



**MetaTech**

三顧股份有限公司

Stock Code: 3224

# METATECH (AP) INC. Investor Conference

2022/12/01

# Disclaimer

The contents of this presentation and related information are the information collected by the company from various prior documents.

The Company is dedicated to the future development. The actual results of operations, financial condition and business achievement may differ from the forecasted information. This may be due to risk factors that are not expected to be captured by market conditions.

The future development described in this presentation is based on the judgment of market information and the development of the Group's business strategy. The Company is not responsible for alerting or updating for future development as it may be adjusted with the market trend.

# Outline

1

Company Profile

2

Development Progress

3

Future Prospects

4

Regenerative Medical Ecosystem

**01.**

**Company  
Profile**



MetaTech  
(AP) Inc.

- **Electronic Components Agency**
- **Cooperators** : Samtec, Everspin, E-Switch etc.
- **Partner** : Inventec, Quanta, DELTA, Foxconn, LITE-ON, ADLINK, OSE, Accton etc.

1998/  
09



MetaTech  
established

2004/  
06



Listed on OTC  
Market

2013/  
06



BIOMED  
Department  
established

2017/  
04



Authorized  
from CellSeed  
in Japan

2020/  
01



日生細胞生技  
UP CELL BIOMED  
established

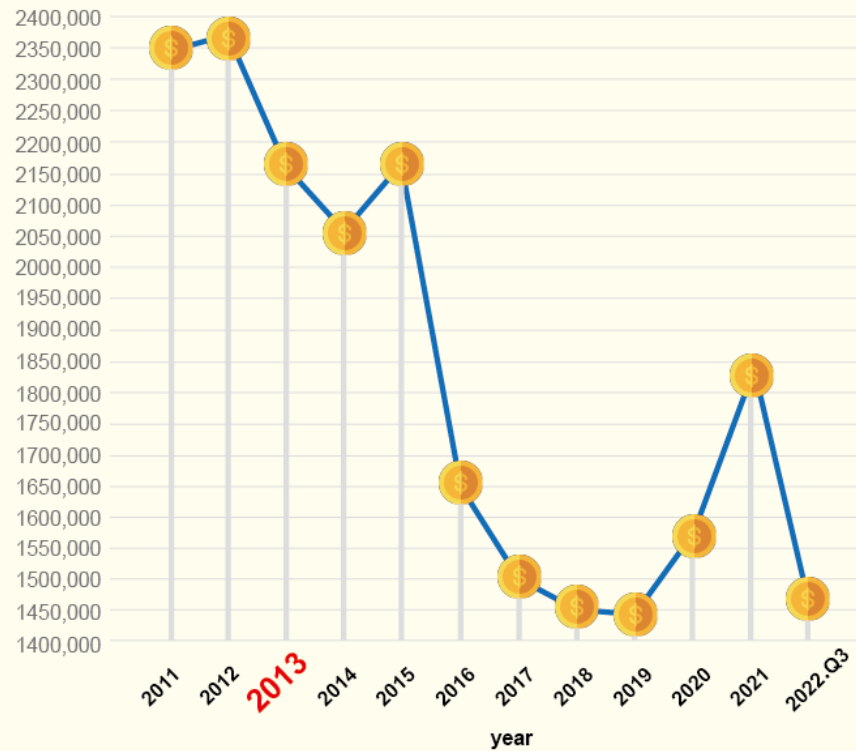
2021/  
05



樂迦再生科技  
LOCUS CELL CO., LTD.  
LOCUS CELL  
established

## Operating income

(Unit: thousand NTD)

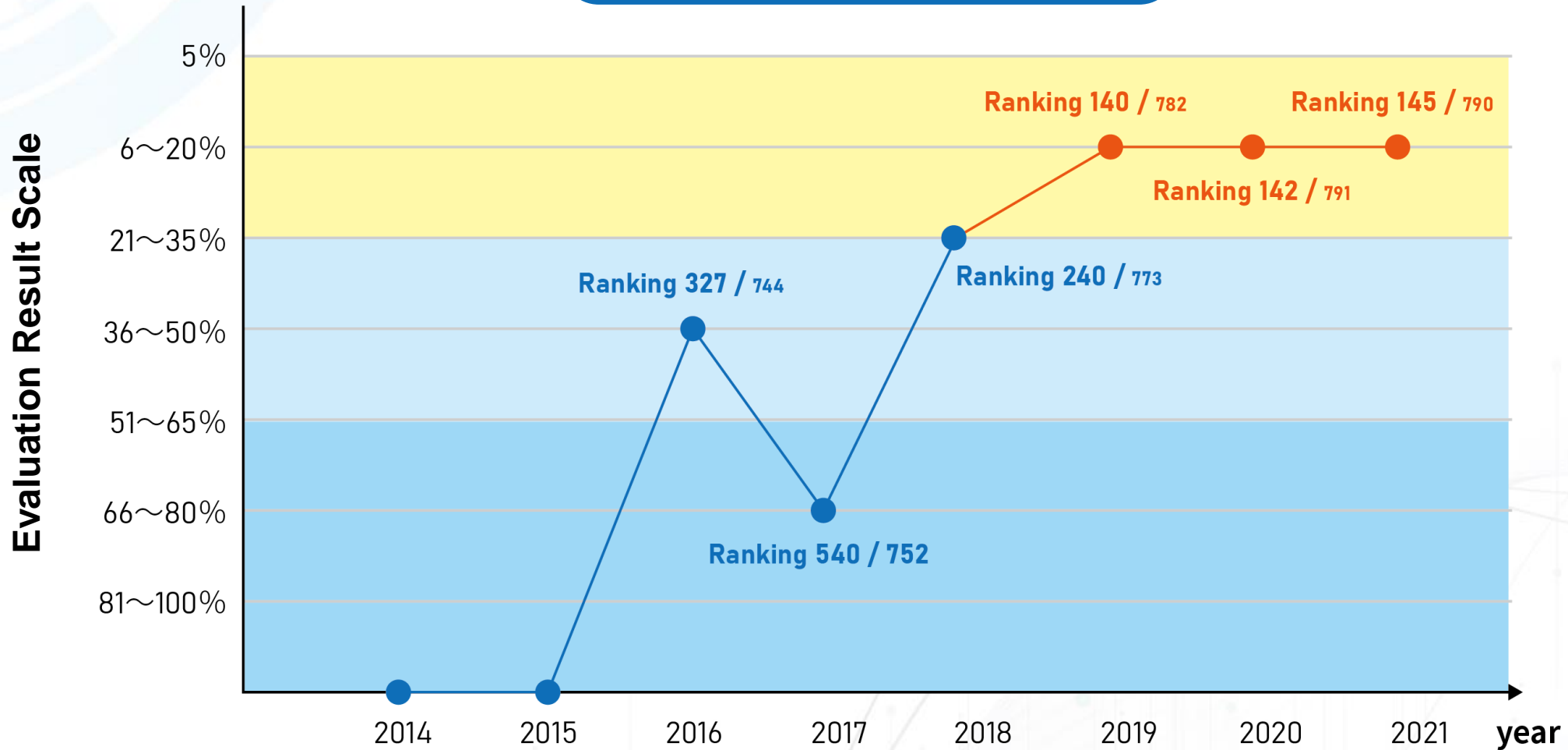


## Current Performance

(Unit: thousand NTD)



## Stable Corporate Governance



**02.**

**MetaTech BioMed  
Development  
Progress**





# The highest number of autologous chondrocyte cell sheet therapy case in the world

Completed cell transplantation,  
Total **64** cases

**Success rate 100%**

**5 cases** completed  
bilateral total knee  
replacement

**Regenerated  
hyaline cartilage**

Collecting real-world data

Using real-world Evidence



“Regulations of Special Medical Techniques” Connection Inspection  
Registration

**Expect to be the First Product to obtain a drug certificate  
under the “Regulations of Special Medical Techniques”**

## ● Difference between Artificial Joints and Cell sheet

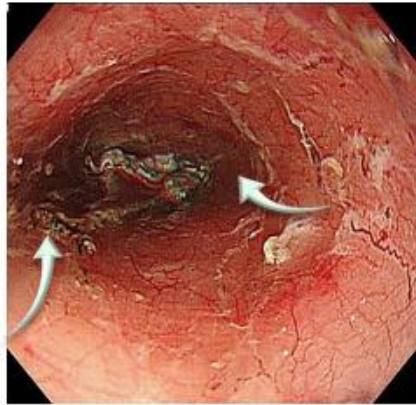
| Treatment  | Artificial Joints   | Cell Sheet   |
|------------|---|--|
| Age        | Middle-aged and elderly   | 18-70  |
| Indication | Osteoarthritis<br>avascular necrosis of<br>femoral head   | knee cartilage defect<br>(2019 research indicate<br>used in traumatic arthritis)   |
| Treatment  | <ul style="list-style-type: none"> <li>Remove all the necrotic parts</li> <li>Replace the artificial joint</li> </ul> | <ul style="list-style-type: none"> <li>Applied directly to the affected area</li> <li>Without destroying the cartilage or hard bone layer</li> </ul> |
| Recovery   | The recovery period takes 1-8 weeks, and the knee joint should not bend more than 45 degrees.                         | Clinical study indicate the <b>symptom, pain and mobility improved</b> after transplantation <b>1 month</b>  |

# First phase III clinical trial on preventing esophageal stenosis in Taiwan

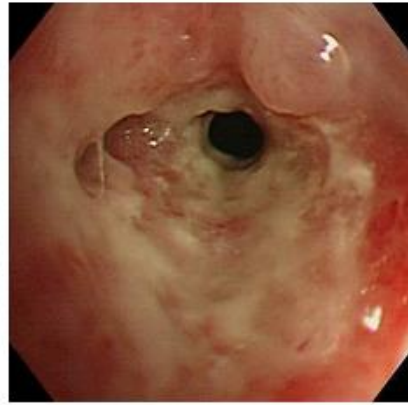
Reference : Clinical outcome in Japan



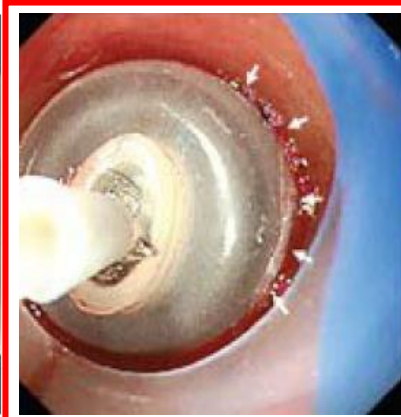
After ESD



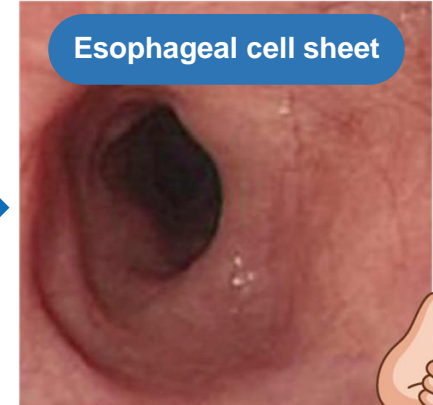
Normal internal esophagus



Inside Narrow esophagus



Esophageal balloon dilatation



Normal internal esophagus

**Conventional treatment ≠ Cure**



National Taiwan University Hospital



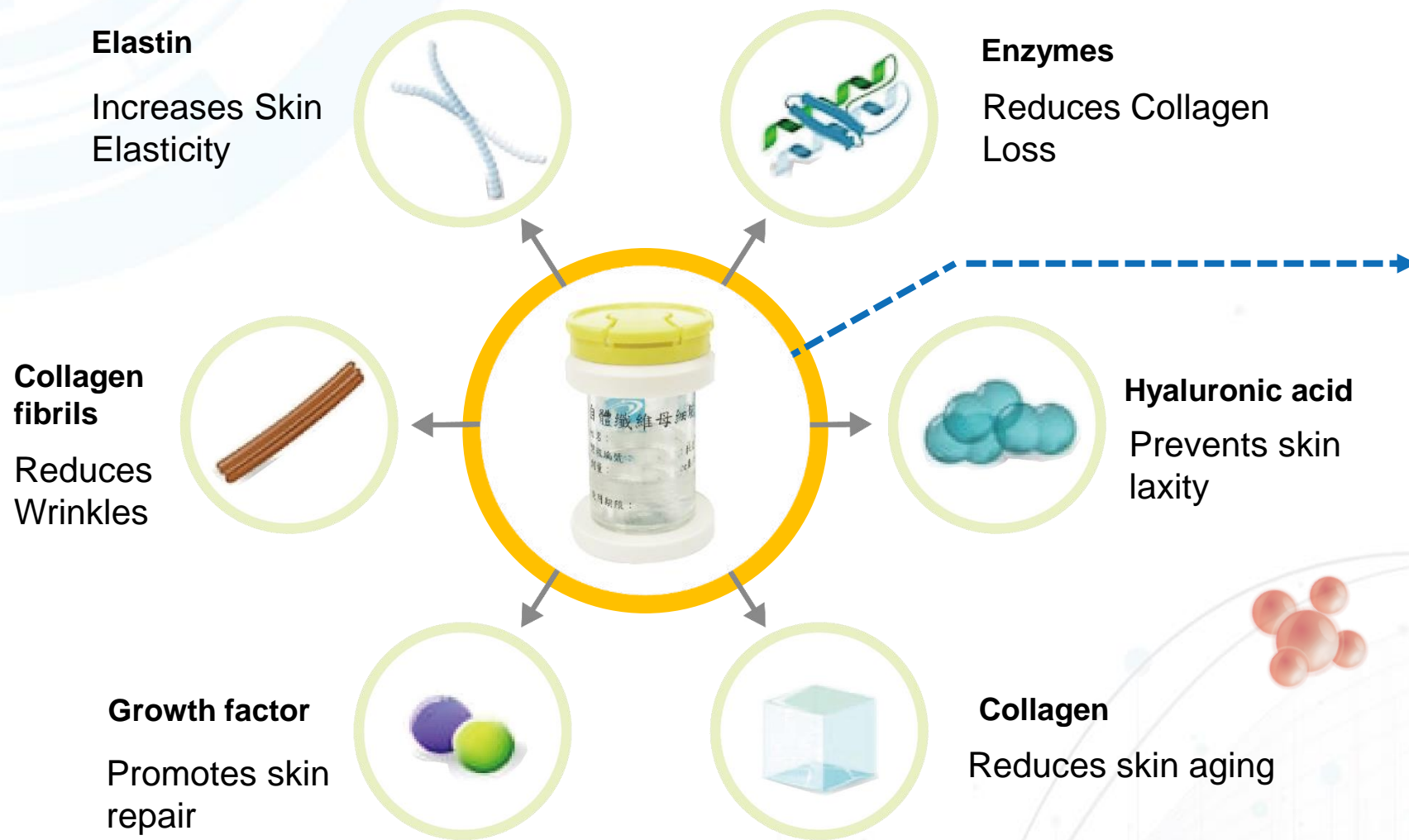
E-Da Hospital



1. The first cell therapy product in Taiwan
2. Base on esophageal cell sheet technology, MetaTech has developed other cell sheet technologies
3. Apply for GMP certification and become a pilot factory for LOCUS CELL Co., Ltd
4. Development of CRO business through clinical experience



# Original Technology – Treatment of wrinkles with aggregated cells



**Injectable**

## M-Cell

High-efficiency  
polymerizing fibroblasts

**Patent No. I693283**  
**Patent No. I724528**

Secrete more elastin, collagen, hyaluronic acid, growth factors and extracellular matrix  
→ **Effectively promote cell regeneration and skin repair**

# M-Cell collaborative clinic



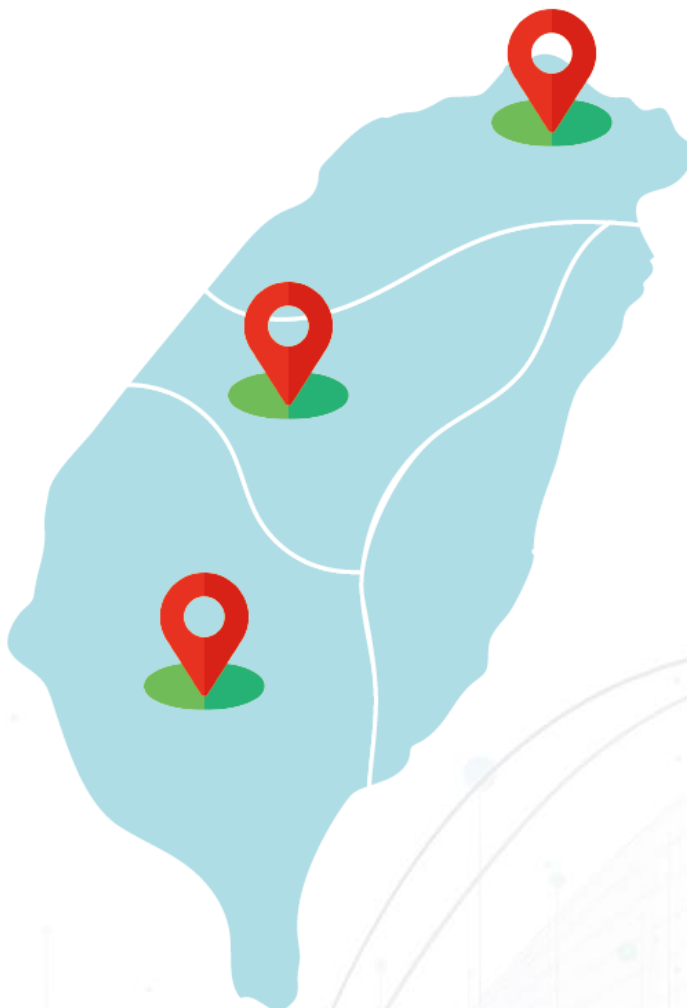
**Aphrodite  
Medical Clinic**



**Beauté J'adore  
Esthetic  
Medicine**



**Le-Renouveau**



**Chang Gung  
Clinic**



**JOURDENESS  
CORP.**



**Arsty Clinic**



Acer and MetaTech collaborated on DC therapy through AI and cell manufacturing



Combining AI

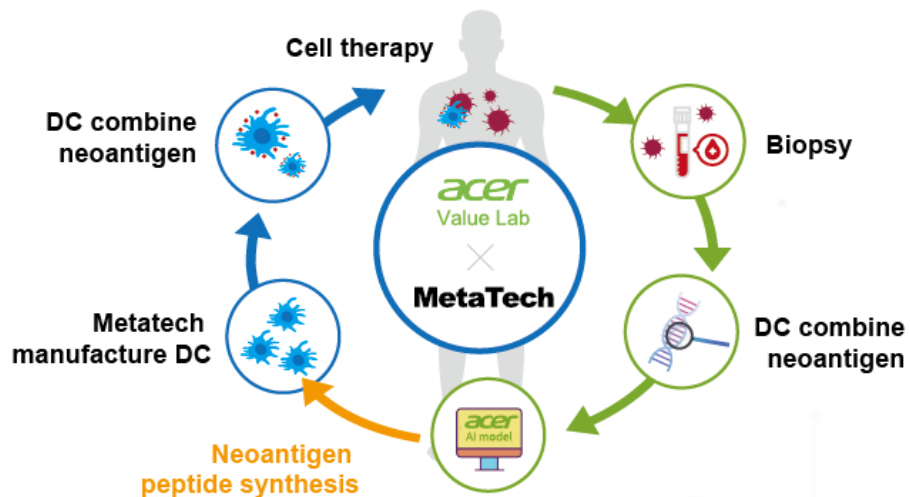


Personalized

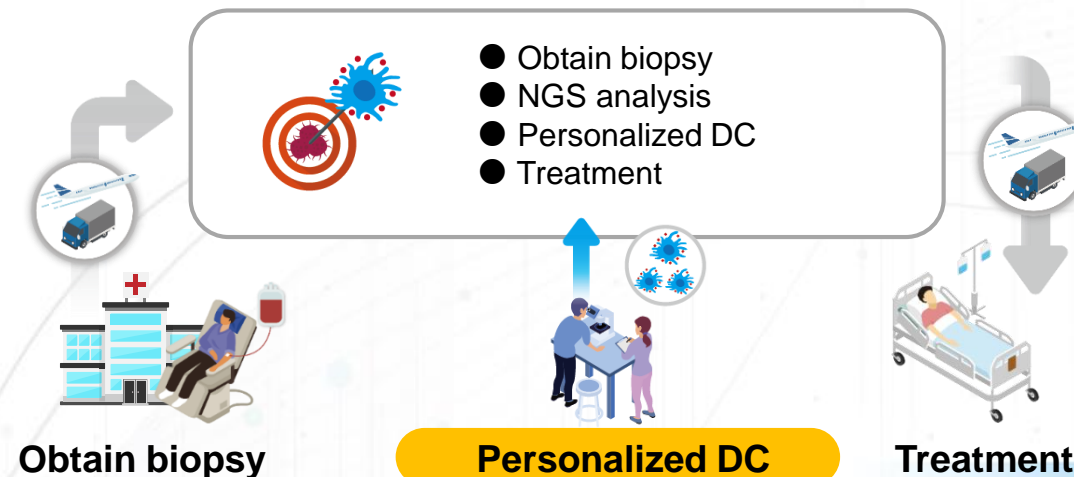


Used in clinical treatment

## Combining with AI process



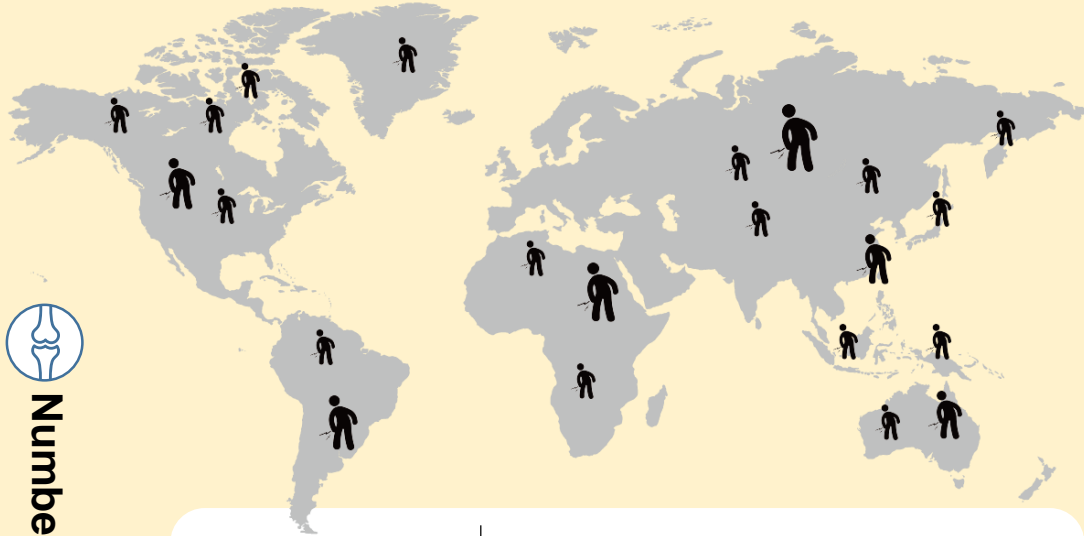
## Precision Therapy



**03.**

**MetaTech BioMed  
Future Prospects**





Number of knee replacements

**Taiwan**

2020 **29,000**

2021 **27,000**





Ministry of Health and Welfare

**China**

2020 **436,099**

2021 **525,936**

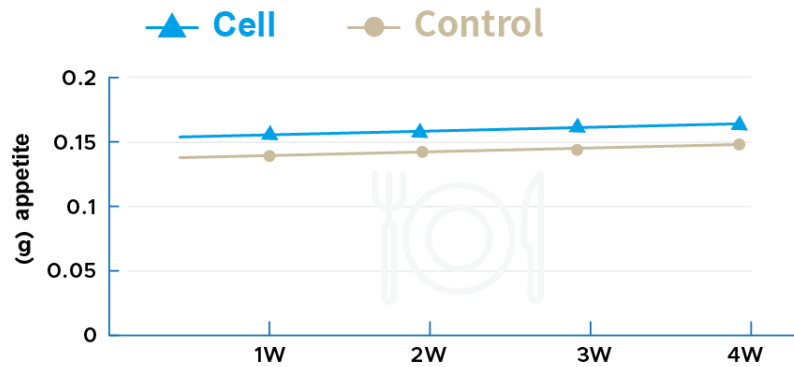
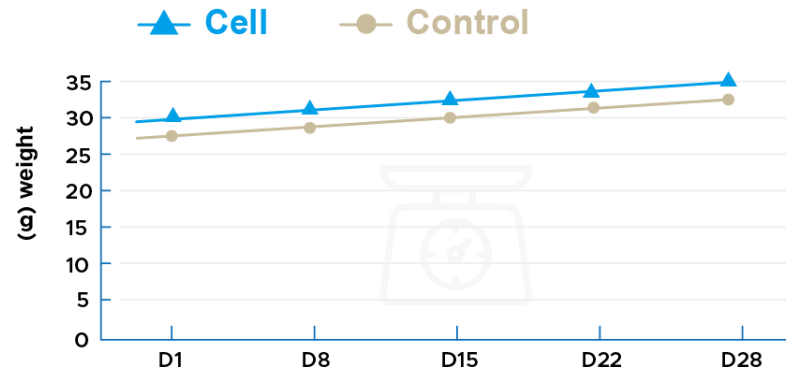
www.chyxx.com

|              | Autologous                   | Allogeneic   |
|--------------|------------------------------|--|
| Surgeries    | Twice                        | Once    |
| Waiting time | Requires cell expansion time | Ready to use                                      |
| Cell Quality | Varies                       | Consistent quality                                |
| Market       | Smaller, due to Customized   | Larger, Potential for the international market  |



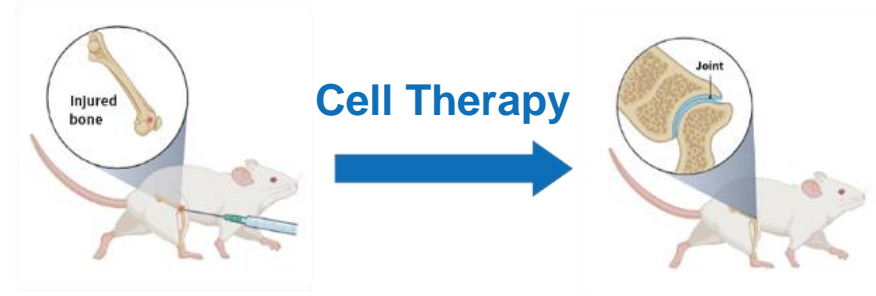
## Toxicological- Confirm Cellular Safety

- No effect in weight and appetite



## Pharmacological -Confirm Cellular Efficacy

- Cartilage Defects-Cell therapy filled the defects with hyaline like cartilage



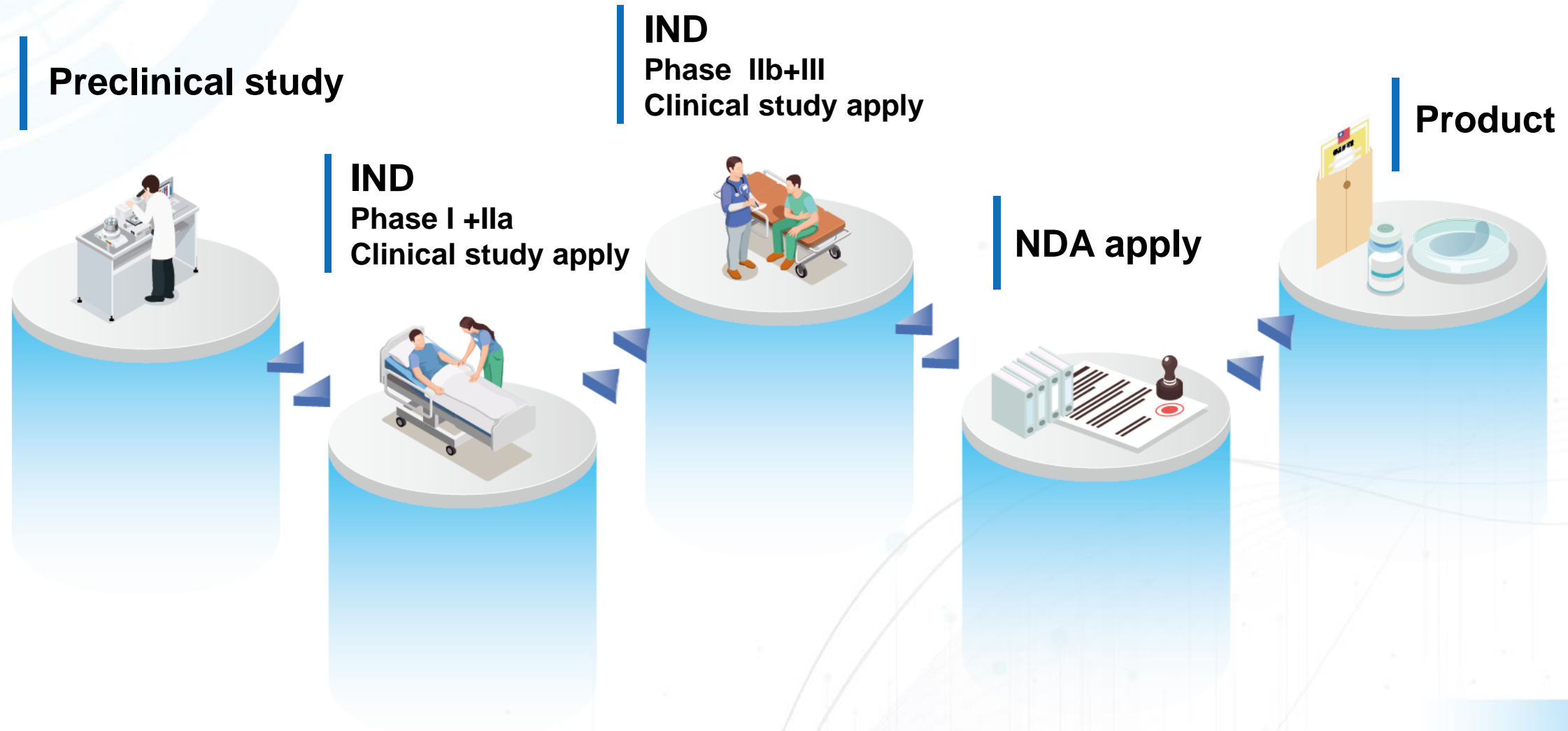
- Cartilage degeneration-Cell therapy prevent the deformation of femoral cartilage



Created in BioRender.com



# Allogeneic chondrocyte sheet started overseas authorization





**Cell Sheet**



**NTUH**

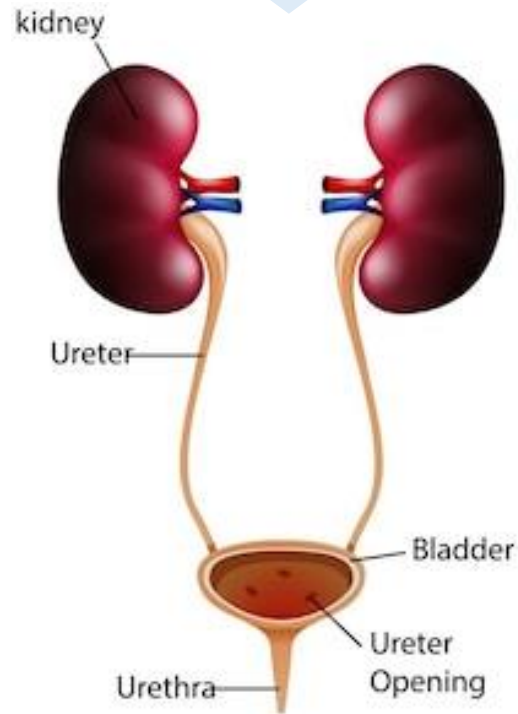
## Kidney Injury Treatment

《 Taiwan Kidney Disease Annual Report 2018 》 ·  
2012 -2016, the number of kidney transplant cases  
ranges from 255 to 318 per year in Taiwan

Dialysis Prevalence in Taiwan  
1,448 per million population in 2000, increased to  
3,392 per million population in 2016.

**Treat  
Kidney  
Injury**

**Reduce  
Medical  
Burden**



## Improved urination



The proportion of patients with voiding  
symptoms will increase with age.  
More than half of the elderly over 70 years  
old have this problem

**Improve  
Urinary  
Function**

**Improve  
Quality of  
Life**

# Heart sheets for Heart Failure- No Need to Wait for Heart Replacement

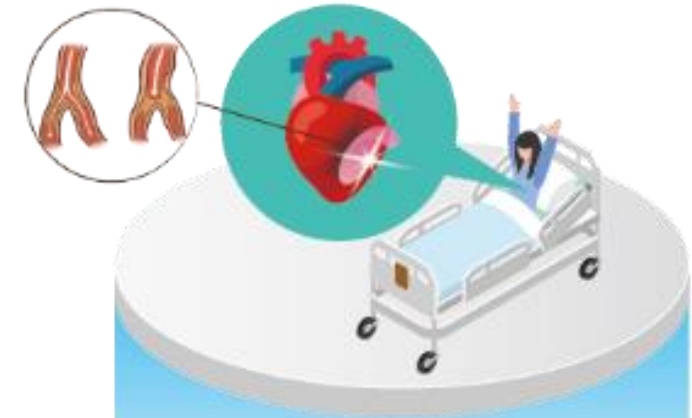



## Dr. Yoshiki Sawa

Osaka University Medicine Cardiovascular Surgery

- Osaka University department of medicine  
Professor of Cardiovascular Surgery
- JSRM Director/ Former Chairman
- Founding CUORiPS Company

More than **60** cases have  
been successfully treated

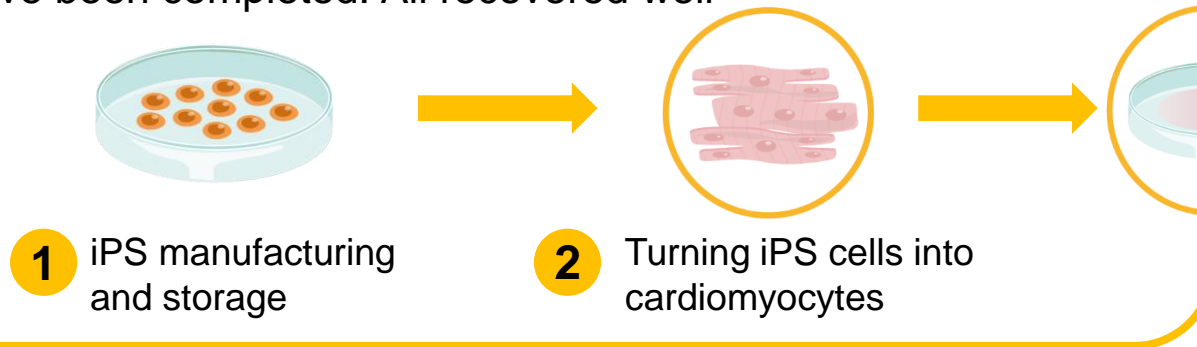


|   |   |
|---|---|
|  | 「ハートシート (Heart Sheet®) 」<br>ヒト(自己)骨格筋由来細胞シート<br>(Autologous skeletal muscle derived cell sheet) |
| <b>Manufacturer</b>   | TERUMO  |
| <b>Approval</b>   | 2015 Conditionally Approved   |
| <b>Indication</b>   | Heart failure due to ischemic heart disease   |
| <b>Price</b>  | 14,760,000 yen  |

## Better pulsation & treatment

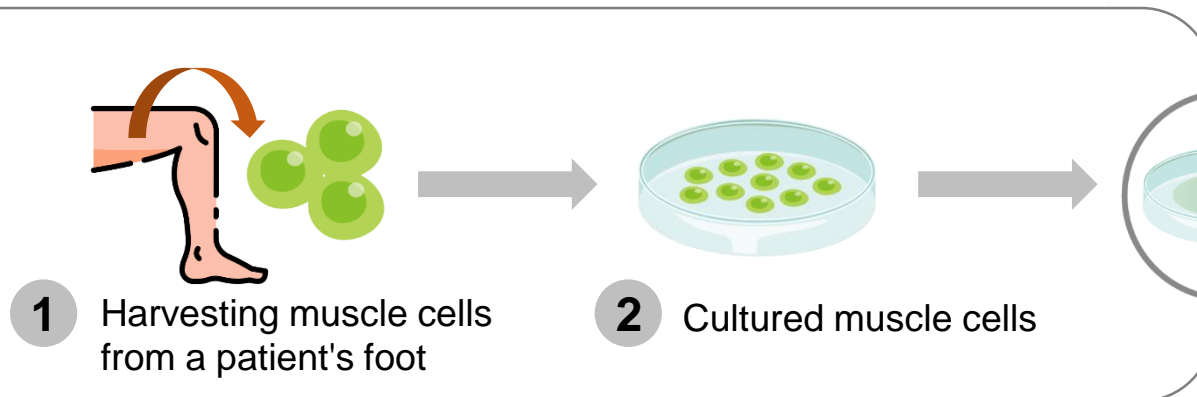
- Human trials to begin in November 2020
- Three transplants have been completed. All recovered well

**iPS**  
Make heart sheet



**3 4**  
Fabricate muscle cells into sheets

**Skeletal muscle**  
Make cell sheet



**3 4**  
During open-heart surgery, the sheet is applied to the patient's damaged heart area.

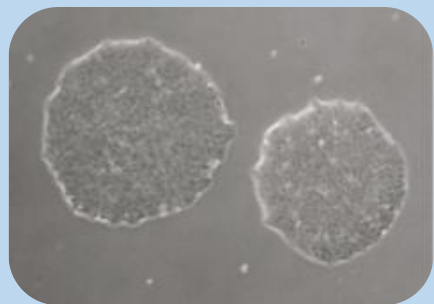


**Dr. Yoshiki Sawa**  
Osaka University Medicine  
Cardiovascular Surgery

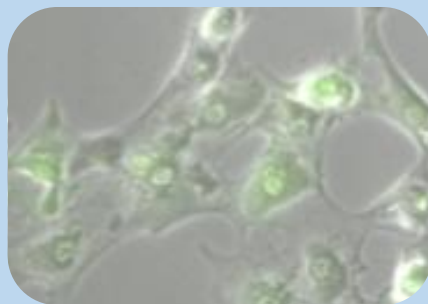


**MateTech (AP) Inc.**

## Collaborative Research in Taiwan



iPS cells(feeder free)



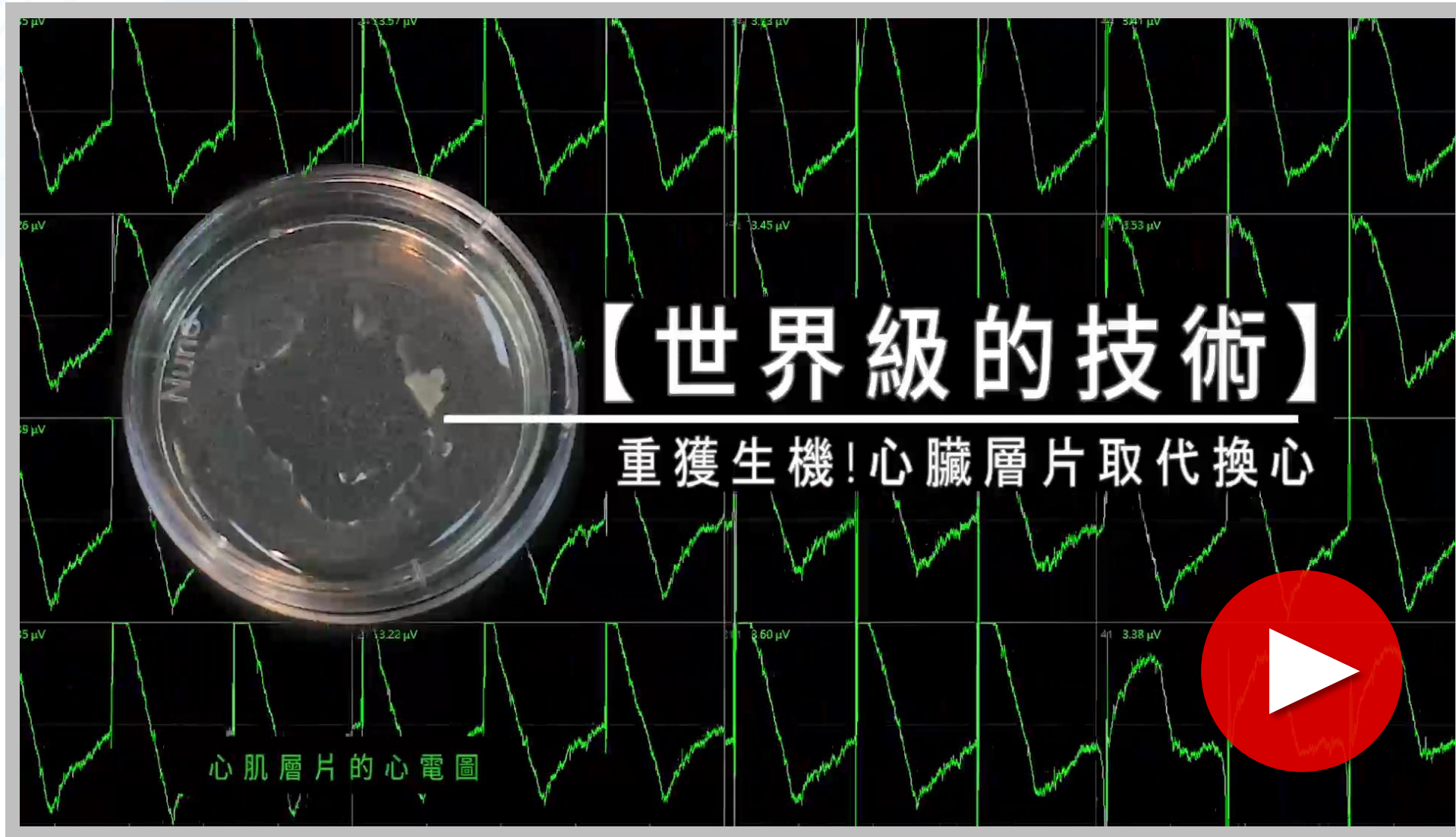
iPS cell-derived cardiomyocytes



Cardiomyocytes sheet


Transplant  
Cardiomyocytes sheet





**【世界級的技術】**  
重獲生機！心臟層片取代換心

心肌層片的心電圖





**04.**

**Constructing a  
Regenerative  
Medical  
Ecosystem**

### Digital technology

- Assist in authentication
- Protect customer IP from plagiarism

### Regenerative Medicine Company

### Demanders

### Clinicians

- Regulations, Hospitals, Government Funding

### MetaTech(AP) Inc.

GTP cell processing center

- The world's largest cell sheet manufacturing and R&D company
- Cell storage
- CRO service

### UP Cell BioMed

R&D of innovative regenerative medicine

- Various cell sheet type development
- Exosome research and development
- Formulation research and development

### LOCUS Cell Co., Ltd.

PIC/S GMP CDMO

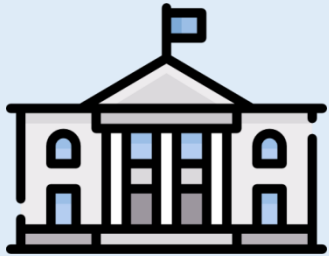
- Optimize process development
- Various Cell Process Services

iPSC、CAR-T、MSC、DC、  
Cell sheet (chondrocyte, fibroblast, cardiac, etc)



Constructing a regenerative medical ecosystem





## Support from the government

- Regeneration medical associated regulations passed
- Incentive Ordinance: Biotechnology and Pharmaceutical Industry Development Ordinance, regenerative medicine, precision medicine and digital medicine are included in the scope of application of the new ordinance, and the rental tax exemption is expanded.
- The government takes the lead in investing and foreign companies invest in Taiwan's biotechnology industry, and the number of Taiwanese companies in the biotechnology industry has multiplied.



## Healthcare Environment

1. Taiwan's medical technology ranks third in the world
2. The quality, timeliness and cost of clinical trials are globally competitive



## Geographic Location

1. Taiwan is located in the heart of Asia, with easy access to Mainland China, Japan, Korea and Southeast Asia markets

PAST EVENT / 國內研討會

<https://biomaptw.com/index.php/cell-therapy/item/305-2019-07-18-I>

## 2019.07.18 | 全球再生醫療趨勢與展望論壇-攜手創建全球細胞治療生態系

2017

Metatech  
technical transfer  
from Japan

2019

MetaTech and Hitachi Group  
announced that Taiwan's  
regenerative medicine  
ecosystem is about to take  
shape, and will work together to  
create a cell therapy ecosystem

2020

UP Cell was  
established

A joint venture between  
Taiwan and Japan

2021

LOCUS CELL established

National Development Fund and  
Taiwan-Japan joint venture



**Chairman**  
**Dr. Hong-Nerng Ho**



**CMO**  
**Dr. Yu-Hsiang Chang**

## Specific disease model

(induced pluripotent stem cells)

- ✓ Polycystic ovary syndrome (PCOS)
- ✓ Heart failure (TNNT2)
- ✓ Premature ovarian failure (POF)

## Specific differentiation model

- ✓ Granulosa cells
- ✓ Endothelial cells
- ✓ Cardiomyocyte
- ✓ Germ cells

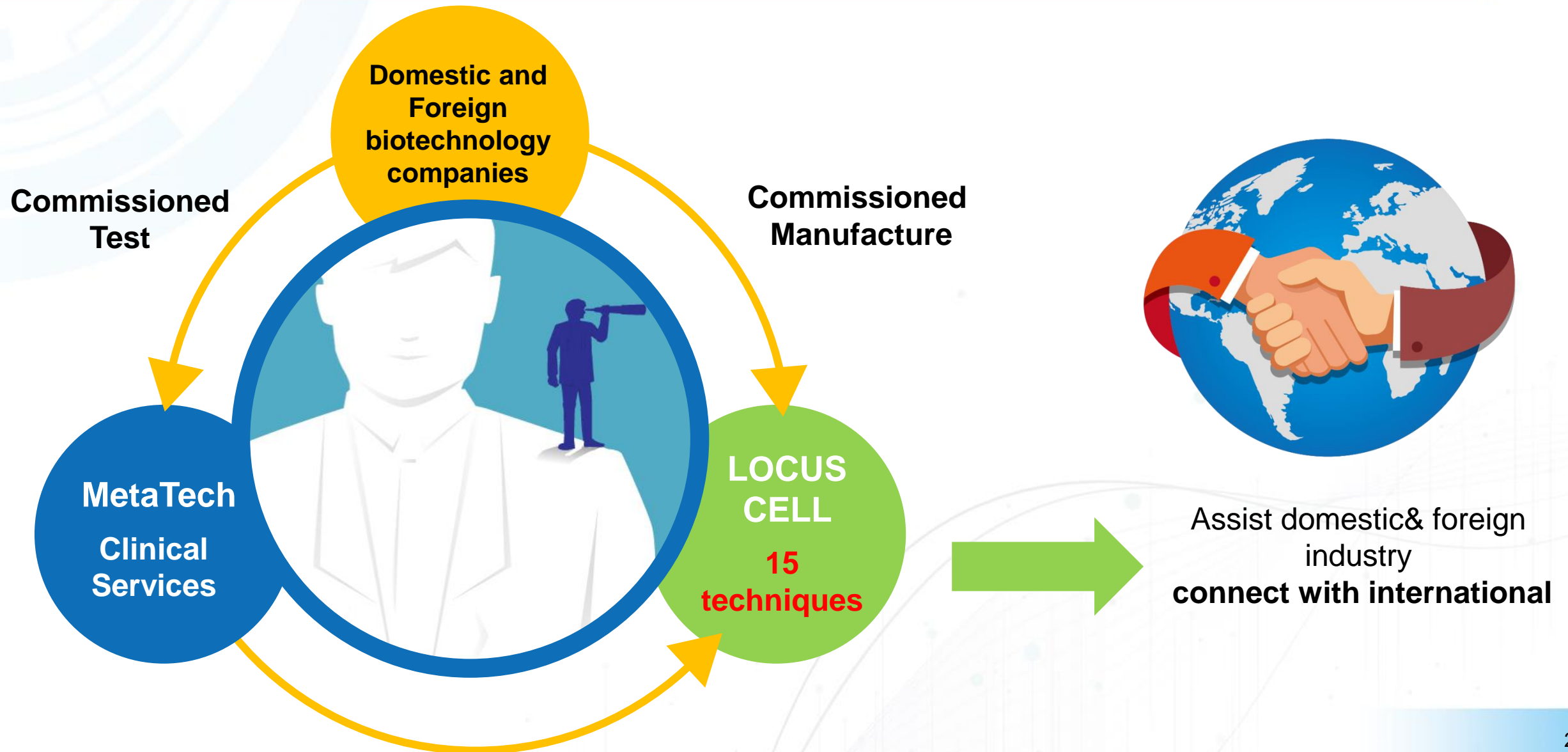
## CAR-T Process practical experience

- ✓ Virus production
- ✓ Traditional multi-station CAR-T production technology
- ✓ One-stop automated closed system CAR-T process technology, Prodigy practical experience
- ✓ CAR-NK R&D capabilities
- ✓ Specific embedded patented technology

## CAR-T Clinical outcome

- ✓ **6 patients with refractory or relapsed ALL/CLL**
- ✓ Symptoms are completely relieved, lesions disappear and no new lesions appear(2022.5)
- ✓ The highest survival rate after CAR-T treatment has reached 19 months

# The ecological systems Formation





01

Foreign and domestic iPSC industry

Domestic CAR-T industry

02

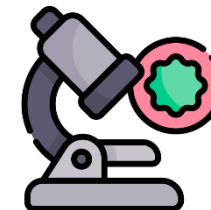


03

Japan 3D printing blood vessel industry

Japan heart sheet industry

04



05

Small modular GMP laboratory



**MetaTech**

三顧股份有限公司

股票代碼：3224

**THANK YOU**