



# Investor Relations 2025

2025.01

**CHA Biotech**

C H A B I O T E C H

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C H A B I O T E C H

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01

## CHA Group Introduction

# Leading Integrated Healthcare Group

**1960**

From our beginning as a single maternity clinic in post-war Seoul...



**Today**

CHA Medical Group has grown over 3 generations to become  
One of the largest global total healthcare group

## Hospitals

- 96 hospitals and medical centers in 7 countries (Korea, US, Japan, Australia, Singapore, Indonesia, Vietnam)

## Academia

- Captive university system
- Research institutes for IVF, stem cell, anti-aging and vaccine studies

## Bioscience

- Cell & gene therapies (CGT)
- CGT CDMO manufacturing
- Pharma manufacturing

## Enterprise

- 3 publicly listed companies
- 50 subsidiaries across investments, hospital management and B2B/C services



## CHA in Figures

### Hospital Network

**3M+**

In & out patient visits per annum

**2,600**

Patient beds

**1,800+**

Doctors

### IVF Excellence

**400K+**

Babies delivered to date

**50K+**

IVF cycles per annum

**1.5**

IVF pregnancies every hour

### Business Scale

**50**

Companies around the world

**14K+**

Global employees

**7 / 3**

Countries / continents present



# CHA Bio Eco System : Core Strength

## Maximizing Global Business Through Industry-Academy-Research-Hospital Vertical Integration

### 1 Academy

Core Technology



Core Technology  
Development 1,300+  
Research Professors



### 2 Institute

Basic Research



23 Research Institutes  
> \$100M R&D Investment/yr



### 3 Hospital

Clinical Trials



Global Network across 7 Nations  
(96 Clinical Sites & 1,800+ MD)



### 4 Industry

Global Business



14,000 Employees in 50  
CHA Bio/Healthcare  
subsidiaries



# A History of Firsts

**We have achieved important global firsts in the fields of IVF and stem cell research, many of which are now global standards**

## World Firsts

**1st**

**1988**

World's first pregnancy from in vitro culture of immature oocytes collected from unstimulated ovaries

**2005**

World's first freezing method for ovum vitrification & freezing method using gold grid and nitrogen slush

**2014**

World's first establishment of cloned stem cell lines using adult somatic cells

**1998**

World's first cryopreservation of oocytes by vitrification

**2009**

First in the world to successfully establish and dedifferentiate stem cells using only the protein

**2015**

First to increase success rate of establishing somatic cell nuclear transfer (SCNT) – embryonic stem cells threefold

**1999**

World's first human egg bank  
World's first pregnancy and delivery of baby with previously frozen egg by vitrification

**2009**

World's first creation of spermatogonial stem cells

**2002**

World's first identification of genes associated with recurrent pregnancy loss

**2013**

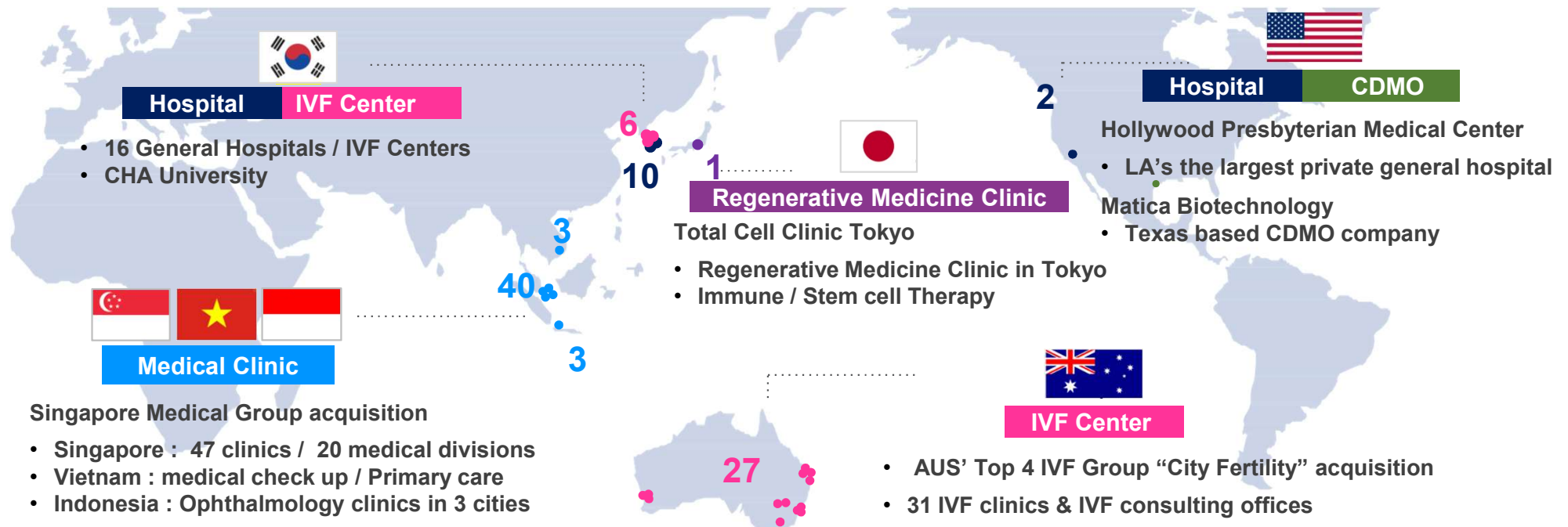
World's first successful treatment of cerebral palsy using heterologous cord blood stem cells





# Global Healthcare Network Landscape

7 nations | 96 sites | 1,800 MD | 14,000 Employees



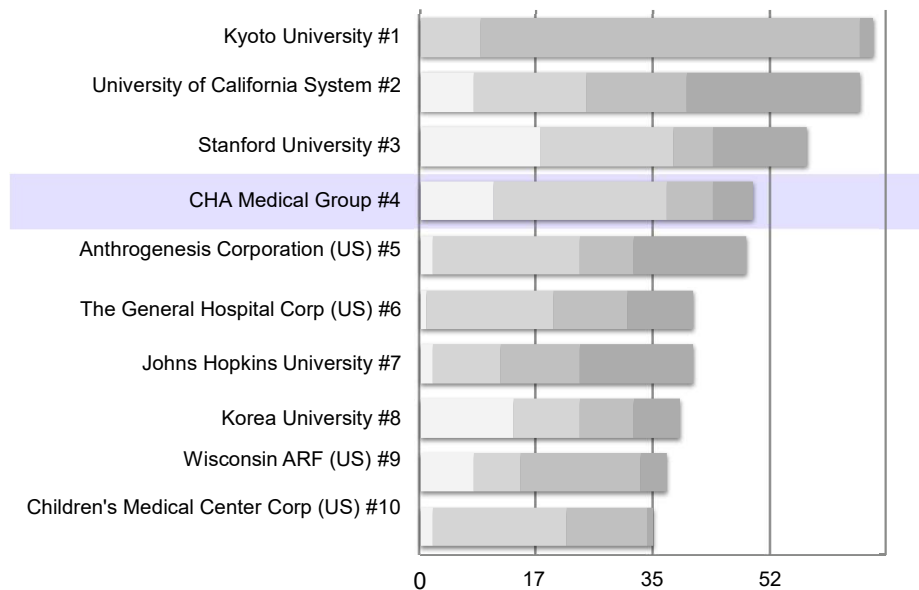


## 02 Cell Therapy Pipeline

# Global Leadership in Cell Science

We have built the world's largest cell library based on advanced tissue platform technology

## Global Patent Applications in Stem Cell Technology



**Only 3 Institutes with rPSC Technology** reprogrammed Pluripotent Stem Cell

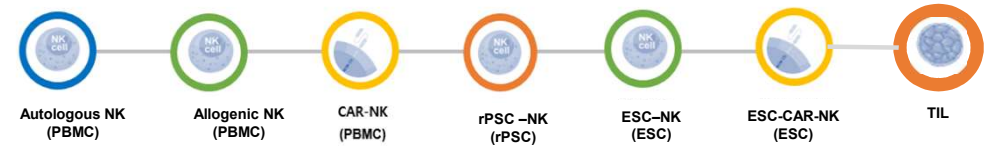
- CHA
- Columbia University
- Oregon Health and Science University

Source: Korea Institute of Science & Technology Evaluation and Planning; color bars denote specific cell types.

## World's Largest "Cell Library"

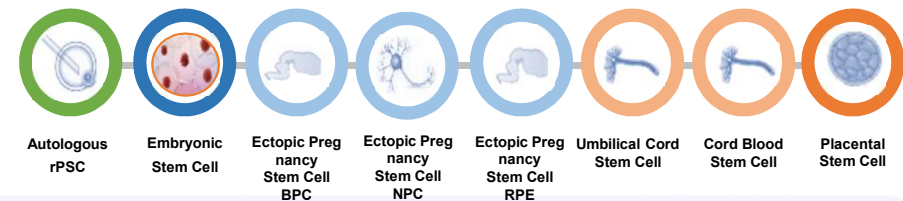
### 7 Immune cell platform

Clinical pipeline focused on Solid Cancers, Ovarian Cancer, Hepatocellular Carcinoma and Recurrent GBM



### 8 stem cell platform

Clinical pipeline focused on Disc Degenerative Disease (Phase II), Stroke, Parkinson's Disease, Age-related Macular Degeneration (out-licensed to Astellas) and other indications



70 hESC lines and 17 rPSC lines established by CHA researchers since 2004

# CHA R&D Talents & Capabilities

## CTO, Head of R&D

Su Youn Nam, MD., Ph.D

### Current

- CHA Biotech, CTO (2024~)
- INTS Bio, CEO (2017~)
- Severance Biomedical Science Institute, Yonsei University, Professor (2018~)

### Previous

- GI Innovation, CBO/CEO/CMO (2018~2024)
- Neoimmunetech (NIT), CMO, EVP (2017~2018)
- Yuhan Co. CSO, EVP (2010~2016)
- BMS(Bristol Myers Squibb), Global medical director (2004~2010)
- Roche, Country medical director (2001~2004)

## 8 Cross-Functional Teams

### TPP Team

- Target product profile

**Hyuntak Jin**  
(Previous) CEO, Progen & SL Bigen

**Donggu Bae**  
(Previous) Director, Biotechnology Research Institute, ISU Abxis

### GTP Team

- Good tissue practice

**Minwoo Kim**  
(Previous) Executive Director, Bio R&D Division, MedPacto

**Youngjin Lee**  
(Previous) Head, Cell Therapy Center, Daewoong Pharmaceutical

### AD Team

- Analytical development

**Yeonju Hong**  
(Previous) Group Leader, Analytical Development, CDO Center, Samsung Biologics

### CDO

- Clinical Development

**Kyungho Jang, MD,PhD**  
(Previous) Clinical Development Team Director, GeneMedicine

**Jaesun Kang,**  
(Previous) Clinical Development Team Leader, GC Pharma

### RA/QA Team

Regulatory Affairs/ Quality Assurance

**Hyujung Na**  
(Previous) Samsung BioEpis

### LPS Team

- Licensing and patent strategy

### TR Team

- Translational research

# CHA Biotech Innovative Cell Therapy Pipeline

Secure diverse cell platform technologies to conduct research and develop personalized cell therapy

Project	Donor Source	Cell Type	Indication	Clinical Trial Status
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## Stem Cell Pipelines

ESC	RPE	ESC	Autologous	AMD(Age-Related Macular Degeneration), Stargardt Disease	Ongoing
NTESC	Oocyte-Somatic Cell	ESC	Autologous	Parkinson's Diseases	Anticipated Pre-clinical
Oh-ESC	Oocyte-homozygous SC	ESC	Allogeneic	HLA-matched (No immune rejection)	Pre-clinical
CHANP	Fetal mesencephalon	NPC	Allogeneic	Parkinson's Diseases	Pre-clinical
CHAPhoR	Fetal retina	RPC	Allogeneic	AMD	Pre-clinical
CHAMS	Umbilical Cord - Wharton Jelly	MSC	Allogeneic	Premature Ovarian Insufficiency	Phase 1 (2025)
				Cartilage Defect	Pre-clinical
				Gingival Recession	Pre-clinical
CHAGE		Gene-edited MSC		Idiopathic Pulmonary Fibrosis	Pre-clinical
CHAUM	Fetal mesencephalon	AT-MSC	Allogeneic	Ovarian Aging	Pre-clinical
	Fetal retina	AT-MSC	Autologous	Anti-Aging	Non-clinical Trial

## Immuno-Oncology Pipelines

CHANK	PBMC-Leukapheresis	NK-cell	Autologous	GBM, HCC	Regenerative Medicine Act
		NK-cell	Allogeneic	Solid Tumors	Pre-clinical
CHATIL	Tumor Tissue	TIL	Autologous	Ovarian Cancer, Head and Neck Cancer	Regenerative Medicine Act

Project	Disease Area	Indication	Clinical Trial Status
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## Develop functionality enhanced next generation combination cell therapies

CHAB-101	Immuno-Oncology	Combination with CHANK / CHATIL / ICI	Anticipated phase 1/2a or Licensing-out
CHAB-102	Auto-immune	Auto-immune diseases	
CHAB-103	Auto-immune	Auto-immune diseases	

# CHA Biotech Pipeline Strategy

- The global CGT market is anticipated to reach approximately USD 97.33 billion by 2033, with a CAGR of 18.3%
- CHA Biotech takes a dual-track strategy: global out-licensing and obtaining approval for regenerative medicine in Korea

## CHA Cell Therapy Platform

### Immune Cell Platform

Natural Killer Cell  
Tumor Infiltrating Lymphocyte

### Stem Cell Platform

NT ESC  
Engineered ESC  
Primed MSC

### Fusion Protein

NK/TIL enhancing  
fusion protein

## Dual-Step Commercialization Plan

### Step1: Regenerative medicine\* (KOR)

#### Regenerative medicine Approval

High-Quality  
Production by  
Matica Biolabs

Partnership with  
100 regenerative  
therapy authorized  
clinical centers in  
Korea

### Step2: Global out-licensing

#### FDA / EMA Approval

Global clinical collaboration and  
treatment integration across a  
network of 96 CHA hospitals

**\*Advanced regenerative medicine act: Effective as of 21<sup>st</sup> Feb 2025**

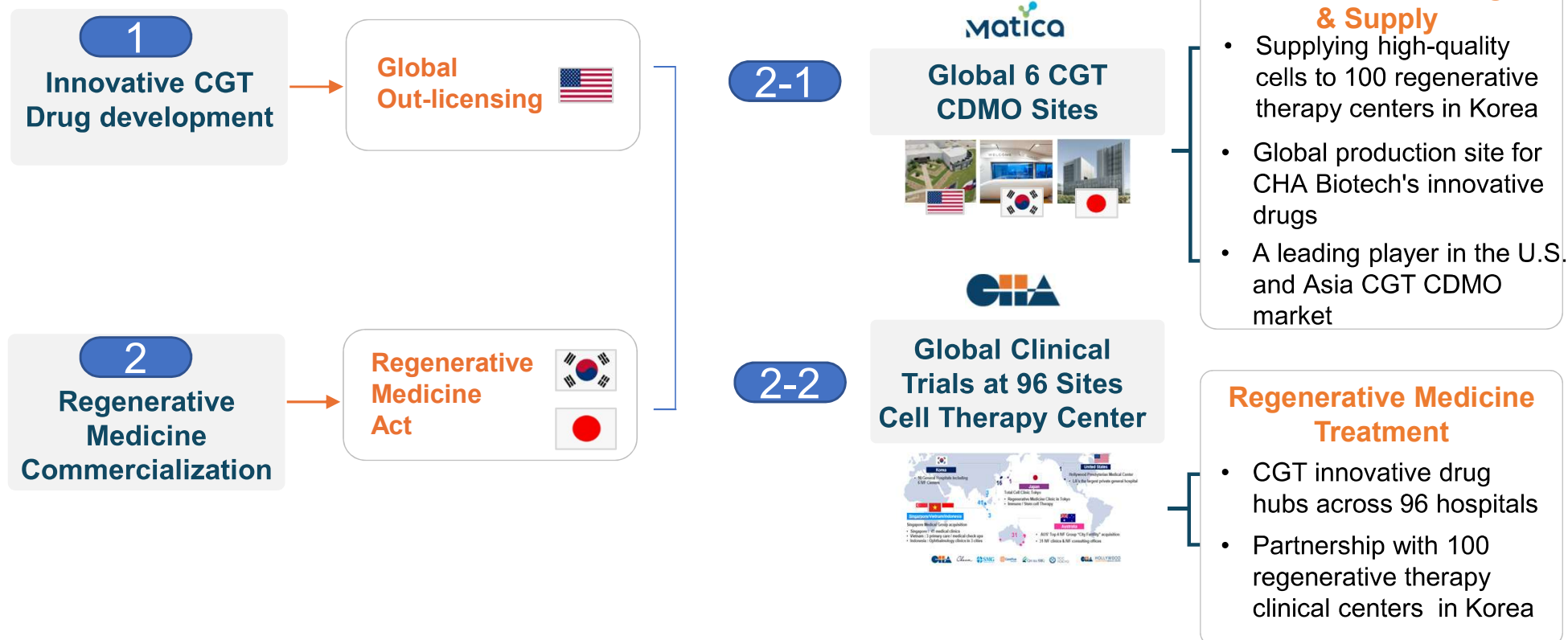
Cell therapy practice is allowed for treating rare and intractable diseases through Regenerative Medicine Clinical Study (IIT) involving a small number of patients, without NDA approval track.



# CHA Biotech CGT Bio-Ecosystem

Cash Flow driven by R&D commercialization

1. Global Out-Licensing : Upfront & Milestone & Royalty
2. Regenerative Medicine Act : Commercialization in Japan and South Korea
  - 2-1. Regenerative Medicine Cell Manufacturing & Supply (CHA Biotech + Matica BioLabs/BioJapan)
  - 2-2. Regenerative Medicine Treatment Fee (CHA Hospitals)



**\*Advanced regenerative medicine act: Effective as of 21<sup>st</sup> Feb 2025**

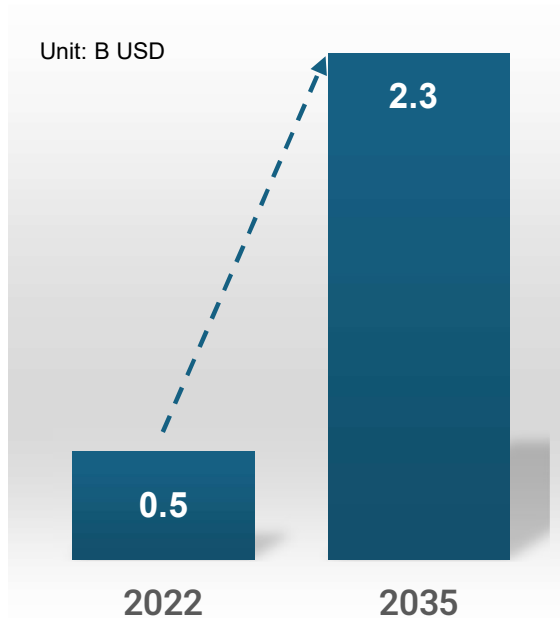
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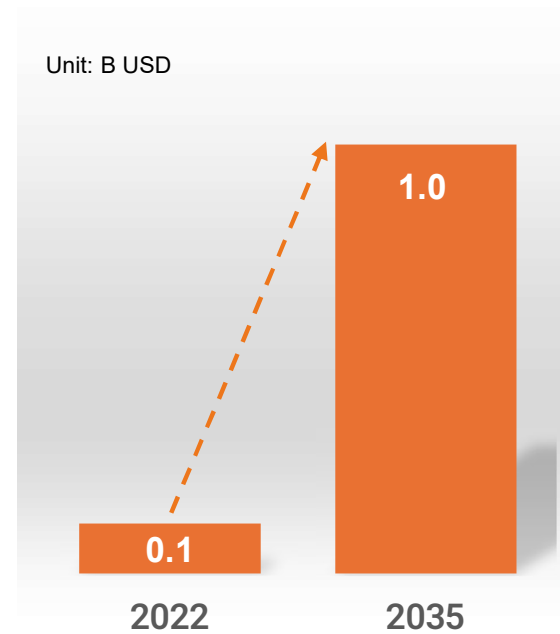
# 03 Global CDMO Business

# Targeting the Global and Asia Markets for CGT CDMO

## Global CGT CDMO Market Size<sup>1</sup>



## Asia CGT CDMO Market Size<sup>2</sup>

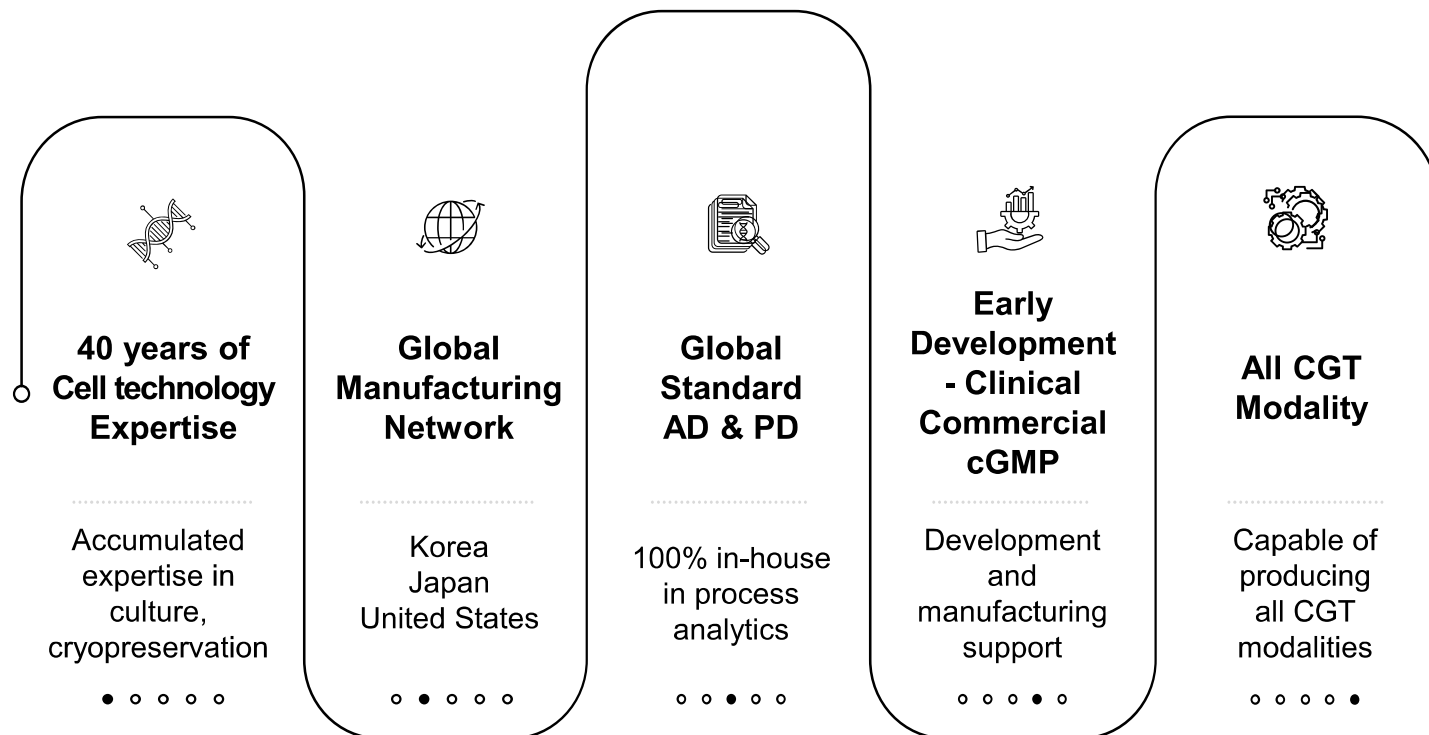


Exchange rate 1USD=1455.95KRW

Reference 1.Root analysis (2022) 2. Market Size, Trends, and Forecast of the Cell and Gene Therapy CDMO in the Asia-Pacific Region 2034

# Matica CGT CDMO

**Matica 6 global CDMO leveraging 40 years of expertise in cell technology**



# 6 Global CGT CDMO Sites

Matica provides comprehensive end-to-end cell and gene therapy solutions through fully Integrated Operation Across Global 6 sites.

We provide full scope of development to commercialization. Our technology supported by academia/institutes of 40years experience of cell and gene therapy





# 04 Global Healthcare Business



# Medical Centers ex-Korea

Outside of Korea, CHA has **some 80 medical facilities across APAC** including general hospitals, women's' hospitals, fertility clinics, stem-cell treatments and multi-specialty clinics.



**Hollywood Presbyterian Medical Center**  
Largest private, for-profit general hospital in LA



**Total Cell Clinic**  
Immunotherapy & stem cell treatment center in Tokyo



**CarePlus Vietnam**  
Health screening & multi-specialist clinics in HCMC



**City Fertility**  
Leading Australian IVF group with national footprint including Brisbane, Melbourne, Perth and Sydney



**Singapore Medical Group**  
Singapore's largest multi-specialist network



**Ciputra SMG Eye Clinics**  
Indonesia's premier ophthalmology clinic group

# Strategic Priorities

- **International Group:**

- Achieve “4 M”

- **Market Share** growth in all key segments
    - **Margins** above 22-25% (EBITDA)
    - **Momentum** from consistent topline expansion and new growth initiatives
    - **Market Messaging** simple, clear and highly impactful

- **HPMC:**

- Transform into specialized hospital enhancing operational efficiency and developing partnerships

- **SMG / CFC:**

- Export existing brands to high-growth emerging markets across ASEAN
    - Evolve into Asia Pacific's leading IVF platform, aiming to deliver 20K+ IVF cycles ex-Korea
    - Build largest pan-Pacific network of cross-referrals and captive customer cohorts

- **TCC:**

- Become a leading Cell & Gene Therapy hub in APAC, expanding immune and stem therapies

# **CHA BIO GROUP GLOBAL VISION**

## **Cell and Gene Therapies Pioneer**

to provide cure to incurable diseases

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## **Leading the Global CGT CDMO Market**

Through optimized high-quality, high-efficiency manufacturing

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## **Global Expansion of High Quality Healthcare Services**

Beyond geographical limits

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## **Achieving Well-Aging**

Through cutting-edge cell technologies

## **Extending Healthy Life Expectancy to 120 Years**





**Thank you**

