

STEM CELL COIN White Paper  
Ver,1.0



# STEM CELL COIN

Regenerative Medicine to the World

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## Disclaimer

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This white paper describes the first sale of the Stem Cell Coin (SCC).

As described in this paper, SCC is a cryptocurrency which has been designed to use for all the services provided by the Stem Cell Project team and its affiliate companies.

The SCC token has been created on the basis of Ethereum network, so this token has no nature of securities in any legal jurisdiction.

This paper is not for inviting investors or for offering securities by any means in any legal jurisdiction.

Please note that purchasing SCC is all definitive and non-refundable.

Individual, company and any other organization must consider risks of purchasing SCC and its costs and benefits carefully.

Information contained in this paper and the whole document is not comprehensive.

Also, this paper does not represent privity of contract between our company and token purchasers.

The accuracy, reliability and integrity of materials included in this paper or provided other sites in association with this ICO are not guaranteed, and we accept no legal responsibilities for that.

For other companies and individuals, SCC does not represent, warrant or promise truth, accuracy and integrity of any kind of information described in this paper, and SCC does not intend to do so. SCC also disclaims representation, warranty or promise on them.

## Important Items Requiring Confirmation

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Purchasing SCC can carry a serious risk. We consider that the purchasers have already accepted the following risks before buying the coins.

- The purchasers recognize that some services in the Stem Cell Project are currently under development and a major modification may occur in the period to the start of the services.
- The purchasers understand that expectations for the forms and features of the Stem Cell Project may not be fulfilled due to various reasons.
- The purchasers understand that some cryptocurrency exchanges may deny connection to this project although SCC devotes best efforts to connect to major exchanges and, as a result, the liquidity provided through platform may become lower than that expected in this paper.
- The purchasers understand that the date of official release may be late although SCC devotes best efforts to start as scheduled.
- There may be broad fluctuations of the value of SCC and its lowering due to various reasons.
- SCC will be issued in NEO blockchain. Therefore, transfer of SCC or purchasers' capability of holding the coin safely may be affected by troubles of NEO protocol or unexpected function.
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## What is ICO?

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ICO (Initial Coin Offering) is a method for financial arrangements by issuing an original digital token and selling it.

This is not to assign equity like stock funding but to simply sell the token like reward-based crowdfunding.

The token is not recognized as a “cryptocurrency” at the time of selling, which means that the ICO is not the method for “financial arrangements” by strict definition but is for selling the token. Thus those who buy it are not “investors” for the project but are the “purchasers of the token.”

At the point in time, the SCC token cannot be used as repayment for a consideration for unspecified persons, and it is considered that this ICO project fits the above-mentioned definitions since it is in a situation where there is no exchange market between the token and the legal currencies, Bitcoin, and any other existing cryptocurrencies.

## Purposes of ICO

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All the produced funds will be used for development of the Stem Cell Project.

1. Development/introduction of payment system for the cost of Stem Cell treatment at our own hospitals/affiliate clinics
2. Development/introduction of pathological/diagnostic imaging systems by Artificial Intelligence (AI) and Blockchain
3. Development of Virtual Clinic Platform
4. Costs of construction and expansion of hospitals for Stem Cell treatment
5. Research and clinical work for pharmaceuticalization of stem cells
- 6.

## Brief Overview of Stem Cell Coin

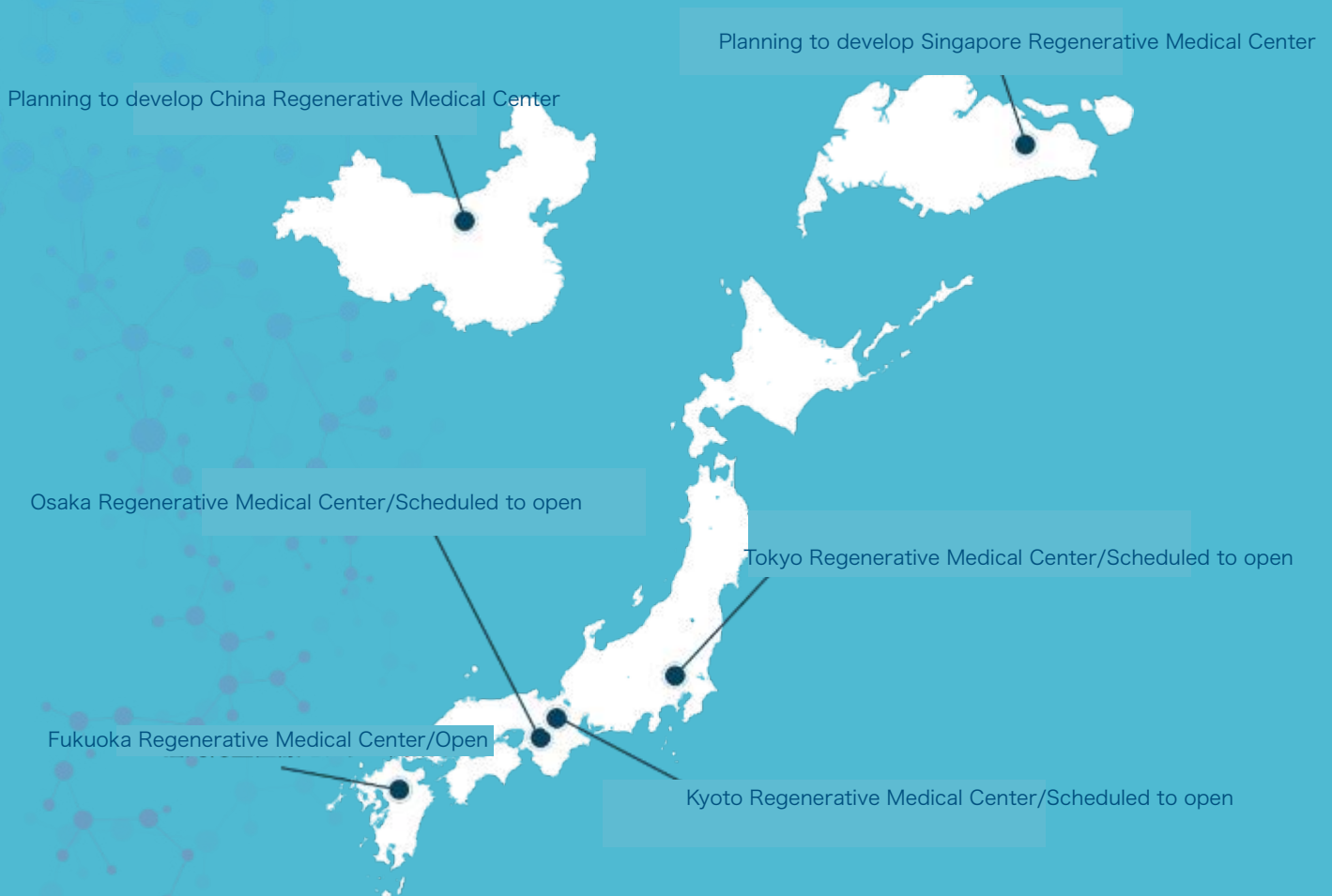
Name of Token	STEM CELL COIN
Currency Code	SCC
Total Number	5,000,000,000 SCC
Max. Number of Token for Sales	1,200,000,000 SCC
Selling Price of Token	1 SCC = 0.06~0.14USD ( × ETH or BTC or NEO ) May fluctuate depending on sales period
Type	Nep5 Neo Platform

TOKEN NAME	SCC
Maximum token supply	5,000,000,000 SCC
Standard	NEO NEP-5 Token
Minimum purchase	20,000 SCC
Maximum purchase	200,000,000 SCC
Public Sale offering price per token	\$0.14
Accepted forms of payment	BTC / ETH / NEO
privatesale begins	October 16, 2018 18:00 GMT+4:00
Pre-ICO Sale begins	May 16, 2018 18:00 GMT+4:00
Pre-ICO Sale ends	October 15, 2018 18:00 GMT+4:00
privatesale ends	October 30, 2018 18:00 GMT+4:00
Token use	Utility Token
Unsold tokens	Burned

# Road Map

Phase 1	Phase 2	Phase 3	Phase 4	ICO	
2018 5/16 - 6.15	2018 6/16 - 7.15	2018 7/16 - 9/15	2018 9/16 - 10/15	2018 10/16 - 10/30	2018 11 - 12
<b>SOLD OUT</b> (BTC or ETH or NEO)	<b>SOLD OUT</b> (BTC or ETH or NEO)	1SCC=0.1USD (BTC or ETH or NEO)	1SCC=0.12USD (BTC or ETH or NEO)	1SCC=0.14USD (BTC or ETH or NEO)	 <b>STEM CELL</b> Token distribution
100,000,000 SCC	200,000,000 SCC	300,000,000 SCC	400,000,000 SCC	200,000,000 SCC	
Presale				Public Sale	

- After ICO period, no. of token for sales will be burnt to make it 50% of total no. of token.
- If all the no. of token for sales are sold before the last day of each period, the selling schedule will be accelerated.
- The schedule/content can be changed depending on progress of the project.



# Concepts of Our Project

In industrialized countries including Japan, which have increasingly aging populations, the number of people suffering chronic diseases are increasing.

Because of development of public transports, people don't exercise enough and begin to have obese and metabolic syndrome. Thus health maintenance/promotion captures their interest. Concept of "health care" becomes very important nowadays. On the other hand, the number of qualified professionals such as medical doctors and nurses is decreasing. Time to wait for the physical examination by a doctor is getting longer, and the burden of the medical experts is also getting heavier year after year. In such a circumstance, we will develop "AI Personal Doctor" on the basis of the concept "eSelfcare" for health maintenance of people around the world. We will provide "Aging Well Concept" which is self-maintenance of own health by oneself to the whole world.

From 60% to 80% of world population have a lack of exercise

People tend to have a lack of exercise as their cultures are developing. As a result, they experience body weight gain which leads to chronic diseases such as diabetes mellitus and hypertension. There have been tools which can lead them to a healthy state and maintain the state. Our challenge is to find out how to utilize these tools to obtain better results for becoming healthy.

Assumed 1 billion people in the world become 60 years old or over by 2025

By 2025, it is assumed that the population of 60 years old or over is increased further. In addition to the currently aging industrialized countries, the developing countries with rapid population growth will soon become aging societies. Do you think their dreams of life with peace, safe and comfortable will come true? What should we do before worldwide aging societies become reality.

8.6 million people in the world suffer some chronic diseases

8.6 million people in the whole world, and the number is growing at a phenomenal speed. In fact, it is estimated that about  $\frac{3}{4}$  of causes of death in the world will be chronic disease by 2020. If chronic diseases are well managed by patients, their family members and health care teams, patients can enjoy their life healthier and also the burden of treatment costs can be minimized. Additional burden will cause a crisis.

Number of qualified professionals are reducing

According to the report in 2006 by WHO, we need 4.3 million more medical doctors, nurses and medical support staff, and such a situation is not expected to improve in the future. They are already insufficient in number, and how can we keep providing essential medical and welfare services?



## 2 technologies playing a role in the future health will open new doors

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To obtain vital data such as body temperature, blood pressure, and pulse rate easily, we need technologies to sense the physical quantities. The obtained biological information are not discarded after temporal usage but accumulated and the course will be followed.

In order to make the above happen, high-security network which can transfer data freely is necessary. When the 2 technologies are integrated, people's lifestyles and environments will change significantly. The change is what we are providing:

Future medical services achieved by IoT and Blockchain

AI Personal Doctor (Keep all the doctors in the world for oneself)

Our vision is to bring a new structure with AI and Blockchain to the old medical system. This can be a breakthrough in the healthcare industry and bring affluent society in which people live in health.

## We revolutionize medical services with AI and Blockchain.

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The revolution, however, doesn't destroy the structure of the current medical services, but rather aims to complement the current services and expand their breadth.

As an example, utilization of cutting-edge sensing technologies and chatbots reduce the burden of medical staff and improve the accuracy of medical examinations, and also application of AI analysis and Blockchain create a new medical service in the area of private practice (no health insurance applicable). We aim to spread these across the world

Our final goal is to create an environment that everyone can always receive high-quality medical services wherever they are. Labor force in the medical field also decreases as the population decreases. In such a situation, the condition to receive advanced treatment becomes even tougher for patients. Along with improving the skills of doctors, procedures associated with medical examinations need to be reduced.

## Brief Overview of Our Project

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Stem Cell Project is a medical project mainly focused on the following 2 points: Development and popularization of (1) a means of payment for the costs of stem cell treatment at the affiliate hospitals and (2) pathological/diagnostic imaging systems by using AI and Blockchain.

The followings are the 4 main purposes of our project:

### 1. Make stem cell treatment possible to pay in cryptocurrency

Stem cell therapy helps to activate weakened cells and proliferate important cells declining in number daily.

After stem cell administration, the cells are circulating through the body. Once finding out damaged tissues, the stem cells are activated by themselves and trying to repair and regenerate the tissues.

This therapy shows promise for treatment of anti-aging, diabetes mellitus, etc. However, currently, stem cell therapy can be provided only in medically advanced countries.

In recent years, stem cell therapy has captured the world's attention. So, we are expecting worldwide financial inflow to regenerative medicine by means of cryptocurrency payment.

### 2. Introduction of pathological/diagnostic imaging systems with AI and Blockchain

We are developing the near-future health check system which can share automatic diagnoses with images and pathological data among clinics and hospitals in the world by using AI and Blockchain technologies.

We will let the system grow to the level that can screen medical big data rapidly and accurately.

We are also planning to use the provided big data for revealing relationship to cancers on the basis of the patient information such as nationality, race, gender and age.

### 3. Development of Virtual Clinic Platform

When patients experience illness/disorders, they often have following questions, “Which hospital should I go?” and “Which department should I choose?” Also visiting hospital just for receiving medicines is wasting time and becomes burden for patients.

In order to solve such problems, we develop Virtual Clinic Platform which can make patients feel a closer connection to doctors by using the network among the member hospitals/clinics of Japan Society of Aesthetic Regenerative Medicine and AIbot diagnosis, remote medical checkup system, search/reservation of hospitals/clinics. All the payments in the platform can be done in SCC.

※AIbot diagnosis: AI can predict suspected patient’s disease(s) only with asking questions regarding symptoms and affected parts.

※Remote medical checkup system: Doctors can examine patients who cannot visit medical institutions for reasons of their living environments by using video calls etc.

### 4. Research and clinical work of therapeutic formulations with stem cells

The final goal of our Stem Cell Project is “pharmaceuticalization of stem cells.”

By doing research and clinical work of therapeutic formulations with stem cells and putting them into public circulation, we will be able to achieve our aims to give more opportunities to those who need regenerative medicine and to optimize the treatment costs. Keeping development of the world’s first “Cell Bank” in mind, we also create a surrounding in which people with diseases can be treated with their own cells which took and stored beforehand at their healthy state.

### More Details on 1.

Stem cell therapy has been attracting worldwide attention in recent years, however, the therapy can be currently provided only in 5 countries such as the US, Germany, Switzerland, Russia (only at governmental institutions), and Japan.

Amid increasing demand for stem cell therapy especially in Asia, the therapy can be currently provided only in Japan among other Asian nations.

In Japan, hospitals/clinics which can provide stem cell therapy need to obtain approval of Class II Regenerative Medicine accredited by the Ministry of Health, Labor and Welfare. One of our project team, Association of Medical Corporation Koge-Kai, is planning to obtain the approval of Class II Regenerative Medicine and is having a clinic where stem cell therapy can be given. Although we have the clinic in which a number of people can be treated, the payment method for the treatment costs is an issue. Especially in China, there is the regulation on annual limit of taking Chinese yuan out of China, and thus, although the demand is increasing, it is currently difficult for them to bring their own currency to other countries for the treatment which costs about 6 to 8 million yen per time.

Introduction of a payment system in cryptocurrency can solve this issue. While the number of individual investors holding cryptocurrencies such as Bitcoin is growing, we are planning to expand customers of our hospitals/affiliate clinics by using SCC as a payment method.

### More Details on 2.

The final goal of this system is to bridge the gaps among the worldwide medical technologies.

This system has been developed because of lack of medical specialists which is the issue of the current healthcare industry.

Rare diseases and diseases which are difficult to detect tend to be found out by thorough examinations in university hospitals or general hospitals, and there are many cases which could not be detected or treated at minor hospitals/clinics. This can be associated with the major issue of lack of pathologists.

A similar situation can be seen in other medically advanced countries. Especially in China, there are only around 10,000 pathologists for the population of 1.4 billion, which is a serious scarcity of labor.

As a result, patients gather at major hospitals.

Brief overview of the system is that data of CT and X-ray images are scanned by AI system in which medical big data have been introduced. This can lead to early detection of variety of diseases and detection of rare diseases.

Furthermore, by using this system on Blockchain, diagnostic data can be shared at the medical institutions with the system, which can lead to medical technology improvement. Thus, even the minor hospitals and developing countries can manage high-level medical technology, and gaps of the medical technology will be filled by this system.

### More Details on 3.

We propose Virtual Clinic Platform. Patients can receive various medical services on 1 device online wherever they are.

A variety of contents will be added such as remote medical checkup system, chatbot and translation function.

#### More Details on 4.

This is directly connected to the point of our philosophy “Regenerative Medicine to the World.”

Stem cell therapy has been attracting worldwide attention to a variety of symptoms and anti-aging effect; however, only some wealthy people can receive the therapy (mostly for anti-aging) due to the high cost. Thus stem cell therapy is not considered as a therapy for patients in need.

For the issue, our project is aiming to “optimize stem cell therapy cost.”

Since our project team has been established a special technology to culture stem cells rapidly and accuracy, mass culturing is possible.

By improving this technology and optimizing the treatment cost, we can give more opportunities to those who need regenerative medicine.

We aim to make regenerative medicine closer to our life by pharmaceuticalization of stem cells on the basis of research and clinical work.

Currently, the clinics of our project team provides stem cell treatment under the approval of Class II Regenerative Medicine accredited by Ministry of Health, Labor and Welfare, however; approval of Class I Regenerative Medicine is essential for pharmaceuticalization of stem cells.

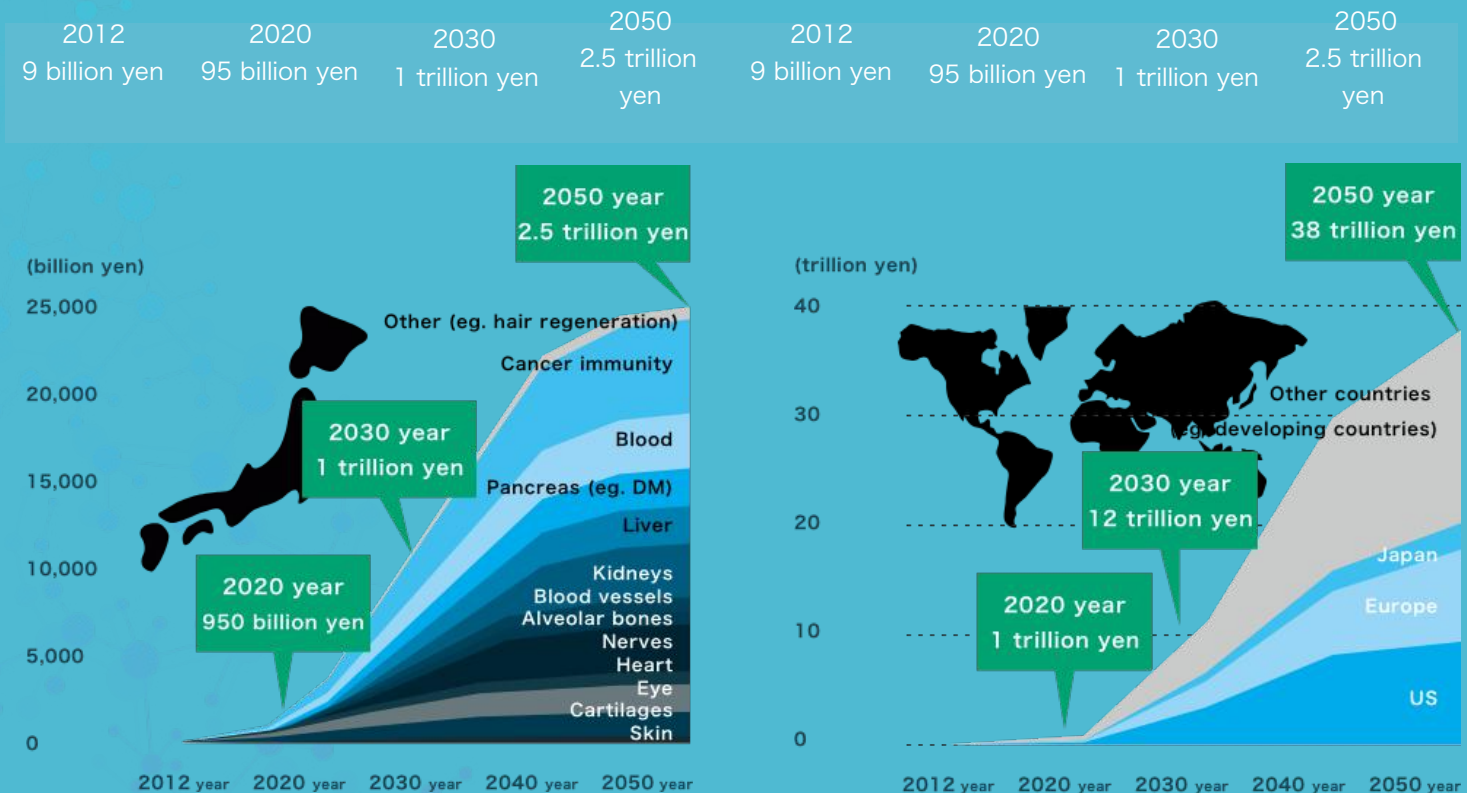
We will obtain appropriate approval while the project is going further and then provide regenerative medicine to the people who need it.

Advantages of our project are not only providing IT services in healthcare, but also holding a medical corporation, JSARM and clinics in the team. Our aim is not to raise funds for startup like a general feature of ICO, but to grow our business further.

We can introduce and operate the payment system and diagnostic imaging system at our own clinics first, which is because the Stem Cell Project includes the medical corporation.

## Market Sizes and Growth Potential of Regenerative Medicine

The market sizes of regenerative medicine will be 2.5 trillion yen on Japanese market and 38 trillion yen on the world market in 2050, and it is expected to be enormous economic effects in the near future.



<Method of calculating market size in Japan>

“market size of regenerative medicine” =

“no. of patients \*1” x “costs per patient \*2”

\*1: “no. of patients” = “no. of latent patients in Japan” x “application rate of regenerative medicine”

\*2: “costs per patient” = “unit price of products/processed products” + “medical charges for regenerative medicine (eg. Technical fee)”

<Method of calculating market size in the world>

“market size of each country” = “current market of regenerative medicine in the country \*1” x “adoption rate of regenerative medicine \*2”

\*1: “no. of patients” x “costs per patient” (same as the method for the Japanese market”

\*2: Estimated from population, income (commodity prices), developing items, existing market, R&D budget, etc.

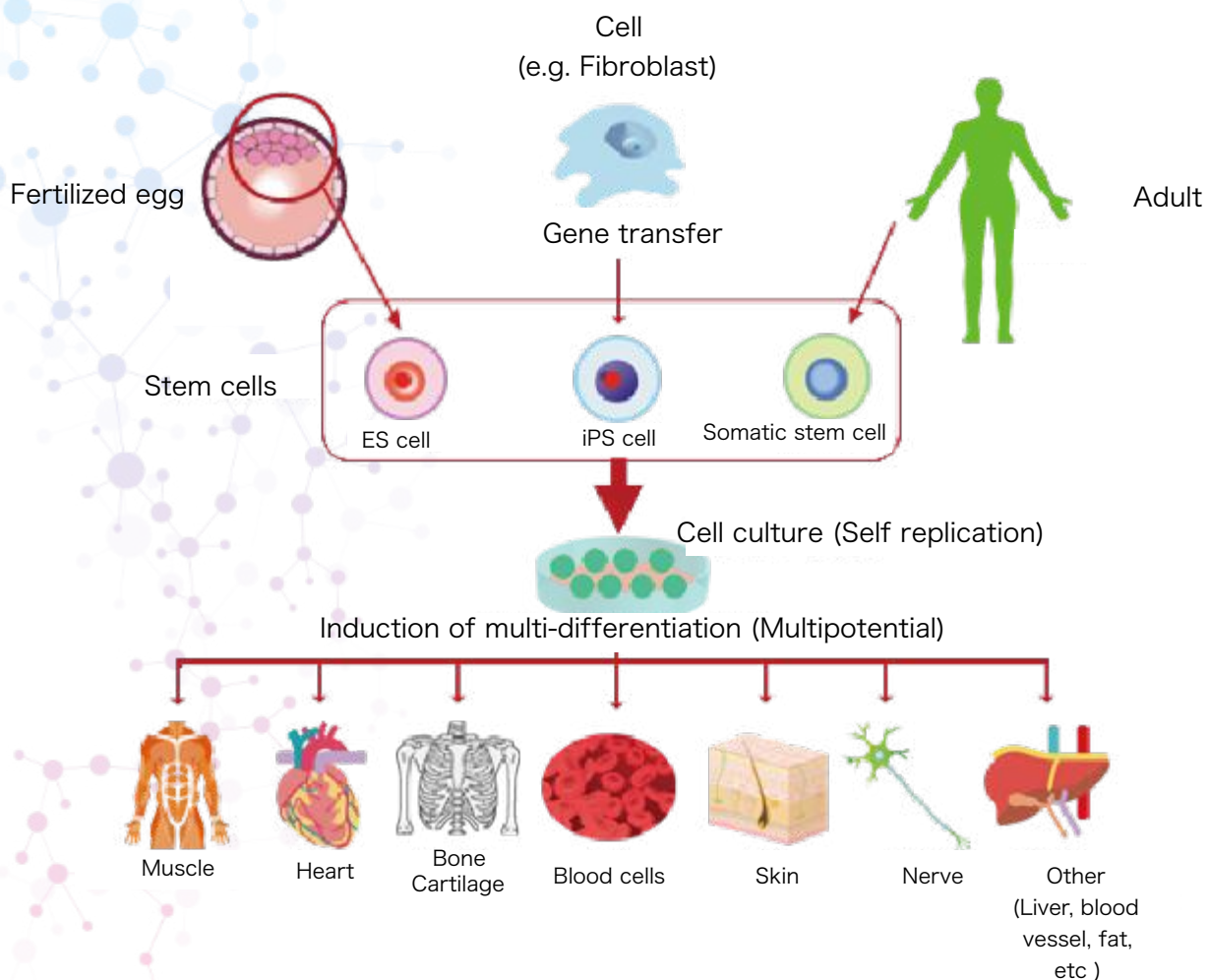
# What is Stem Cell?

The human body is comprised of 60 trillion cells and more than 200 types of cells. Each type of cells has a role to play such as cells to grow hairs, cells to activate skin. There are cells which don't have specific role and can become several types of cells. This is "Stem Cells."

Stem cells have:

1. Potential to divide repeatedly and proliferate the same type of cells.
2. Potential to become several different types of cells.

Stem cells gather around damaged area and divide and proliferate repeatedly, which facilitates regeneration of the cells and restores the tissue functions.





# What is Stem Cell Therapy?

Stem cell therapy helps to activate weakened cells and proliferate important cells which are declining in number daily. After stem cell administration, the cells are circulating through the body.

Once finding out damaged tissues, the stem cells are activated by themselves and trying to repair and regenerate the tissues.

After catching SDF-1 signal from the damaged area, the administered stem cells are migrating to that area. And the cells repair the area rapidly and move to another area (hit-and-run phenomenon).

The stem cells further stimulate pituitary gland, which restores the hormonal balance and metabolism cycle to a healthy state.

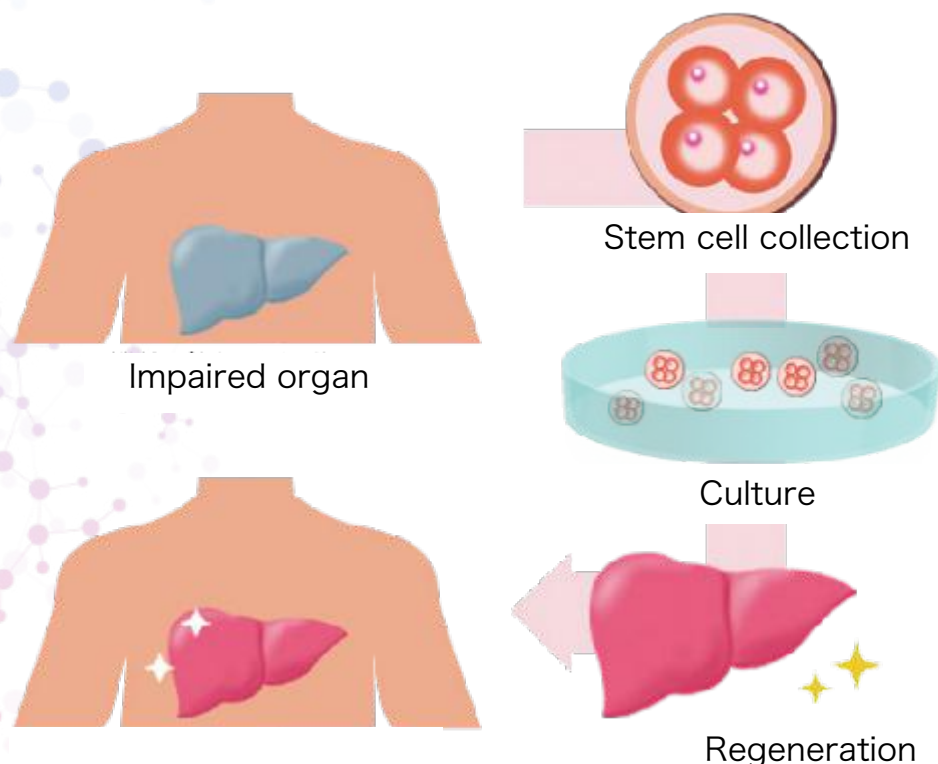
The recent stem cell researches reveal that health of many organs can be maintained over a lifetime with permanent regeneration of stem cells. On the other hand, organs/tissues are aging as stem cells are aging.

In other words, it is medically recognized that stem cells play an essential role in changes caused by aging.

“Stem cells” = “Core role in research on aging”

A feature of stem cells is to regenerate organs damaged by illness and injury and to restore functions of the organs.

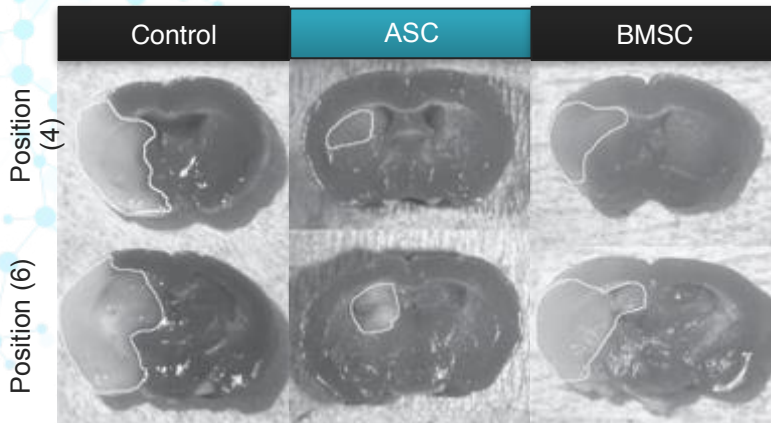
Mechanism of regenerative medicine



## Materials (research papers/images) Stroke treatment (MSC,ADSC)

### Comparison of mesenchymal stem cells from adipose tissue and bone marrow for ischemic stroke therapy

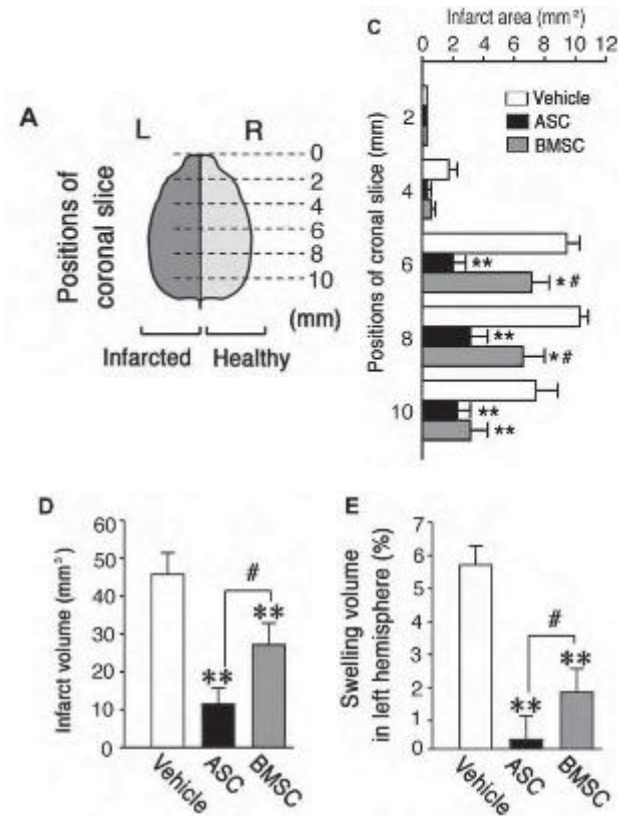
TTC (triphenyl tetrazolium chloride) dyeing of brains  
24 hr after administrations of ASC and BMSC



In the model of ischemic left middle cerebral artery, shrinkage of infarcted areas are more obvious in ASC than in BMSC.

Cytherapy, 2011; 13: 675–685

Comparison of mesenchymal stem cells from adipose tissue and bone marrow for ischemic stroke therapy.



## Materials (research papers/images) Neurodegenerative treatment (ADSC, MSC)

### Possibility of Alzheimer's disease treatment with human mesenchymal stem cells derived from adipose tissue

#### Pathological mechanism of Alzheimer's disease

Alzheimer's disease is characterized by blemish-like structure which is called senile plaques and lint-like structure which is called neurofibrillary tangle.

The main component of senile plaques is  $\beta$ -amyloid peptide consisting of 40–43 amino acids.

This peptide is resulted from cleavage of amyloid precursor protein (APP) by  $\beta$ -secretase and  $\gamma$ -secretase.

Affregation and precipitation of  $\beta$ -amyloid can be seen at the early stage of Alzheimer's disease and is considered to be the possible cause.  $\beta$ -amyloid 1-42 is accumulated specifically in cerebral cortex and form senile plaques.  $\beta$ -amyloid 1-40 is accumulated in cerebral blood vessels, which can cause vascular damage.

#### Functions of ADSC and MSC

APP is cleaved into  $\beta$ -amyloid by  $\beta$ -secretase and  $\gamma$ -secretase  
 $\beta$ -amyloid is then aggregated and precipitated

Administered stem cells secrete neprilysin

Neprilysin degrades  $\beta$ -amyloid

Human adipose tissue-derived mesenchymal stem cells secrete functional neprilysin-bound exosomes

# Indicated Clinical Cases

## 1. Indicated clinical case (treatment given)

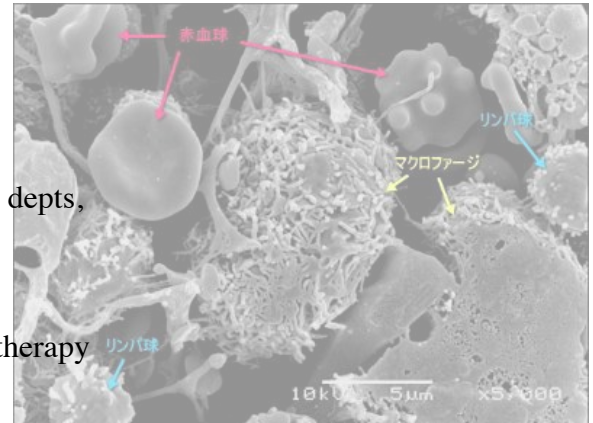
### Cancer treatment : Immunotherapy

Congenial domains:

Internal medicine, orthopedics, anesthesiology, dermatology depts, etc

Therapy type: NK-CAT therapy,  $\gamma\delta$ T-cell therapy, dendritic cell therapy

Combination therapy: Radiation therapy , Chemotherapy



Contradiction for blood cancer

Compared with solo therapy, combination therapy with radiation and chemotherapy promises less adverse effects, at the same time, effect of each therapy can be maximized.

For end-stage patients, pain relief and QOL improvement can be achieved, which leads to improvement of QOL of the patient's family members.

## 2. Indicated clinical case (treatment given)

### Diabetes treatment: Stem cell therapy

Congenial domains:

Internal medicine, diabetic internal medicine, endocrine metabolic depts (Urology, Plastic surgery, internal medicine, Reproductive medicine, etc)

• Pancreas and kidneys

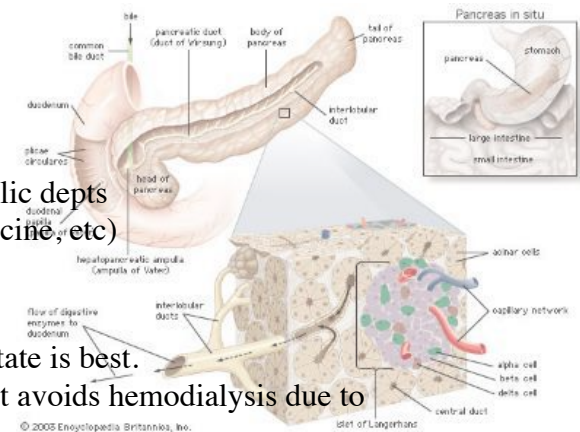
Treatment given before the patients fall into chronic pathological state is best.

Early treatment should be started in the acute stage. Early treatment avoids hemodialysis due to symptoms in the chronic stage in/out of Japan.

Deterrence of GDP shrink and prevention of high healthcare costs are expected.

High healthcare costs will be prevented beforehand by withdrawal from hemodialysis by induction of differentiation of stem cells into insulin producing cells and cell transplantation.

Moreover, income from healthcare services can be one of pillars of the industry along with income from tourism by targeting diabetes patients in economically advanced countries.



3. Indicated clinical case (treatment given)

Autoimmune disease : Stem cell therapy

Congenial domains:

Collagen disease, rheumatology, orthopedics depts, etc

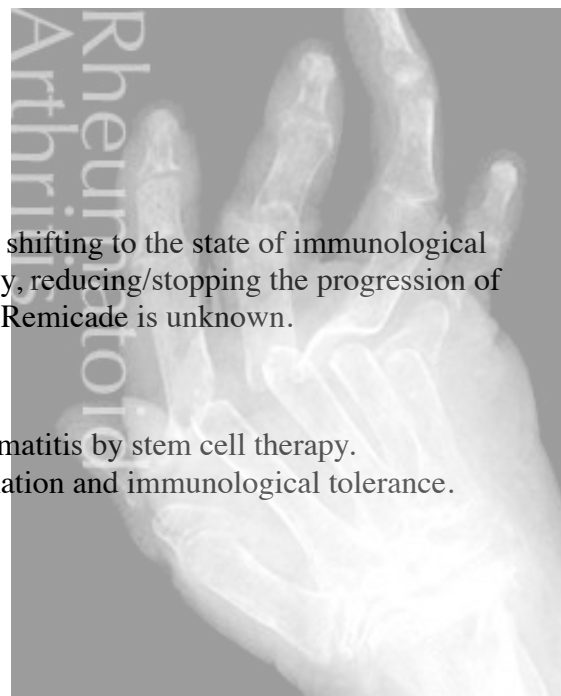
• Rheumatism

Utilization of functions of stem cells such as anti-inflammation and shifting to the state of immunological tolerance. If the state of immunological tolerance is maintained early, reducing/stopping the progression of pathological condition. A possibility that exceeds the superiority of Remicade is unknown.

• Behcet's disease

There has been a report showing improvement of ulcers such as stomatitis by stem cell therapy.

It might be attributed to a combination of functions of anti-inflammation and immunological tolerance.



4. Indicated clinical case (treatment given)

Stroke treatment: Stem cell therapy

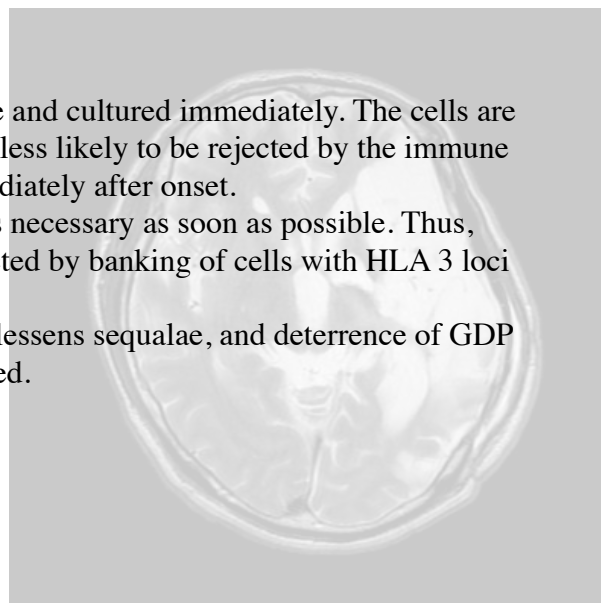
Congenial domains: Internal medicine, rehabilitation, neurosurgery depts, etc

Stem cells need to be given in 3 months after onset.

Stem cells are taken during acute phase or recovery phase and cultured immediately. The cells are autotransplanted after 3-4 weeks, or stem cells which are less likely to be rejected by the immune system are banked beforehand and are transplanted immediately after onset.

In order to lessening sequelae, stem cell transplantation is necessary as soon as possible. Thus, ideally, pharmaceuticalization of stem cells may be expected by banking of cells with HLA 3 loci homozygous.

Administration of stem cells at as early stage as possible lessens sequelae, and deterrence of GDP shrink and prevention of high healthcare costs are expected.



5. Indicated clinical case (treatment given + under R&D)  
Hair regeneration, baldness treatment: Stem cell therapy

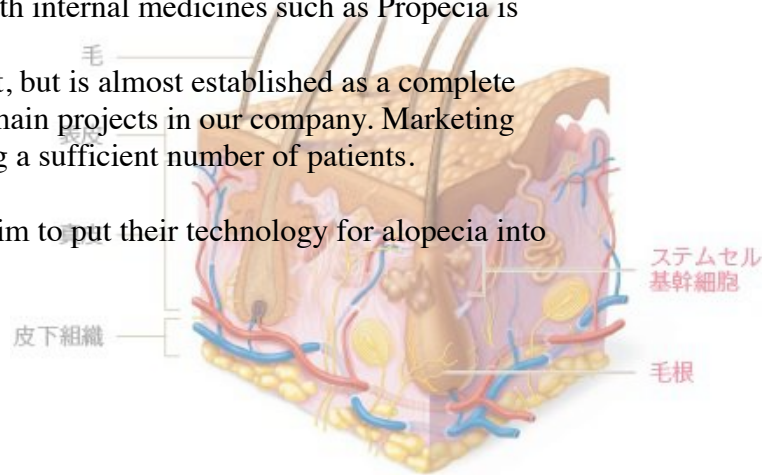
Congenial domains:

Internal medicine, surgery, plastic surgery, dermatology depts, etc

Stem cell therapy for alopecia. Combination use with internal medicines such as Propecia is possible.

The therapy is still under research and development, but is almost established as a complete treatment. There is global demand, and one of the main projects in our company. Marketing especially for wealthy people in the world can bring a sufficient number of patients.

Kyocera corporation and Organ technologies Inc. aim to put their technology for alopecia into practical use in 2020.



6. Indicated clinical case (treatment given + under R&D)  
Cell banking system: Cord blood, stem cells

Congenial domains:

Maternity and gynecology, internal medicine, surgery, plastic surgery depts, etc

For patients suffering stroke and spinal cord injury, stem cell transplantation should be provided at as early stage as possible to lessen sequelae.

Securement of a certain number of cells with HLA 3 loci homozygous enables to provide stem cell formulation to the majority of Japanese people without immunorejection.

Storage of cord blood will be a supply source for various cases such as leukemia.



7. Indicated clinical case (treatment given)

Angiopathy: Stem cell therapy

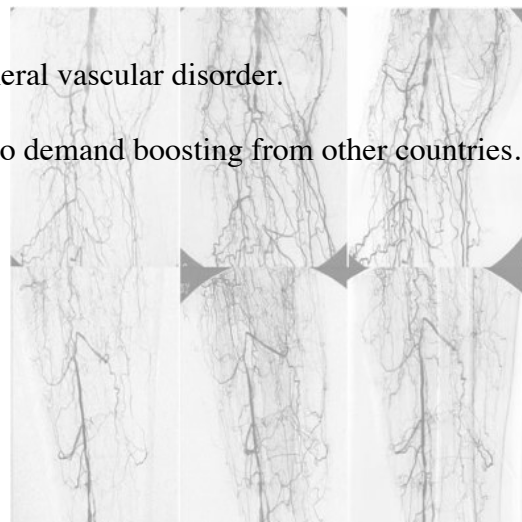
Congenial domains:

Cardiovascular, vascular surgery, plastic surgery depts, etc

Stem cell therapy for angiopathy such as Buerger's disease and ASO.

Applicable not only for rare diseases but also diabetic patients' peripheral vascular disorder.

Therapy can achieve of course Improvement of patients' QOL and also demand boosting from other countries.



. Indicated clinical case (R&D)

Psychiatric and neurological disorders : Stem cell therapy

Congenial domains:

Internal medicine, psychiatry, neurology, cranial nerve internal medicine dept, etc

- Lymphocytes

R&D and clinical study for medicinal treatment of depression and autism or for withdrawal of the therapeutic medication.  $\beta$  endorphin facilitates pain relief and increased activity at the same time

- Stem cell therapy

R&D and clinical study for treatment of neurodegenerative diseases such as Alzheimer's disease, ALS, Parkinson disease, and pilio.



## Pathological/diagnostic imaging systems by AI and Blockchain

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Deep Learning has been greatly developed and is currently gathering attentions in various areas by tremendous improvement of computer performance, collection of big data due to the spread of World Wide Web and internet devices, and various research outcomes. Deep Learning has overwhelming recognition performance especially in the field of pathology image recognition. In the ImageNet Large Scale Visual Recognition Challenge (ILSVRC) where competitions of recognition accuracy of generic object images are held, the accuracy has kept greatly improving since 2012 when Deep Learning was introduced, and eventually, in 2015, it overtook human recognition performance. Deep Learning will be applied in a variety of fields of healthcare with Blockchain.

Deep Learning, comparing to other computational techniques, can achieve great accuracy; however, in order to gain such accuracy, it requires a great deal of leaning time even with currently available high-speed calculators. For instance, Google spent 1,000 – 2,000 hours of learning time to achieve 99.63% ultrahigh-accuracy in convolutional neural network, FaceNet, which recognizes human face images.

We are going to handle much bigger Blockchain network and lead to complete solutions for various medical issues by using Deep Learning. In terms of future issues, since it is not considered practical that the each issue will be learnt with longer time, our purpose is to reduce leaning time drastically by accelerating the leaning speed.

As an experiment which have already started, we are turning an algorithm for speeding up of Deep Learning into reality with the idea of a new architecture of data flow by using distributed memory with a keyword of “parallelization.” At the current stage, we provide aforementioned pathological imaging diagnosis and capillary diagnosis in our medical practice. Moreover, we aim to get high throughput/high power efficiency with small temporal granularity by achieving high-speed learning with dedicated processors.

## Issues Faced by Health Industry

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### ◇ Limited number of radiologists and pathologists

Japan: 6,334 radiologists, 2,232 pathologists

\* Japanese Board of Medical Specialties (2013)

cf. China: About 50,000 radiologists (incl. technicians), about 10,000 pathologists

→ Serious issue of regional difference/difference among hospitals on cancer treatment

→ Reaching critical limits in the traditional model of pathologists' work

\* Since some institutions are sticking with “real material samples”, they cannot transition into digitalization of pathological examinations. In order to facilitate the transition, radiology depts. are given preferential national health insurance points if they choose digital data storage rather than film storage.

◇ Number of patients with cancer/lifestyle-related diseases is growing due to the aging of society and increase of city population.

## Validation results based on pathological data (Benefit)

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◇ Diagnostic accuracy of colorectal cancer **99.9%**

◇ (Validated with images of past 1,865 diagnosed cases at Osaka University)

◇ The 0.1% of cases were poorly differentiated Type II, which are very difficult even for experienced pathologists.

◇ Examination time: Approx. **5 sec**/diagnosis with a commonly marketed PC

◇ FP (over detect ): 43.5% (J. Diagnostic Pathology 2015)



Out system can be used for screening, double-check, remote pathological image diagnosis, etc on colorectal cancer, stomach cancer, etc.



# Issues Faced by Health Industry

## 1. Cost-saving of pathological diagnosis

- ◇ Improvement of diagnostic efficiency and prevention of missing cancer diagnoses by automatic screening of digital images and double-check function of Automated Pathological Service by Applied Mathematics (APSAM).
- ◇ Cost-saving for each hospital (saving of storage space for pathological samples by digitalization, increase of income with remote pathological diagnosis)

## 2. Solution of limited number of pathologists

- ◇ Developed regions: saving labor of pathologists, making double-check of diagnoses happen
- ◇ Developing countries: improvement of levels of pathological diagnosis at hospitals having no veteran pathologists, offering of remote pathological services for hospitals having no pathologists and improvement of quality of medical services with educational tools.

## 3. Homogenization of treatment level (sharing of diagnostic criteria)

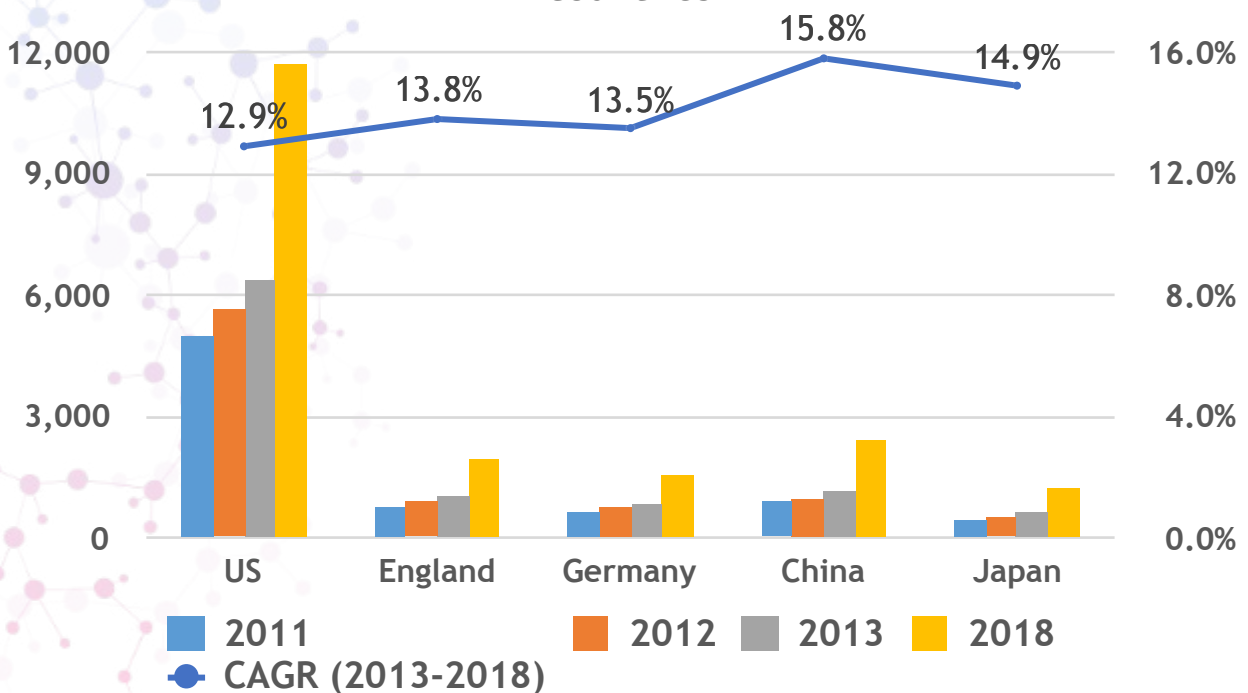
## 4. Development of processing methods for big data of pathological images

- ◇ Indexing pathological image data enables to process medical big data and contributes to the improvement of medical services.

Source : Marketsandmarkets  
Digital Pathology Market

Unit: 100 million yen

Digital pathology market and CAGR of leading countries



# Global needs and Pricing

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## Increase of number of cancer patients

- ◇ Developed countries such as Japan have a tendency toward aging of population, and thus an increase in the number of cancer patients is expected.
- ◇ According to improvement of healthcare system, major diseases causing death (e.g. infection) is decreasing even in developing countries.
- ◇ Although cancer is a disease which we haven't overcome yet, a complete cure could be achieved if treatment is appropriately given.
- ◇ Pathologists who indicate treatment methods require sufficient training.

## Needs Not enough pathologists throughout the world

- ◇ Developed countries: Computer aided systems are necessary **due to busy schedule**
- ◇ Developing countries: **Very few pathologists** → support system is necessary (if possible, a system which can determine a certain level of pathology)
- ◇ Important to have systems which cover and support improvement of infrastructure (e.g. Remote diagnosis)

## Pricing

- ◇ Usage charge of APSAM will be covered by social insurance, except in the US.
- ◇ It is difficult to fix a price because pathologists have different status and role in each country.
- ◇ At this point in time, 30%-40% of payment amount for pathological diagnosis is considered as the cost for a patient.
- ◇ Usually, 90% of the part of a pathological sample is normal, and thus development of a system which can extract abnormal parts only contributes to improvement of pathological diagnostic efficiency.

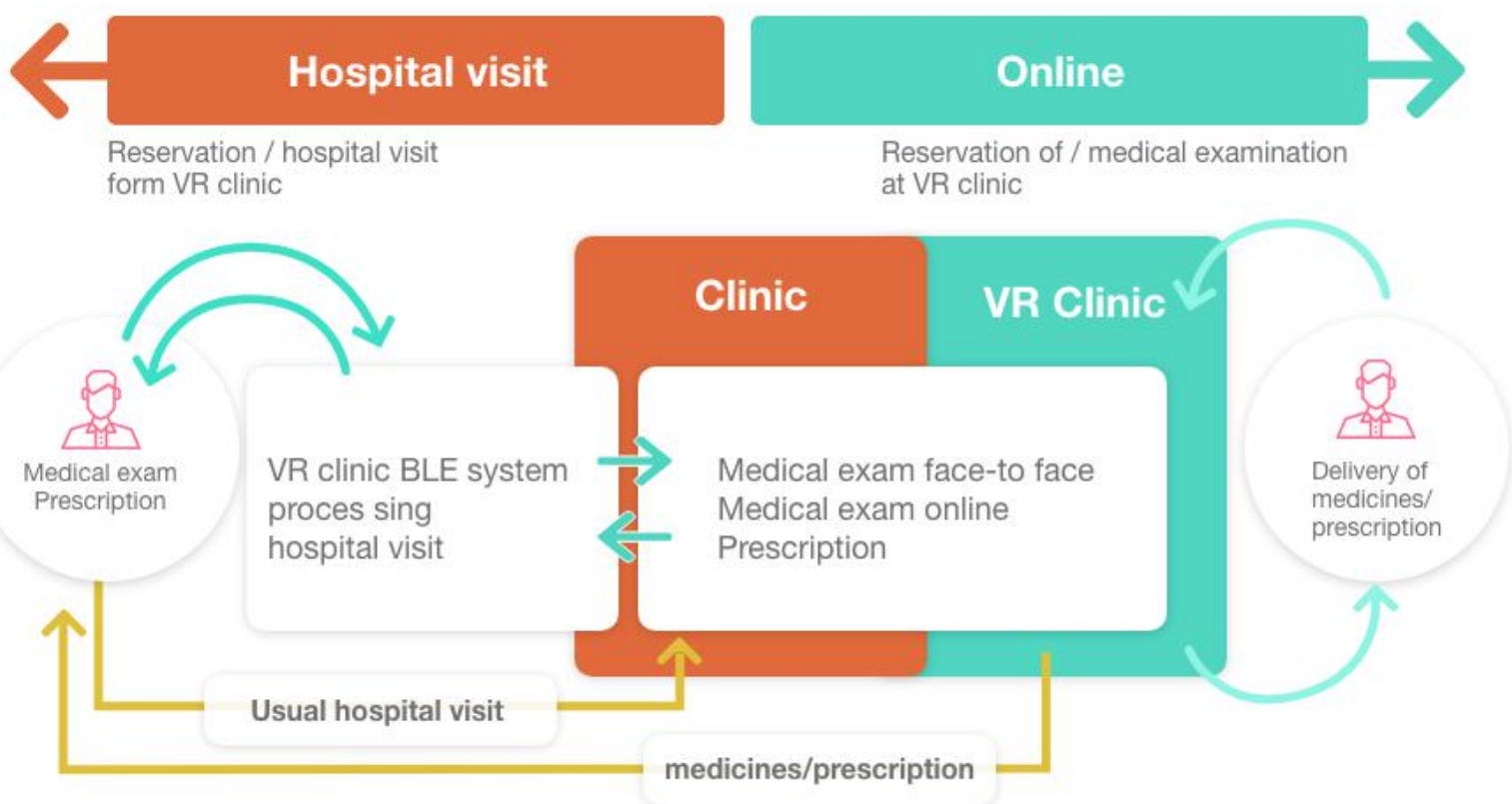
In light of that, **we will set the price in comparison with the actual hiring cost of a pathologist.**

## Concept of Virtual Clinic Platform

When patients experience illness/disorders, they often have following questions, “Which hospital should I go?” and “Which department should I choose?” Also visiting hospital just for receiving medicines is wasting time and becomes burden for patients. In order to solve such problems, we develop Virtual Clinic Platform which can make patients feel a closer connection to doctors by using the network among the member hospitals/clinics of Japan Society of Aesthetic Regenerative Medicine and AIbot diagnosis, remote medical checkup system, search/reservation of hospitals/clinics. Various contents are added to this platform, and we create environment where patients can easily receive medical services online. All the payments in the platform can be done in SCC.

All the process from reservation to payment of medical examination can be done online. Patients can receive medicines and their prescription at home. The storage of medicines and sales can be managed at the same time.

Patients visiting a hospital can use the BLE system, which is used as a registration card.



## From the World to Japan

### "Japan as the leading center of medical tourism"

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- We create our system of each country's version and disseminate information of Japanese advanced medical care.
  - Our system is responsive to requests of remote diagnosis from the countries of the world 24 hours a day.
  - We facilitate medical and its related services (e.g. medical checkup, treatment) targeting Asian wealthy people in collaboration with travel agencies, medical tourism companies/groups.
  - Patients can consult a healthcare professional for their health problems even they are away from home (e.g. foreigners living in/visiting Japan). They can also ask "where can I get my regular medicine?", "My physical condition suddenly gets worse", etc.
  - All they need to do is choose a healthcare professional online from the App. They can consult the healthcare professional in their mother tongue.
  - If a referral form is needed, it will be issued in the language of that country.
- 
- ✓ You don't need to worry in case of sudden aggravation of physical condition. You can consult a healthcare professional during a trip for a change of physical condition, run out of regular medicines, etc.
  - ✓ Reachable 24/7 by smart phone. A variety of healthcare professionals are waiting for your call.
  - ✓ You can talk in your mother tongue. You can choose a right healthcare professional by yourself (language, levels of profession, etc are listed).
  - ✓ Emergency illness/symptoms are also acceptable. We tell your symptoms as well as your personal data to that hospital and provide a referral form and your medical information in the language of that country.

# Sensor Network

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A sensor network cognizes one's circumstances and autonomously cooperates with others. This is an essential technology to realize a healthy and wealthy society and can be applied to a wide range of areas such as healthcare, welfare, crime prevention, security, disaster prevention, environmental risks. This is developing for our future social/economic activities.

## Doctor

Constant collection of major biological information (e.g. pulse, BT, BP, O2 in blood) and its data base is very useful for doctors to make a decision. Sensor network will change healthcare services..



## Family

Family can know how the person are by receiving the biological information whenever and wherever. Family and the person is connecting though the network.



## Pharmacist

Based on the biological information, efficiency of the prescribed medicine(s) can be checked. Compared with the past data, pharmacists can prescribe most appropriate medicine(s) for the patient.



## Physiotherapist

Physiotherapists can know how much the patient is doing exercise and consuming energy even they are away from the patient. They can give the patient appropriate advice by knowing the exercise level.



## A Person

He/She is in the sensor network without noticing. This is the purpose of Virtual Clinic. Miniaturization and communication function of devices are the main points, future key technology.



## Care and Welfare services

If connecting to network, care workers can check the patients' conditions all the time. Communication with medical institutions and nursing homes is smooth. This lessens the burden of carers.



Our society has been established with the purpose of contribution to development of regenerative medicine in Japan by improvement and dissemination of research of regenerative medicine practices and publication/communication and exchange of their knowledge.

Although we named our society “aesthetic,” it doesn’t mean we are dedicated to cosmetic medicine. We use the word “aesthetic” because we develop the society into multiple fields of regenerative medicine including cosmetic medicine. Of course, we are going to mention alternatives of new treatment centering on dentistry.

In light of conditions of the times, our activities (working together with other societies and organizations) include providing advice for observational studies for the medical guidelines which is applicable to the regenerative medicine law. In regard to healthcare and studies applicable to the laws of regenerative medicine and clinical studies, we cooperate with the certified special committee for regenerative medicine, certified committee for regenerative medicine, certified review board, and research ethics committee.

Moreover, a working group with knowledgeable people on human pluripotent stem cells and cell culturing was organized by Miho Furue in human stem cell applied research room in National Institutes of Biomedical Innovation, Health and Nutrition, a project leader of regenerative medicine practical project “A study on standardization of culturing technique aiming to quality variability and practical application of iPS cells” in Japan Agency for Medical Research and Development (AMED). The group proposed the following 5 conditions in “Fundamental principles in cell culturing.”

1st condition: Recognize that cell culturing is derived from a part of living body.

2nd condition: Confirm reliability of the source and applicability of methods of using.

3rd condition: Prevent contamination of culturing cells.

4th condition: Manage culturing cells and handling record properly.

5th condition: Consider health and safety of culturing technicians and environmental effect.



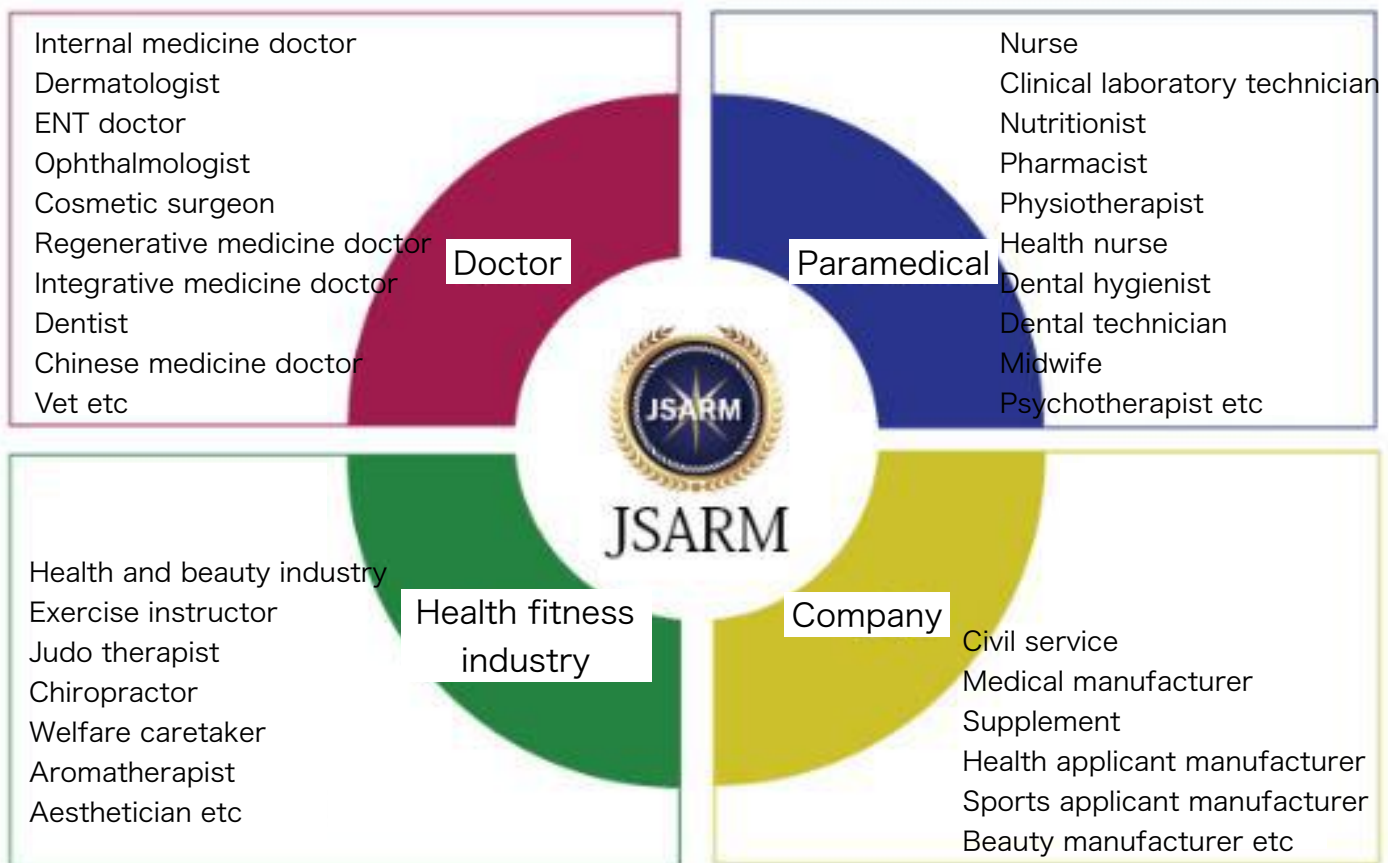
We comply with the 5 conditions and have an affiliate cell processing center approved under Regenerative Medicine Ensuring Safety Law Article 40 Clause1. We are preparing for supplying cell-processed products and physiologically active materials (e.g. culture supernatant) adequately.

We are also preparing for providing genetic treatment, remote diagnosis, immunotherapy, flora therapy, etc and studies on them.

However, as well as medical practice based on the law, of course, we need to comply with the guideline of each field even though it is only partly legislated. In all the law and guidelines, “duty of education and training” is listed in common.

In order to exercise the duty, we are going to have various training workshops, for which we are looking for some people who support our proper dissemination of regenerative medicine and can provide study cases and teach on the field.

Head director  
Shuji Yamaguchi



# Business Expansion Map

**Early step (~1 year)**

- Stabilization of operation of the healthcare institution
- Consolidation of the protocol

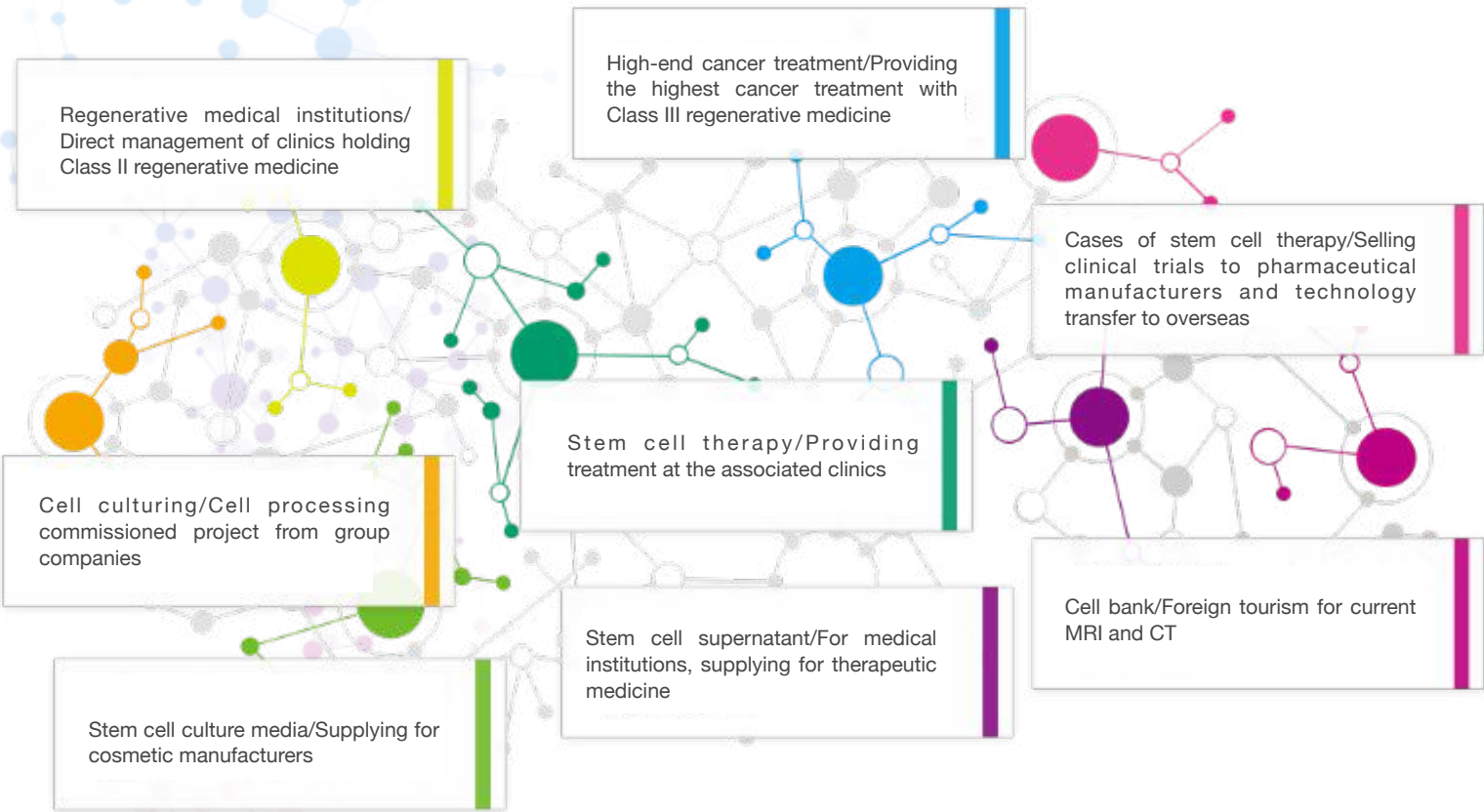
**Sales expanding step (1~3 years)**

- Development of several clinics
- Spreading clinics/CPC through the major cities
- Expansion of CPC instruments

**Technology overseas transfer (3 years)**

- Affiliation of overseas healthcare institutions and technology transfer

# Business Expansion



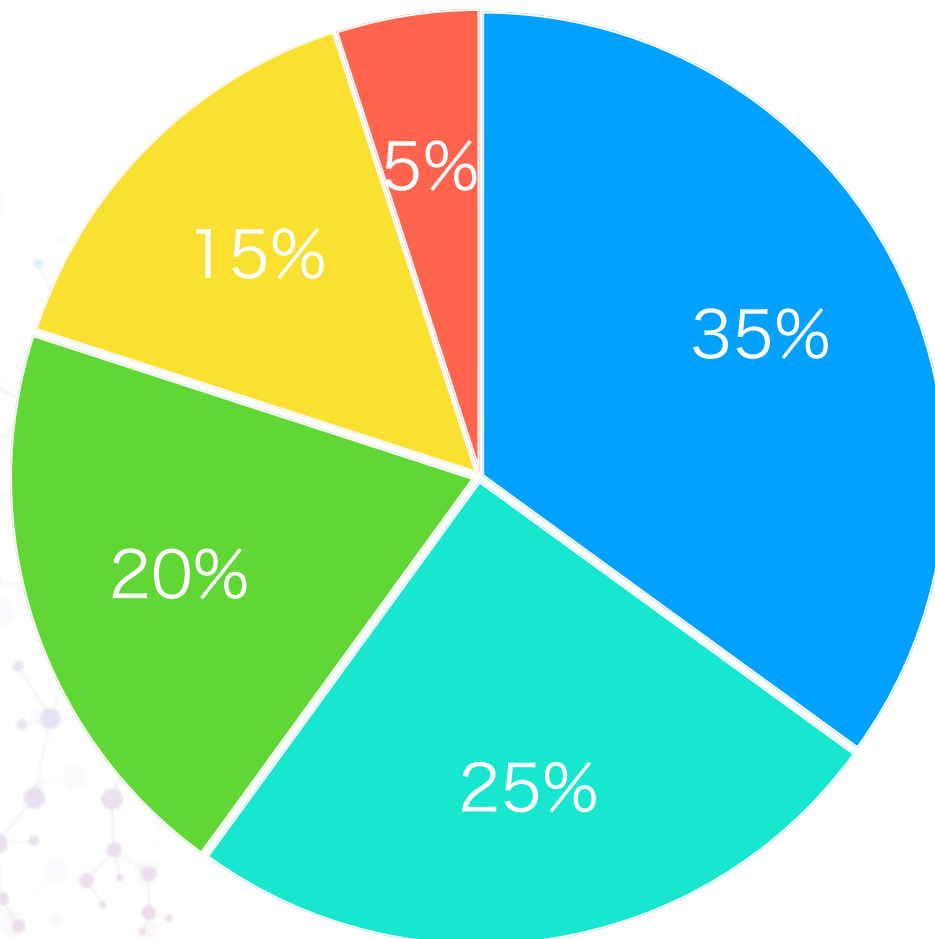


## Brief Overview of Token Sale

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The procurement funds in ICO will be used mainly for research and development of the project. The foundations of our service are our own clinics, AI technology, and Blockchain technology. Since their development requires a large amount of money, the funds will be appropriately distributed in accordance with procurement funds and used as development cost.

### Purpose of funds

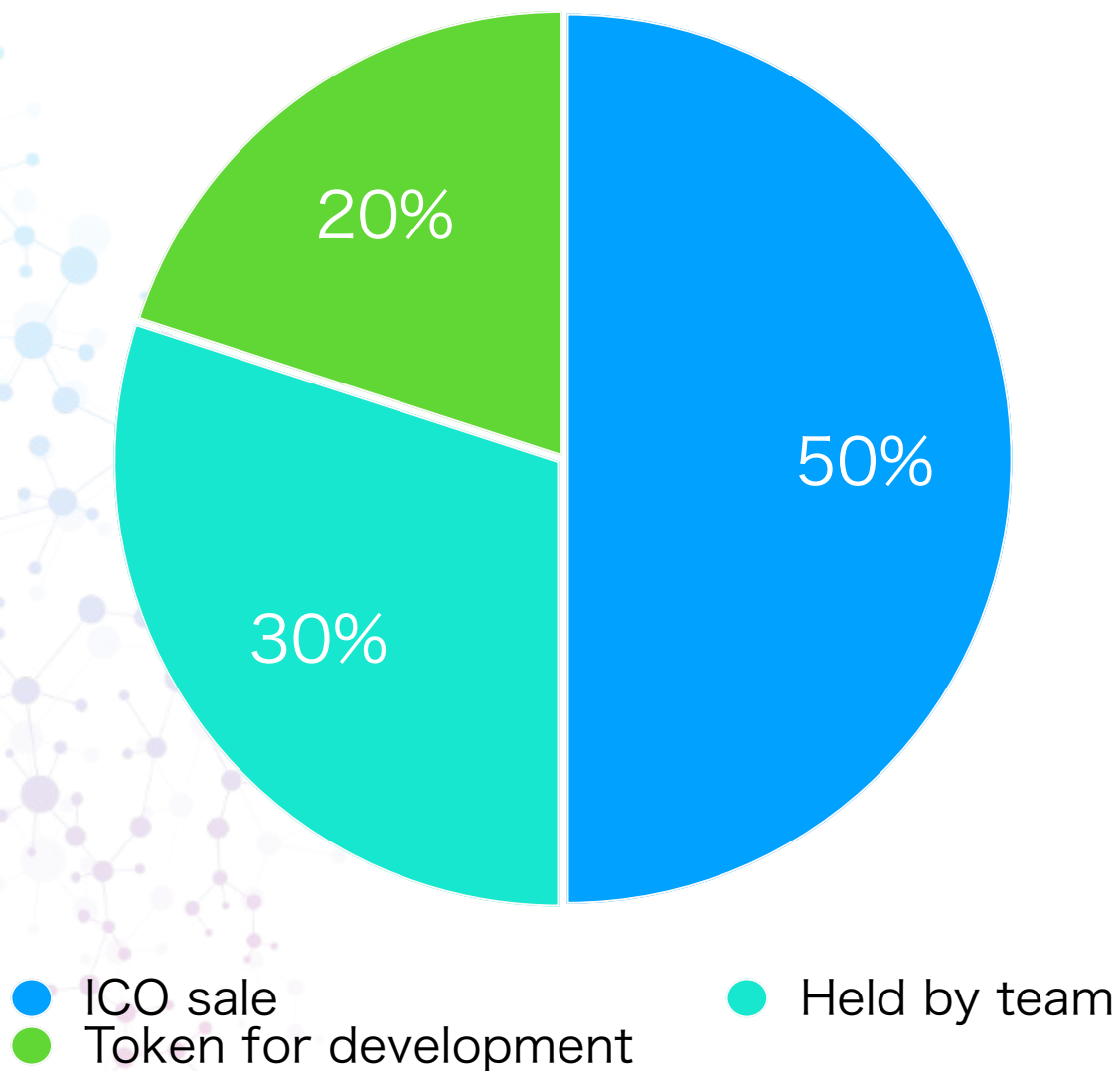


- Expansion of hospitals/research
- System development
- Marketing
- Legal work
- Management cost

## Token Distribution

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The procurement funds in ICO will be used mainly for research and development of the project. The foundations of our service are our own clinics, AI technology, and Blockchain technology. Since their development requires a large amount of money, the funds will be appropriately distributed in accordance with procurement funds and used as development cost.



# Bonuses of Major Token Holders

Major token holders will be given bonuses to receive the following stem cell treatments (6 million yen) at the healthcare institutions of our group. This bonuses will be given only to those who purchase tokens during the ICO period.

## **[Over 200,000 Token Holder]**

Get 20% Off Stem Cell Treatment (1 time only)

## **[Over 1,000,000 Token Holder]**

Get 50% Off Stem Cell Treatment (1 time only)

## **[Over 2,000,000 Token Holder]**

Get Free Stem Cell Treatment (1 time only)

## Bonuses of Long-term Token Holders

6-month holders	Holding token for 6 months after healthcare point is given
<p>Healthcare point is given as many as the amount of holding token</p> <p>* Healthcare point is given only if holding token was not sold/money transferred for 6 months.</p> <p>↓</p> <p>The points can be used for payment of treatment at the affiliate hospitals/clinics.</p>	<p>The healthcare point given for 6-month holders can be used for payment of treatment at the affiliate hospitals/clinics for 6 months from the day given.</p> <p>* Available clinics will be updated on our website as needed.</p> <p>If healthcare point is not used for 6 months, it will be automatically swapped for the same amount of token and given to wallet.</p>

## Affiliate Teams

### Total issuance

MTA Intec PTE LTD (Singapore corporation)

Address: 10 Anson Road #18-03, International Plaza, Singapore  
079903

Website: <https://www.stemcell-pj.net>

### Business development



Japanese society of aesthetic regenerative medicine  
**日本美容再生医療学会**

Medical corporation Koge-Kai  
(medical service developer)

World Agent Co., Ltd. (System developer)

### Chief Director



## Security Team

In order to avoid hacking of AI, the system security is always monitored and strengthened by this team.

## Blockchain Team

SCC is implemented by this team.

On the basis of the concept of Stem Cell Project, this team will implement our private Blockchain.

## Marketing Team

This team plays a key role in formulation of advertisement strategy on Stem Cell Project and also in branding and information transmission.

# Disclaimer

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This document is for information purposes only and is not intended to solicit the sale of our or related companies' shares or securities.

Such solicitation shall take place only in accordance with the provisions of law.

Neither the information nor the analysis presented is a basis for investment decisions, and there are no specific recommendations.

Therefore, this document does not constitute investment advice or recommendations or investment solicitations.

This document is not intended as a solicitation for the sale of securities or for the purchase of securities.

In addition, this document has not been submitted to or registered with the regulatory authorities, nor has been reviewed or confirmed by the regulatory authorities, nor has it been planned to be submitted to or registered with the regulatory authorities.

We shall not be liable for any loss or damage of any kind, directly or indirectly, resulting from any error, omission or inaccuracy in the information contained herein.

Furthermore, the information contained in this document may be changed without prior notice in the future.

## Restrictions on purchasers

- Nationals, residents of any state where purchase of the STEM CELL COIN token issued by MTA Intec PTE LTD (hereinafter "SCC token") or similar token is prohibited (including, but not limited to, the People's Republic of China), any other purchaser who may be subject to such laws, or nationals, residents of European Economic Area (Members of the European Union, Iceland, Liechtenstein or Norway) may not purchase the SCC token.

- Purchase of the SCC token shall be made only by individuals, entities or enterprises with extensive experience with token and block chain based software systems and with knowledge of their use and complexity.

- The purchaser must understand the storage method and transmission mechanisms for the SCC token and other tokens.

- Neither we nor any of the parties associated with us shall be liable for any loss of the SCC token by the purchaser for any reason whatsoever.

- The SCC token may not be purchased if the purchaser does not have the required other experience or expertise.

- When purchasing the SCC token, the purchase shall be made after careful consideration of the risks and costs of the purchase and any other disadvantages.

- In the event the purchaser does not have the above-mentioned other experience or expertise required for such consideration, the purchaser must obtain advice from experts on these points. The purchaser may not purchase the SCC token before the purchaser understands and reviews the items stated in the "Risks of purchasing the SCC token" and any other risks related to the purchase of the SCC token, and has been in a situation in which the purchaser can accept such advice.

- If we determine that the purchaser is in breach of the representations and warranties set forth in the "**Representations and Warranties of the SCC token purchaser**" set forth below, the purchaser may not purchase the SCC token.

## Risks of purchasing the SCC token

Purchase of the SCC token poses significant risks. Before purchasing the SCC token, the purchaser should carefully consider the risks listed below and consult with an attorney, accountant, tax accountant or other expert to the extent necessary if there are any issues

that cannot be understood.

Please note that the purchase of the SCC token is made by the purchaser with a definitive intent to purchase and cannot be refunded in any event except in the case we allowed.

(Risks inherent in blockchain technology)

- Blockchain technologies are subject to scrutiny by various regulatory agencies around the world.

The SCC token may be affected by regulatory inquiries, actions and legal amendments that may interfere with or restrict the issuance, distribution and exchange of the SCC token.

- A third party with access to the user's account information or private key can operate on the SCC token.

If such information is known to a third party, there is a risk that it may lead to the loss of the SCC token. Therefore, in order to minimize this risk, the purchaser must take measures such as protecting electronic devices from unauthorized access.

(Risks of fluctuations in the value of the SCC token)

- Like other tokens, the value of the SCC token may vary considerably and may be reduced for a variety of reasons.

- We will use our best efforts, but will not guarantee, the creation of token economies associated with the SCC token (hereinafter referred to as the "SCC token economy").

The purchaser must understand that the liquidity of the SCC token is lower than they expect and that if the use and adoption of the SCC token is inadequate, there may be little or no market at platform startup and the value of the SCC token may be limited.

In addition, the SCC token economy may suffer systemic failures that result in a decline in the value of the SCC token.

- The benefits or rights that the purchaser can enjoy by owning the SCC token, as determined between the purchaser and us at the time of purchasing the SCC token, depend on the development of the business managed and operated by us.

The SCC token economy is currently in the planning stage and may be subject to significant changes prior to release.

Expectations regarding the format and functionality of the SCC token held at the time of purchase may not be met at the time of release for several reasons, including changes in design and implementation plans and the establishment or execution of the SCC token economies.

We will use our best efforts, but we do not guarantee whether or not there are any such benefits or rights that the purchaser expects, the timing or content of which the purchaser may enjoy, or any other matters related to benefits or rights.

(Risks based on external factors)

- Hackers and other groups or organizations may attempt to disrupt the availability of the SCC token economies or the SCC token in a variety of ways, including denial-of-service attacks, Sybil attacks, spoofing, smurfing, malware attacks, and agreed-upon attacks.

- Technological advances, such as advances in cryptography or the development of quantum computers, may pose risks to the cryptography field and the SCC token economy and may result in theft or loss of the SCC token.

(Other risks )

- Unlike other financial institutions' bank accounts and accounts, funds held using the SCC token are not insured.

There is no remedy by a public insurance company, such as a private insurance

company, in the event of loss or loss of value.

- The SCC token economy may become impracticable and may be dissolved for a number of reasons, including but not limited to adverse fluctuations in the value of the SCC token and inadequate business relationships.
- The cryptographic token is a new technology.

In addition to the risks listed here, there are risks that we cannot anticipate.

The unexpected combinations and variations in risks described here could affect the value of the SCC token if the risk becomes more apparent.

### **Disclaimer and Disclaimer of Warranties**

- We sell the SCC token "as is" and "to the extent available" without warranty of any kind, and we expressly disclaims all implied warranties, including, without limitation, implied warranties of merchantability, fitness for a specific purpose, title and non-infringement, with respect to the SCC token.
- We make no representation or warranty that the SCC token is reliable, current, error-free, meets the conditions required by the purchaser, and that any defects in the SCC token will be corrected in the future.
- We make no representation or warranty that the mechanism of delivery of the SCC token or the SCC token is not affected by viruses or other harmful components.
- We do not make, do not intend to make, and disclaims any representation, warranty, or promise of any kind, including any representation, warranty, or promise as to the truth, accuracy, and completeness of the information contained in this document or on the web site, etc.
- We do not warrant that the estimated present value of the SCC token, the information provided by us, and any information that may be obtained by the purchaser from the SCC token will conform to the specific purpose of the purchaser, have the expected function, merchandising value, accuracy, usefulness, and completeness, that the purchase of the SCC token will conform to applicable laws, regulations, or internal rules of trade associations applicable to the purchaser, will not cause any defects, and will resolve any problems related to the SCC token.
- We and our related companies shall not be liable for any damages incurred by the purchaser in connection with the purchase of the SCC token.

In accordance with the provisions of the Consumer Contract Act and other reasons, where we or our related companies are liable to the purchaser for damages, the scope of the liability shall be limited to direct and ordinary damages actually incurred due to a reason attributable to us or our related companies, and the upper limit of the amount of such damages shall be the purchase price of the SCC token by the purchaser.

- The purchaser shall be responsible for any taxes (including but not limited to consumption tax, sales tax, use tax, value added tax, etc.) imposed on the purchase of the SCC token. It is also the responsibility of the purchaser to withhold and collect the correct tax amount, report it, and pay it properly.

We will not be responsible for the withholding, collection, reporting or payment of taxes on the purchase of the SCC token.

### **Representations and Warranties of the SCC token purchaser**

In purchasing the SCC token, the purchaser represents and warrants to us that:

- The purchaser is not subject to the purchase restrictions set forth in the "**Restrictions on purchasers**" and has the authority and full capacity to lawfully purchase the SCC token.
- The purchaser shall fully understand "**Risks of purchasing the SCC token**" set forth

above and any other risks and disadvantages associated with purchasing the SCC token, and shall purchase the SCC token with the responsibility to determine whether the purchase of the SCC token is appropriate to the purchaser.

- The purchaser purchases the SCC token on its own behalf and does not act as an agent for any third party.

- The purchaser agrees and acknowledges that the SCC token does not constitute any form of securities in purchaser's jurisdictions

- The purchaser agrees and acknowledges that it is not intended that the promotional activities for the SCC token will not result in the solicitation of securities or investment in securities in the purchaser's territory.

- Purchase of the SCC token is not prohibited or restricted by any law or regulation in the purchaser's territory.

If purchase or ownership of the SCC token is restricted, the purchaser shall comply with any such restriction at its own expense and without incurring any liability to us and our related companies

- The purchaser agrees and acknowledges that at the time of purchasing the SCC token, the SCC token will not be classified or treated in any of the following;

- Virtual currency prescribed in Article 2, Paragraph 5 of the Payment Services Act

- Means of payment in advance prescribed in Article 3, Paragraph 1 of the Payment Services Act

- Legal currency or deemed currency prescribed by Japan or any other State

- Bonds issued by us or our related companies

- Shares and other controlling interests issued by us or our related companies

- Any right, option or derivative instrument in respect of any such bond, share or share certificate

- Rights under CDF contracts or other contracts for the purpose of securing profits or avoiding losses.

- Equity in collective investment schemes

- Equity in a business trust

- Derivatives for equity interests in business trusts and any other types of securities

- The purchaser fully understands the operation, function, use, storage, transmission mechanism and other significant features of virtual currency, blockchain based software systems, virtual currency wallets or other relevant token storage mechanisms, block chain technology and smart contract technology.

- The purchaser fully understands the risks associated with us or our business and operations.

- The purchaser agrees and acknowledges that we and our related companies shall not be liable for any indirect, extraordinary, contingent, consequential or other loss of any kind (including without limitation, loss of revenue, income or profit and loss of inability or data) arising out of or in connection with the purchaser's purchase of the SCC token, whether in tort, contract or otherwise.

- The purchaser will not use the SCC token for any unlawful conduct, including but not limited to money laundering and terrorist financing.

- We and our related companies shall not be liable for any damages whatsoever incurred by the purchaser with respect to the matters represented and warranted by the purchaser and any other risks and disadvantages associated with the purchase of the SCC token explained to the purchaser, for any reason whatsoever, and the purchaser shall hold us and our related companies harmless from these matters.