

**ImmuniT Research Inc.**

“Eliminating Immune Deficiencies to Realize a Society of Eternal Youth and Longevity”

# Executive Summary

ImmuniT Research Inc.

**Investment Invitation:** We are seeking to raise 50 million USD to accelerate the next generation of medical innovation. We invite you to invest your foresight and passion to redefine the future of healthcare with us.

## CD4 T cell

**Systemic CD4 immunity is a key to PD-1 blockade immunotherapy to cancer**

Our recent discovery of the Th7R cell group, a new weapon against cancer, has been recognized and published in "Cancer Research" journal.

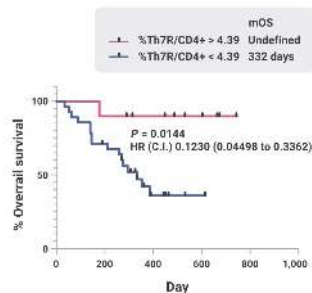


Figure indicates that two groups with higher ratios (red) of Th7R and lower (blue) are clearly distinguished as longer and shorter survivors, respectively.  
Cancer Res; 82(24) December 15, 2022

## Key partners

### Global licensing partners



### Collaborative development partners



Saitama Med Univ.  
(Japan)



Kobe Univ.  
(Japan)

## \$769.4 billion

**Essential Longevity Market Size Statistics in 2023**

• Painting an enlightening picture of the future, this captivating statistic reveals a surge in the global longevity and anti-senescence therapy market to an impressive \$769.4 billion by 2030.

• The Asia-Pacific region is projected to register the fastest growth, reaching \$15.6 billion by 2030 in the longevity market.

<https://blog.srive.co/longevity-market-size-statistics/>

## Our strength

ImmuniT Research Inc. would like to proceed with a project to remove senescent cells and achieve anti-aging or rejuvenation

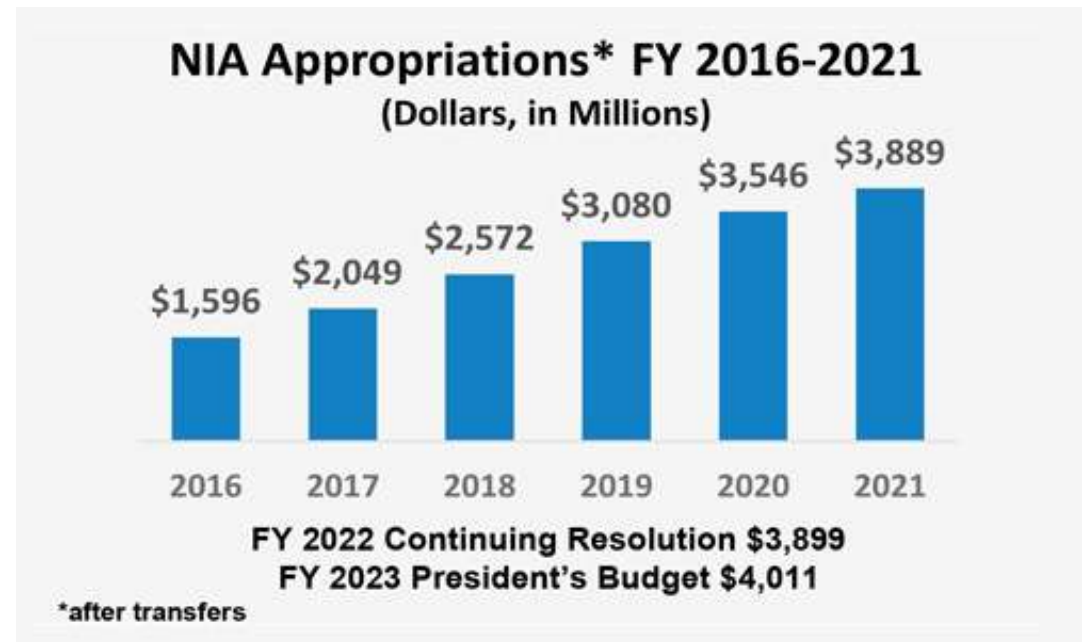
To this end, the Th7R cells that we have been pursuing, or the techniques we have used to find and investigate Th7R, will be useful.

# Problem: Global Aging

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Diseases deeply associated with the aging process include cancer, diabetes, dementia, heart disease, and strokes, among others, which also pose a social issue by increasing healthcare costs.

As we face a global aging society, it is urgent to explore and propose solutions based on scientific and technological advancements.

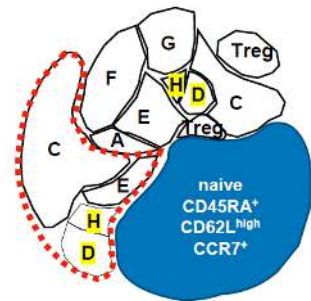
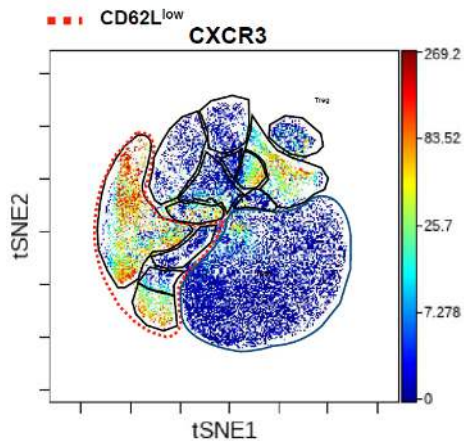


The research budget for the National Institute on Aging in the United States

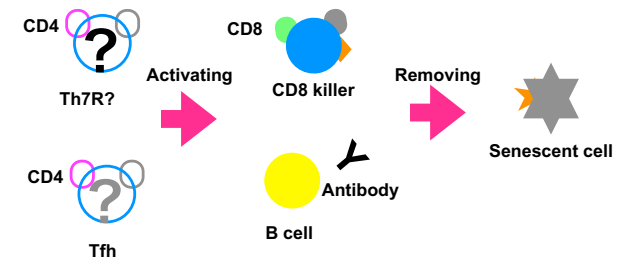
<https://www.nia.nih.gov/about/budget/fiscal-year-2023-budget#graphs>

# Solutions: AI X Immunology ImmuniT Research Inc.

## Immune profiling X Th7R cell therapy



T-cell cluster	A	B	C	D	E	F	G	H
CXCR3	+	+	+	+	-	-	-	-
CCR4	+	+	-	-	+	+	-	-
CCR6	+	-	-	+	+	-	-	+



# Longevity Market

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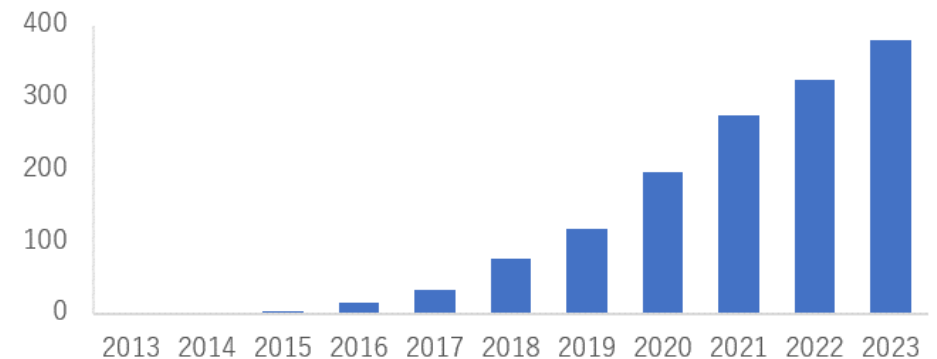
The global longevity and anti-senescence therapy market size is expected to reach \$769.4 billion by 2030. The Asia-Pacific region is projected to register the fastest growth, reaching \$15.6 billion by 2030 in the longevity market.

## 1 Blood Exchange

## 2 Metabolic Control

## 3 Senolytics





## 4 Cellular Reprogramming



Number of papers on "Senolytics" found in a PubMed search.

# Competitors

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	Juntendo Univ.	Developing a vaccine that selectively removes GPNMB-positive senescent cells.
	Rubedo Life Sciences	Rubedo Life Sciences, which is working on developing therapies targeting senescent cells that cause age-related diseases, has raised \$40M in a Series A funding round. This funding will advance the company's lead candidate, RLS-1496, targeting chronic atopic dermatitis and chronic psoriasis, and is planned to enter Phase 1 trials.
	immunai	Using machine learning algorithms, there are plans to improve diagnosis and treatment through mapping of the immune system. Immunai has announced that it raised \$215 million in a Series B funding round. The funds will be used to expand their platform.
	ImmunoScape	To combat diseases such as cancer, the team has accelerated the discovery and development of immunotherapy, leveraging advanced immune profiling technologies. After raising \$25 million (approximately 3 billion yen), the team aims to address all types of health issues, from infectious diseases to chronic conditions.

**No competitors of immune cell therapy using CD4 T cells**

# Value Proposition

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## The Relationship between Th7R Cells and Aging (Hypothesis)

### Tumor

CD4



Th7R

- ICI is more effective in patients with more Th7R.
- More Th7R causes better prognosis after surgery.
- Th7R provides a site for immune cell activation by forming TLS/HEV.

CD8



CD8 killer

- Anti-PD-1 Ab and Anti-PD-1 Ab activate cancer immunity.

PD-1



PD-L1

Tumor cell

### COVID-19

CD4



Th7R

- More Th7R suppresses the severity of pneumonia after infection.

CD8



CD8 killer

- SARS-CoV-2-specific CD8 T cells cause death of infected cells



Cell infected with SARS-CoV-2

### Aging

CD4



- CD4 T cells may exist to work for removing senescent cells. Those cells may be Th7R.

CD8



CD8 killer

- Anti-PD-1 Ab eliminates senescent cells.

PD-1



PD-L1

Senescent cell



# Business Model

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## ● Patent and licensing: Find X inhibiting Th7R functions

CD8 T cells act not only in cases of disease but also against senescent cells. There is a known experiment in which anti-PD-1 antibody promoted the removal of senescent cells by CD8 T cells (Want et al, 2022). It is also known that vaccination can eliminate senescent cells (Katayama et al, 2021).

If we consider senescent cells in the same position as the cancer cells and virus-infected cells mentioned above, it is likely that Th7R, or some type of a CD4 T cell cluster equivalent to it, exists to assist CD8 T cells in removing senescent cells. Thus, Th7R or that type of a CD4 cluster is anti-senescent cell T cells.

We are looking to identify that type of a CD4 cell (X) and plan to license it to pharmaceutical companies.

## ● Know-how licensing: Lifespan Meter

We aim to set a lifespan meter by identifying Th7R and other immune cells as those increasing and decreasing with aging. To this end, we will first use the above AI analysis tool to examine healthy people of all ages as well as patients at various stages (including those who have not developed symptoms yet) of age-related diseases such as cancer, diabetes, arteriosclerosis, and Alzheimer's disease, by thoroughly investigating the types and numbers of immune cells.

We analyze those data to create tools that assess an individual's health status, biological age, and estimate their potential lifespan. This is a lifespan meter. We believe that the Lifespan Meter will be useful for long-term health management and treatment planning, as it will show individual's risk of disease.



# Team



## Masafumi Yasukochi

CEO: After working on R&D and marketing at Otsuka Pharmaceutical, he participated in the launch of the intellectual property department of Saitama Medical University. He founded Immunity Research as a university-launched venture company and he is familiar with IP strategy for drug discovery.



## Akio Ametani, PhD

Director of R&D Division: After earning a PhD from University of Tokyo. With over 40+ years of researching at various universities and non-profit and for-profit research institutes, he has established a strong network of professional relationships. Highly regarded by peers both in Japan as well as overseas, he brings strong leadership, credibility, and industry connection.



## Daisuke Tajima, MBA

CFO: Certified Public Accountant. MBA from Thunderbird School of Global Management. After graduating from university, he gained audit experience at KPMG Azsa LLC. Following his studies in the United States, he joined Deloitte Tohmatsu Consulting where he was involved in PMO and overseas expansion projects. He has extensive experience in both domestic and international M&A financial advisory services.

## ImmuniT Research Inc.

### Key Advisors



## Keima Ueno, MBA

Keima Ueno is Outside Director. Serving as CEO of the Dojin Group, Inc. Holding MBA from Harvard University. He runs an immunotherapy clinic.



## Hiroshi Kagamu, MD, PhD

Professor of Respiratory Medicine, Saitama Medical School: Immunology Advisor. Extensive experience in immunology research in Japan and the U.S., as well as experience as a respiratory medicine clinician.



# Longevity Project Schedule

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