- Tissue stiffness



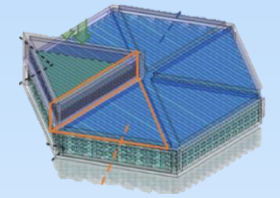
Cirrhosis-in-Cube



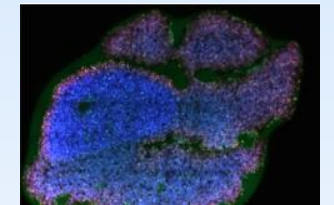
- Hepatic pseudo lobule
- Fibrotic niche
- Tissue stiffness



Combinational Cube



- Multiple block integration
- Inter-block communication



- Tailor-made to patient-specific disease subtype
- Pre-fabricated based on established biobank for high-throughput drug evaluation
- AI-empowered decision making and in silico drug efficacy and toxicity evaluation
- Capable of all types of drug evaluation, simultaneous organ toxicity and pharmacokinetics test

Impacts on Precision medicine & New drug development

Precision Medicine

Increase Objective Response Rate

↑ 20%

Decrease Recurrence Rate

↓ 20%

Increase Recurrence-free Survival

↑ 10%

Calculated based on clinical feasibility study updated data

New Drug Development

Increase Clinical Trial Successful Rate

Increase Efficacy & Toxicity Prediction

Reduce Preclinical R&D Cycle Time & Cost

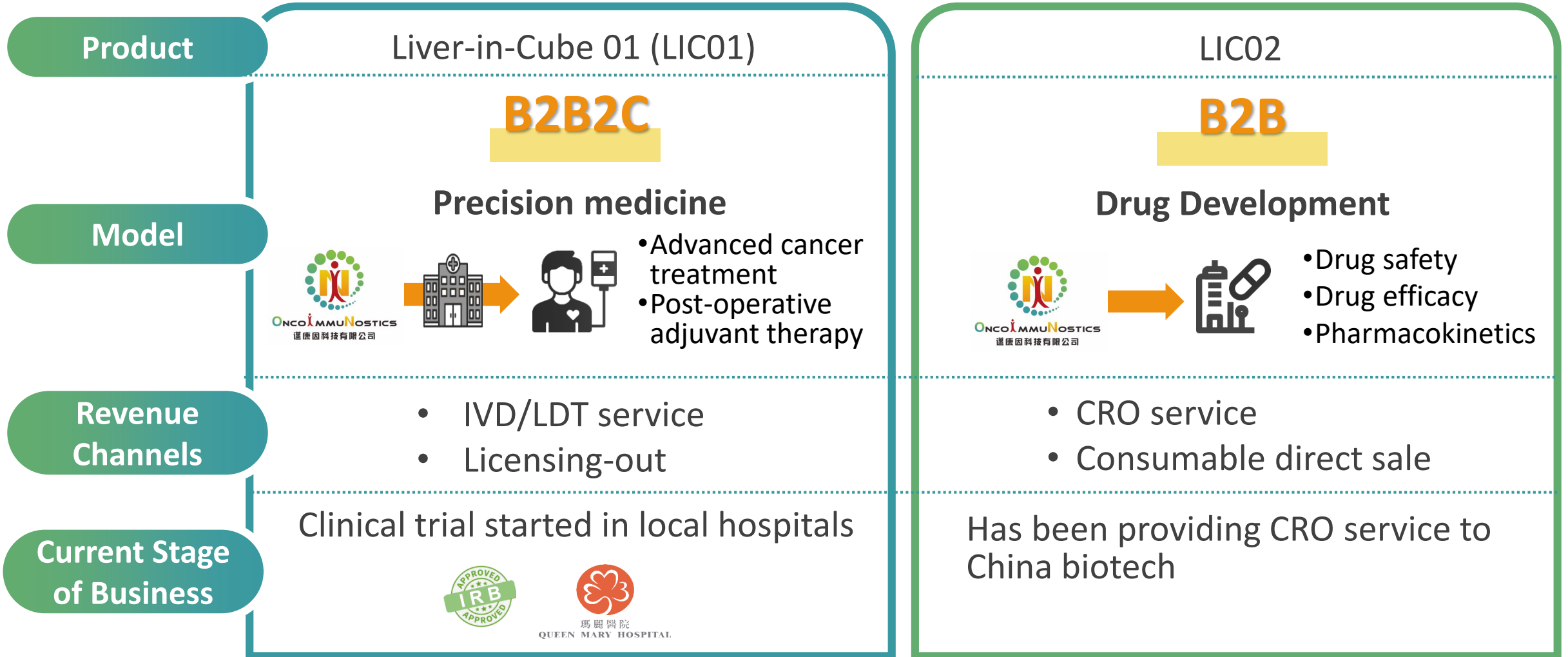


1. Liver-in-Cube
2. Vascularized 3D tissue

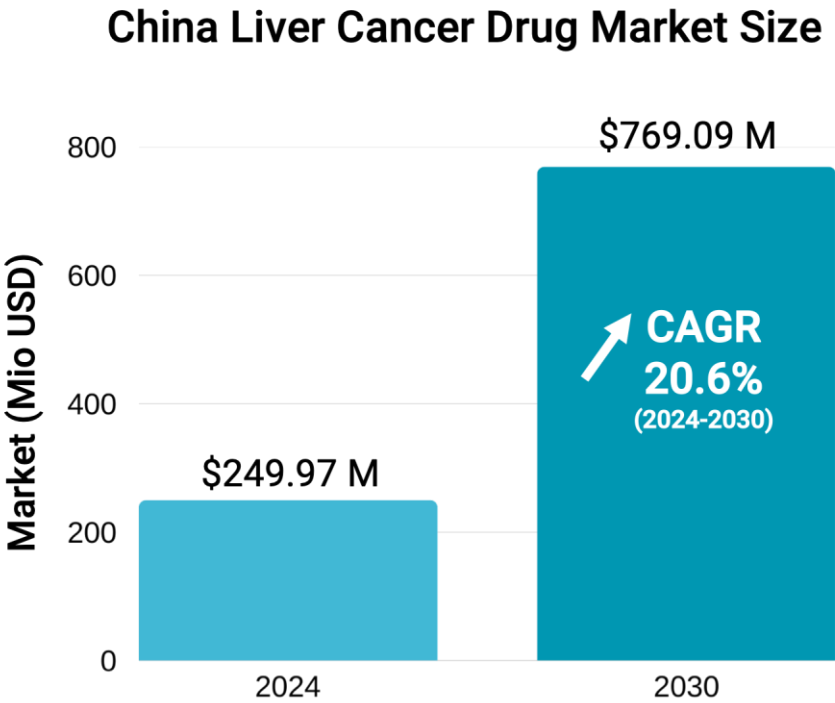
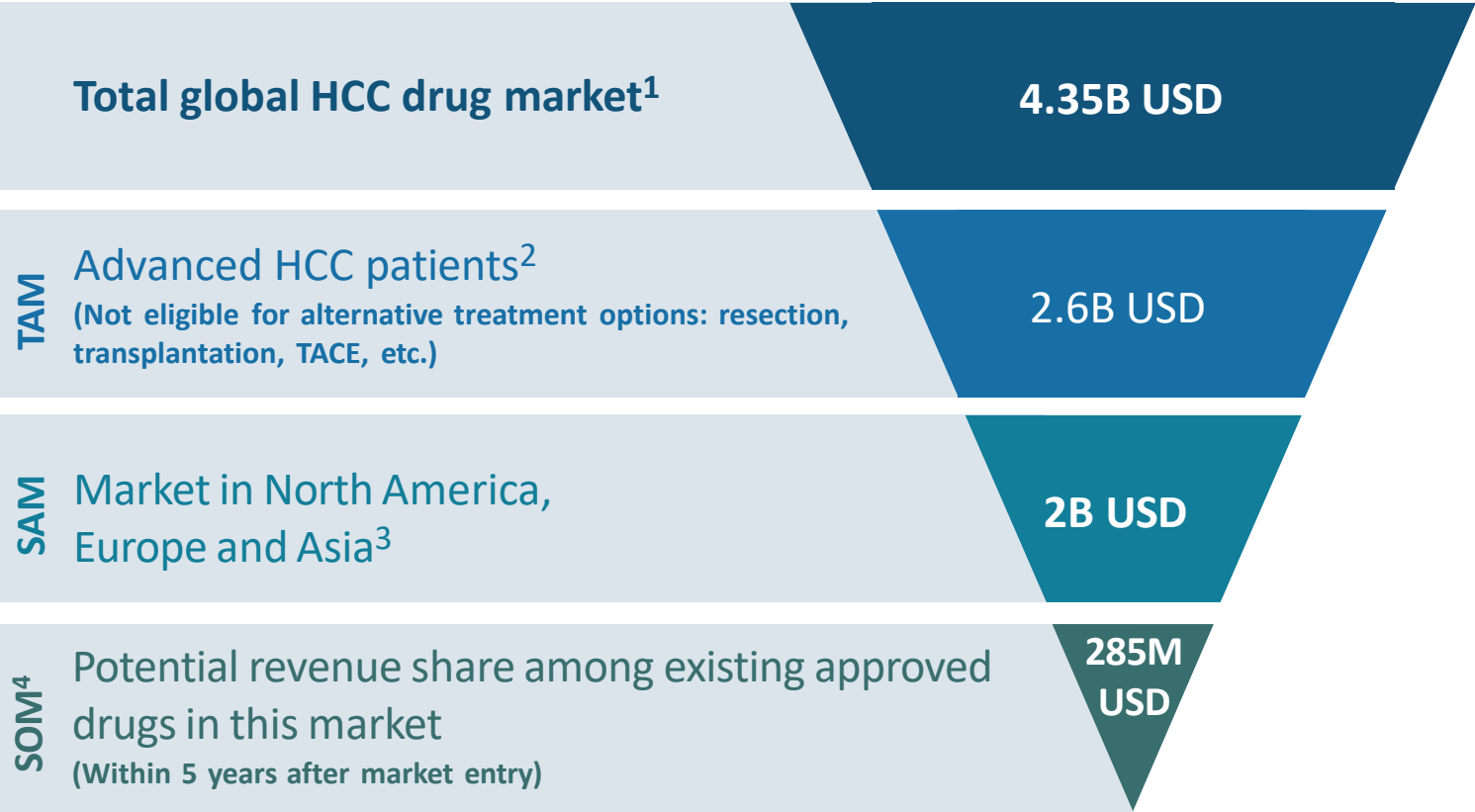
Competitive Analysis with FDA-Collaborated Ex Vivo Liver Systems

Platform	Company	Bionic (vasculature, immune)	Tailor- made	Immuno- drugs test	Toxicity test	Time (wks)	Establish Successful rate	Pricing (USD)
Liver-in-Cube		✓	✓	✓	✓	3	100%	Competitive price
Organoid	  	✗	✗	✗	✓	5-10	50-70%	\$10,000- \$25,000
Liver Assembloid	 Max Planck Institute of Molecular Cell Biology and Genetics  Research Institute	✗	✗	✗	✓	4-8	50-80%	Est. > \$60,000
Organ-on-Chip	    Emulating Human Biology 	✗	✗	✗	✓	2-4	70-90%	Est. >\$125,000

Business Model: A hybrid “Centralized + Cooperation” strategy



Addressable market share for cancer (Liver cancer as an example)



1. Mordor Intelligence 2025;
2. Galle PR et al., *J Hepatology*, 2017;
3. Maximize Market Research, 2020;
4. Market approval in a 2nd indication is expected within 4 years of HCC approval, generating additional revenue

Adapted from <https://www.grandviewresearch.com/industry-analysis/china-liver-cancer-drug-market-report>

Global University and Hospital Partnership

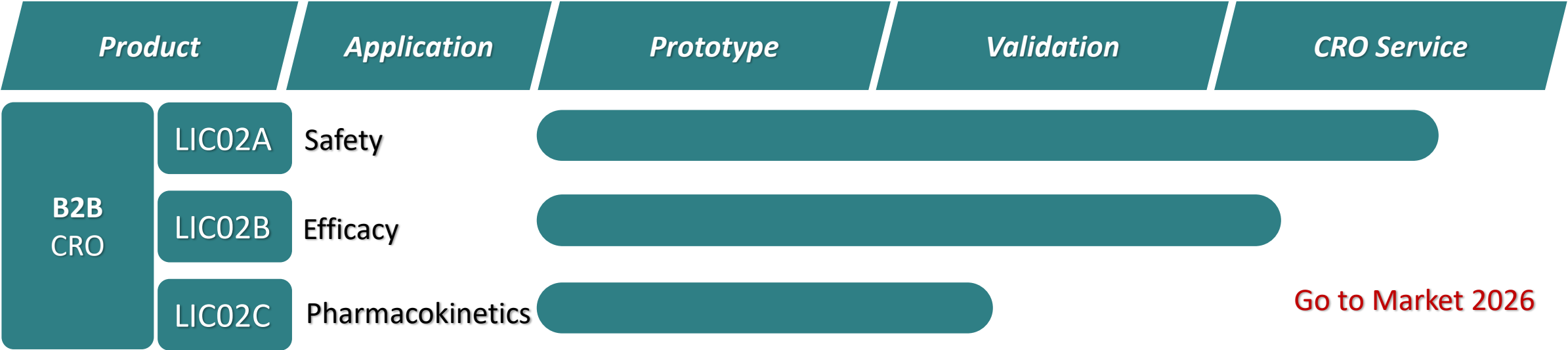
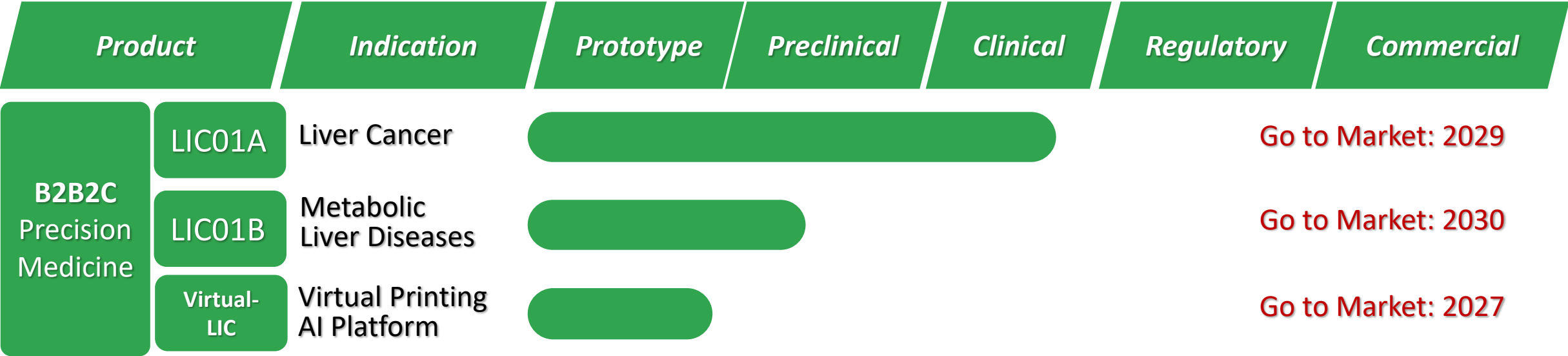
>20 University Collaborators



>30 Hospital Partners



Scalability - Multiple Pipeline Development



Milestones & Roadmap

2026				2027				2028				2029				2030				2031+			
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				

B2B2C Precision Medicine

	Clinical Trial Started in Dec 2025	 瑪麗醫院 QUEEN MARY HOSPITAL	IVD registration	Go to Market: LIC01A
SOP, QC			Expand to other cancers & metabolic liver diseases (LIC01B)	

B2C CRO Service

Go to Market: Drug Safety Evaluation Platform (LIC02A)																							
Preclinical				Go to Market: Drug Efficacy Evaluation Platform (LIC02B)																			
Preclinical Study								Go to Market: Drug Pharmacokinetics Evaluation Platform (LIC02C)															

Liver-in-Cube

First-in-Class 3D-bioprinted Bionic Platform

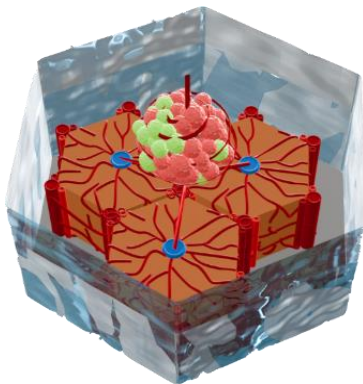


ONCOIMMUNOSTICS
邁康因科技有限公司

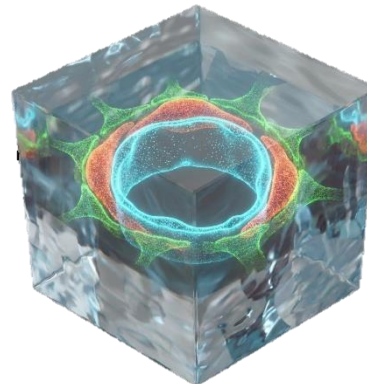
Revolutionizing Oncology to Make It Personal

- Revolutionize Personalized Drug Evaluation!
- Accelerate Innovative Drug Development!
- Provide Sustainable and Animal-free Platform!

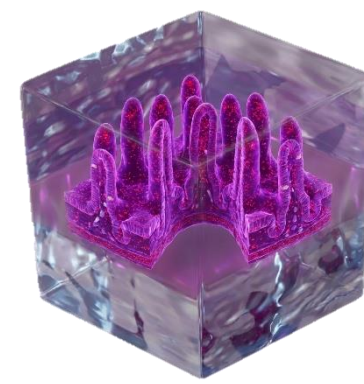
Born in Hong Kong, Impact Globe



Liver-in-Cube



Brain-in-Cube



Colon-in-Cube

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