



A new frontier  
for health.



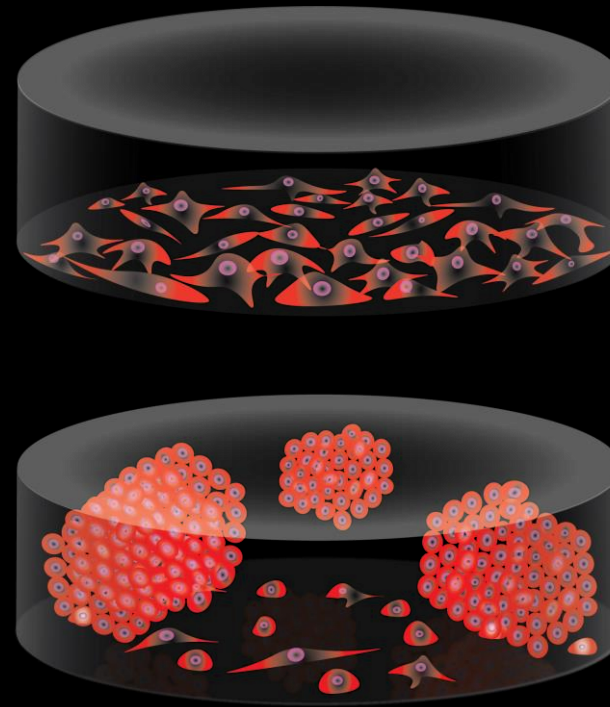
SYDNEY

TOKYO

MICHIGAN

INVESTOR DECK

# Microgravity is a unique environment for innovation



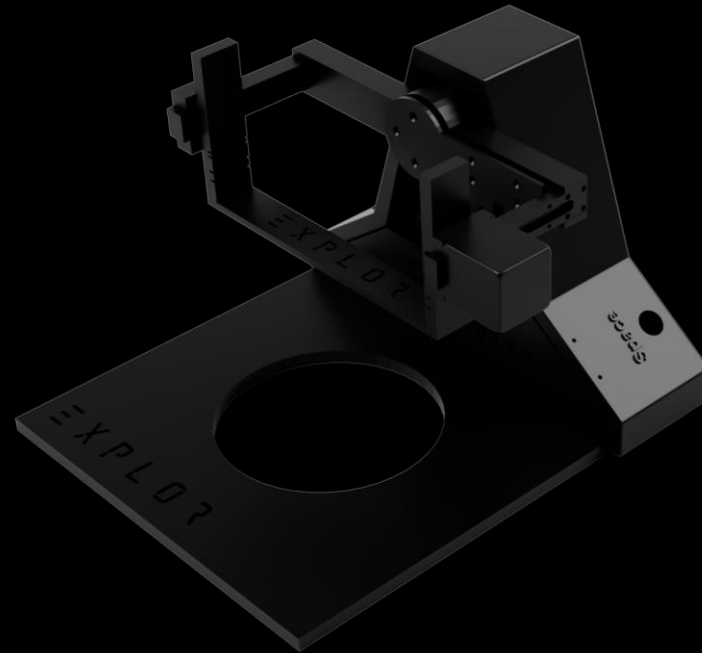
Cells on Earth

Cells in Space

Microgravity affects the human physiology and **all life form**

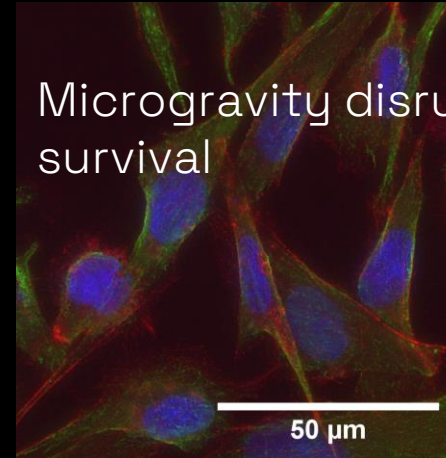
Microgravity "stresses" the cell that induce different response

Biogravity™  
simulates the  
microgravity  
conditions on  
the ISS but on  
Earth !!



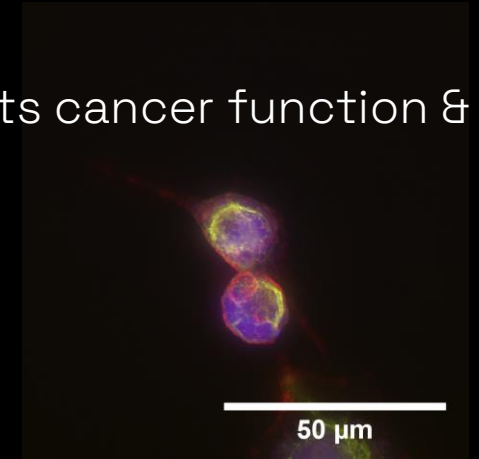
Breast Cancer

Control

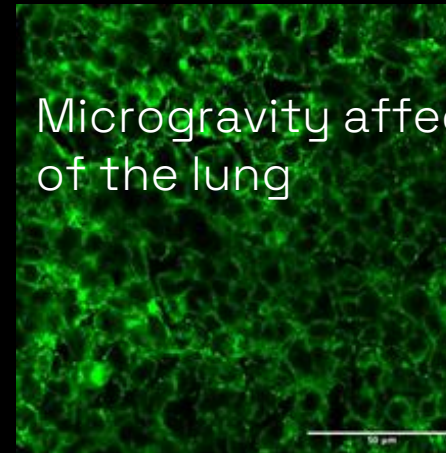


Microgravity disrupts cancer function & survival

Microgravity (24hrs)



Lung Cells



Microgravity affect the breathing action of the lung



### Endless Applications

- ▼ Cell Biology
- ▼ Cancer Research
- ▼ Cell Therapy
- ▼ Stem Cell Research
- ▼ Drug Discovery
- ▼ Tissue engineering
- ▼ Astrobiology
- ▼ Protein Structural Analysis
- ▼ Embryology and more...



An astronaut in a dark space suit is seen from the side, looking out of a large window. The window shows a view of Earth from space, with the blue atmosphere and the dark surface of the planet. The sun is visible in the upper right, creating a bright glow and lens flare. The astronaut's suit has a red triangle on the back and a patch with the Australian flag on the sleeve. The word 'EXPLOR' is visible on the sleeve.

# SPACE MEDICINE & LIFE SCIENCES

## INVESTMENT PROPOSITION

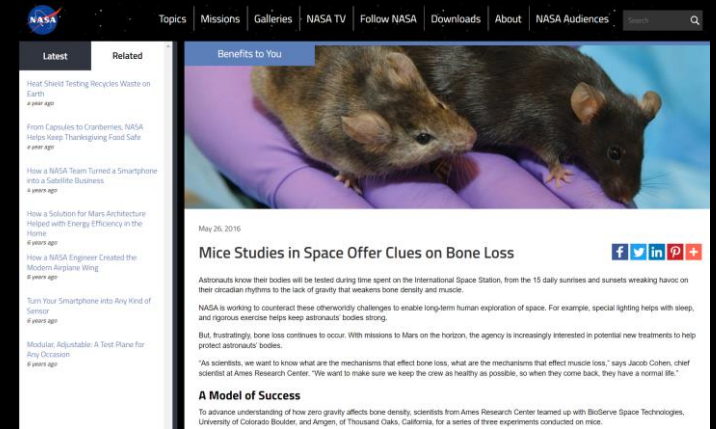
- ▼ Drug Development
- ▼ Drug Discovery
- ▼ Cosmetech & Ageing Disease Treatment

# DRUG DEVELOPMENT | MICROGRAVITY

The Microgravity environment is currently an unchallenged market for significant drug discovery and development.

Producing high-quality crystalline suspensions of monoclonal antibodies would enable pharmaceutical companies to change the drug formulation and switch from intravenous administration to an injection.

## OSTEOPOROSIS DRUG

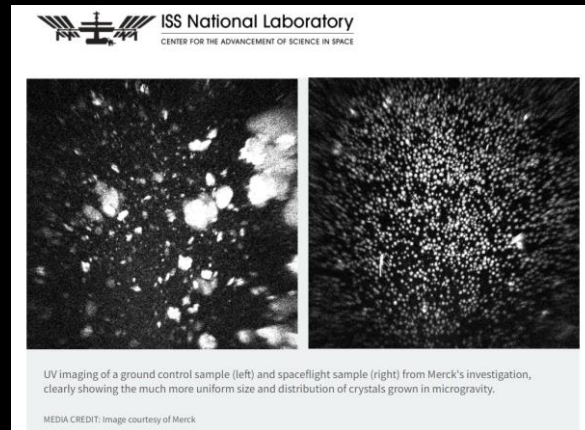


The AMGEN EVENITY™ anti-osteoporotic drug was developed from microgravity research on the ISS by targeting sclerostin, a key osteocyte bone marker responsible for mechanical load signalling.

<https://www.nasa.gov/offices/oct/feature/mice-studies-in-space-offer-clues-on-bone-loss>

EVENITY™ saw 59% growth in 2021 with \$600 million in revenue

# KEYTRUDA | CANCER DRUG



 **\$3 BILLION/ YEAR TO \$17.2 BILLION (2021)**

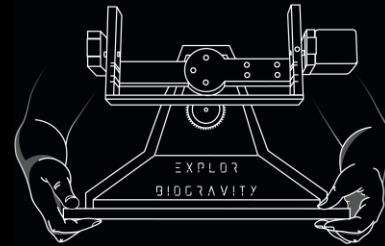
 **12HR INFUSION TO 1HR INFUSION**

 **MICROGRAVITY PROTEIN CRYSTALLIZATION**

<https://www.issnationallab.org/iss360/merck-lab-publishes-pembrolizumab-results/>

The MERCK KEYTRUDA cancer drug was developed and further enhanced from microgravity research through the changes in crystallization to allow for improved patient delivery.

# EXPLOR ADVANTAGE | DRUG DEVELOPMENT



EXPLOR BIOGRAVITY



ISS

PAYLOAD READINESS

DAYS

2-3 Years

COST PER PAYLOAD

\$30,000

~\$500,000

SAMPLES PER PAYLOAD

Up to 768

3-6



# HOSHI® Technology Screens Untapped (Unique Disease and Ageing Targets)

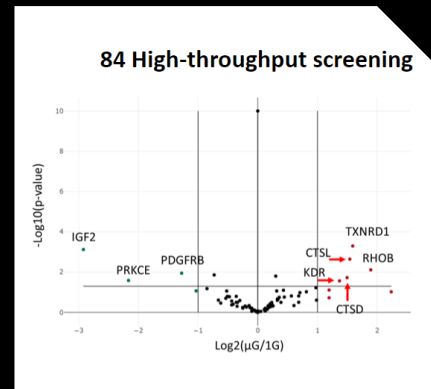


**\$4 Billion USD  
Market by 2028**

**HOSHI® identified 7 new  
breast cancer drug targets**

### Technology Advantage

Microgravity drug discovery is a new trend that no one has yet focused on and most of the genome is not yet targeted by an approved drug.



Microgravity accelerates the ageing process but can also induce cellular regeneration.



# SPACE COSMETECH

The EXPLOR team has unlocked a new disruptive process utilizing our space microgravity technology to enhance the regenerative properties of cell-based cosmetic therapies.

The global stem cells market size is expected to reach USD 18.4 billion by 2028, according to a new report by Grand View Research, Inc.

The global stem cells market size generated a revenue of USD 9.38 billion in 2020.

# CURRENT MARKET

With the emergence of stem cell conditioned media, along with other active components that directly target inactive cells, cell tissue revitalization and regeneration is finally possible.



**INJECTION METHOD**  
 選べる3つの導入方法

実際に効果につながるため、当院では複数の方法で薬剤にVFDを導入します。  
 お肌を意図的に傷つけた後にPRPを補う方法（ダーマペン、またはCO2フラクショナル）と、お肌に傷をつけないと同時にPRPを注射で直接浸透させる方法（水光注射）です。いずれも創傷治癒力を活かした施術ですが、ダウンタイムはほとんどなく、術中の痛みも軽度です。

<p><b>水光注射</b>  <small>有効成分を専用の注射で皮下組織に直接注入。</small></p>	<p><b>水光注射+ダーマペン</b>  <small>水光注射とダーマペンを併用し、ダブルで有効成分を導入。</small></p>	<p><b>水光注射+CO2フラクショナル</b>  <small>水光注射とCO2フラクショナルを併用し、ダブルで有効成分を導入。</small></p>

EXPLOR's microgravity solution is 300-1500% more potent in growth factors and cytokines than conventional methods

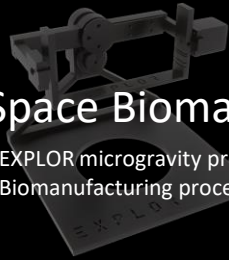
There's a paradigm shift happening in this new generation of anti-aging skincare. In the field of cosmetic medicine, there are now products where stem cell conditioned media can actually injected into the skin

# ASTRACELL | Cytokine Manufacturing

1

## Space Biomanufacture

EXPLOR microgravity proprietary Biomanufacturing process



2

## Enhance Cell stimulation

Diseases  
Cosmetics  
Well-being

3

## Collect CM/ Processing

GMP manufacturing



B2C



EXPLOR Brand

B2B



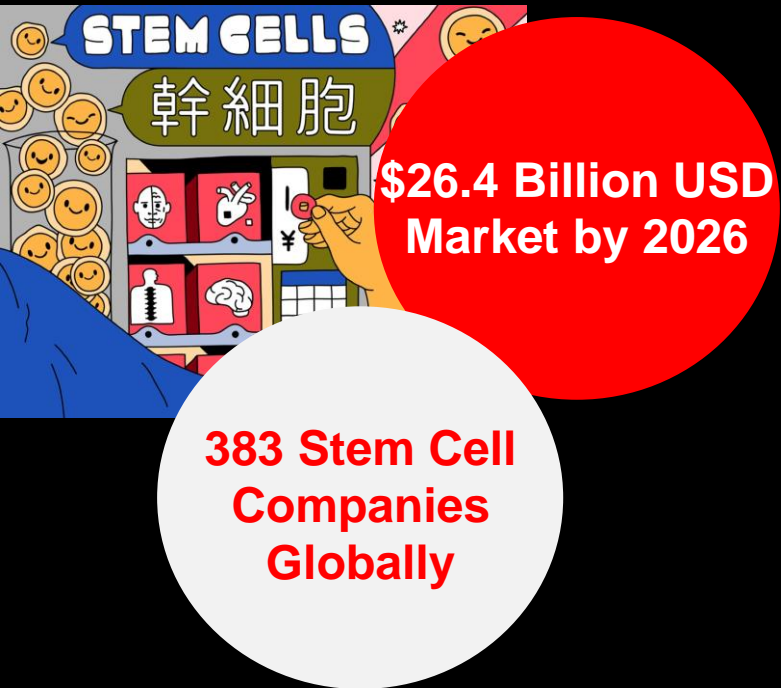
OEM/ODM



Cosmetic Clinic

EXPLOR is seeking to commercialize this multi-facet technology to the cosmetic industry and become the first company to develop space cosmetic to enhance human regeneration.

# AGEING DISEASE TREATMENT



# 20-40% +

increase in growth factors, cytokines and exosomes using the EXPLOR Biograv technology.



REVENUE SHARING PARTNERS

# RION

Rion is using EXPLOR technology for their Phase3 cardiovascular and Phase2 diabetes drug.

# MICROBIAL THERAPEUTIC PRODUCTS

- ▼ Growth Factors.
- ▼ GCSF.
- ▼ Peg GCSF.
- ▼ Exenatide.
- ▼ Anti-cancer Agents.
- ▼ Immunosuppressants.
- ▼ Enzymes.
- ▼ Others.



■ Bacteria ■ Fungi

Source of Product % in 2022

# 200-300% +

increase in bacterial growth, using the EXPLOR Biograv technology.

**Forbes**

MANUFACTURING

## For Bio Manufacturing To Scale, It Has To Think Outside The Tank

Eben Bayer Contributor @  
*I write about how manufacturing can serve and sustain a healthy Earth.*

Jul 25, 2022, 11:10am EDT

Row of shiny metal micro brewery tanks. GETTY

**\$30.55 Billion USD  
Market by 2030**

<https://www.forbes.com/sites/ebenbayer/2022/07/25/for-bio-manufacturing-to-scale-it-has-to-think-outside-the-tank/?sh=9ae020817e10>

# MARKET PLACEMENT



SPACE BIO LABORATORIES

Space Bio-Laboratories Co.,Ltd.



Headquarter	Australia/ Japan/ United States	Germany	Japan	United States
Total Number of Employees	9	10	5	N/A
Funding Series	Begin Funding Round	Series A \$1.4 million USD (2021)	Series A \$1 million USD (2020)	N/A
Services	<ul style="list-style-type: none"> <li>*Simulated Microgravity</li> <li>*Pharmaceutics</li> <li>*Robotics</li> </ul>	<ul style="list-style-type: none"> <li>*Launch Provider</li> <li>*Simulated microgravity (Airbus 2.0)</li> </ul>	<ul style="list-style-type: none"> <li>*Simulated microgravity device Only</li> </ul>	<ul style="list-style-type: none"> <li>Launch Provider</li> </ul>
Market Placement	<ul style="list-style-type: none"> <li>*Pure play</li> <li>*Existing revenue sharing customers</li> <li>*Upside from drug discovery &amp; revenue sharing</li> <li>E.g. Atomwise, Schrodingers</li> </ul>	<ul style="list-style-type: none"> <li>Not a focus</li> </ul>	<ul style="list-style-type: none"> <li>Not a focus</li> </ul>	<ul style="list-style-type: none"> <li>Acquired by Redwire</li> <li>Rumored for &gt;2 digit million USD</li> </ul>

# THE RIGHT TALENTS

EXPLOR has a strong and established team of world-leading scientists in pharmaceutical discovery and development spanning from basic research to clinical trials, accreditation and onto market.



DR. JOSHUA CHOU  
CEO | Co-Founder



ANTHONY KIROLLOS  
CTO | Co-Founder



TAKASHI OKUBO  
Chief Financial Officer (CFO)

Mr Takeshi Okubo was the CFO of Takeda Pharmaceuticals and heads EXPLOR Japan



DR. JAMES SECREST  
Director / USA

Dr. James Secrest has over 20+ years in drug development, clinical trials and heads EXPLOR USA.

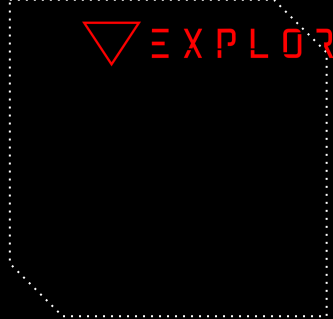
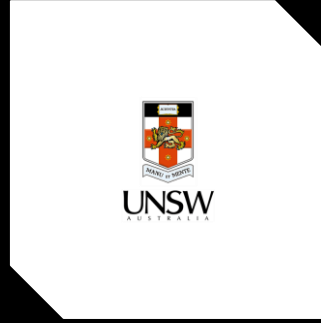
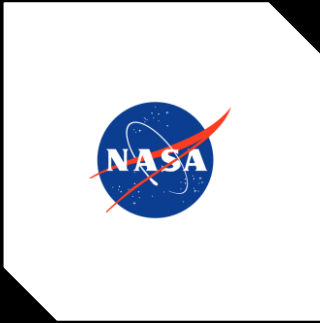


YUI SHIMOMURA  
Space Engineer

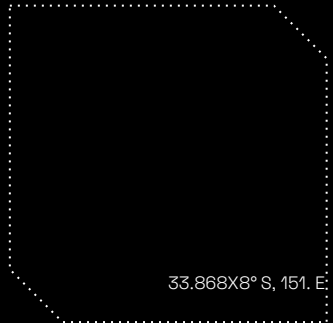
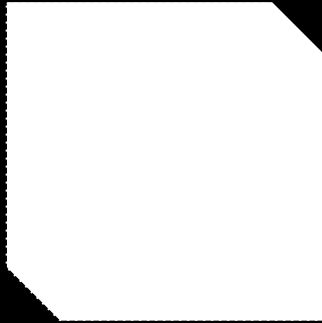
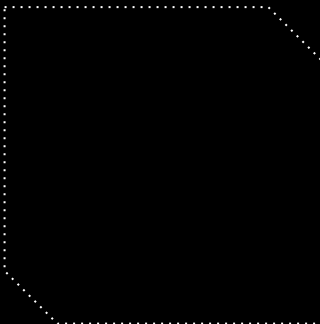
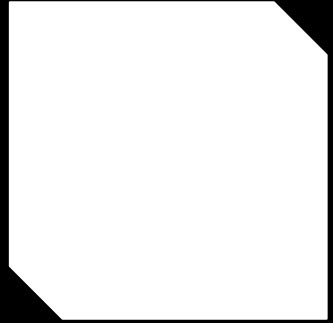
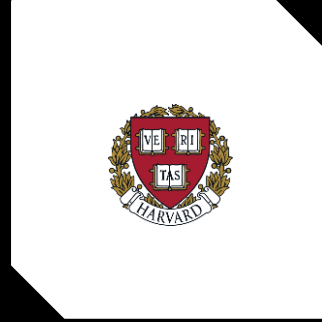
Yui was a JAXA engineer for integration on the ISS

# Our Global Reach

Collaboration & Cross-Sector Strengths



Join our growing network of partners





# TALK TO OUR TEAM |

Contact us and lets talk about how we can support your next innovation .



[humans@explorespace.com.au](mailto:humans@explorespace.com.au)