



White Paper (English) Ver 1.0.4

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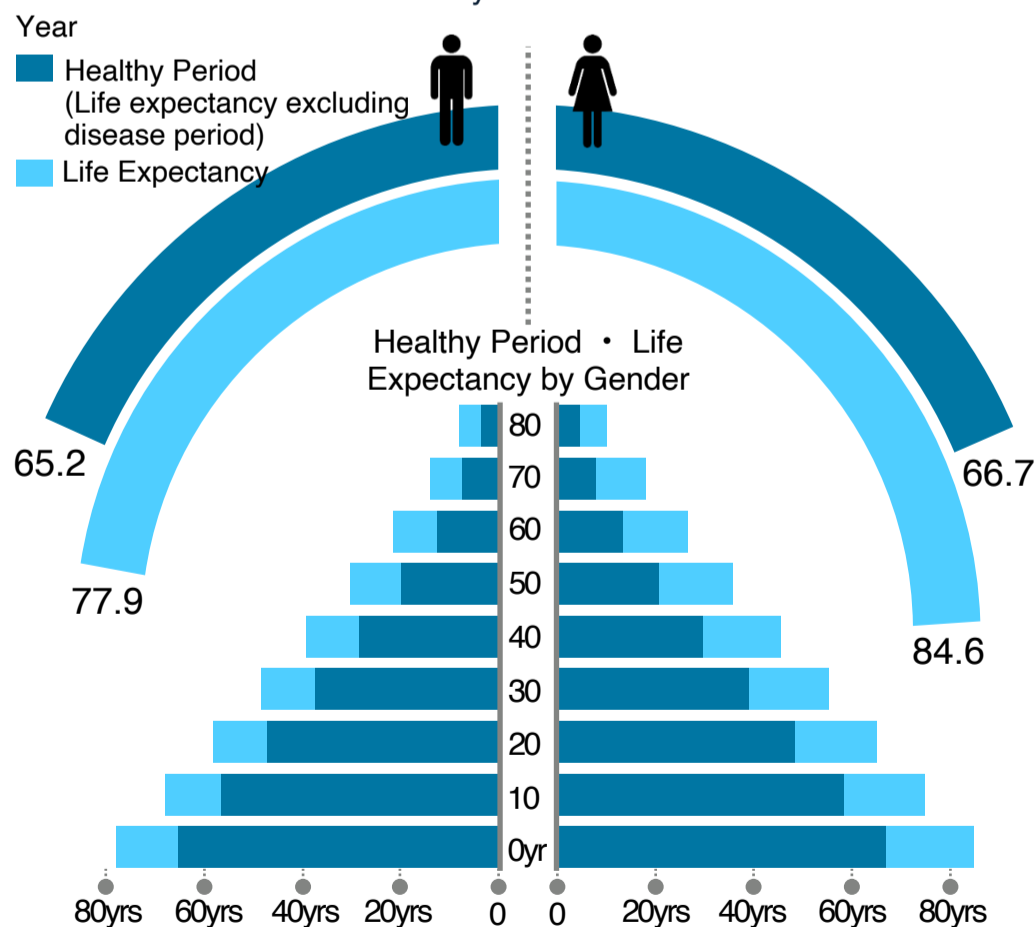


Introduction: Backgrounds

In the 19th century, the average life expectancy of humans was only 42 years. However, the average life expectancy has rapidly increased in the 20th century as humans gained nutritional advancement as well as public health and medical technology improved. According to the report released by Korean Statistical Information Service[1], in 2016, the life expectancy at birth for males marked 79.3 years and 85.4 for females. Compared to a decade ago, These numbers have risen by 3.9 years and 3.3 years, respectively. However, unlike the increased life expectancy, the period of life in healthy state has decreased. For the babies born in 2016, the healthy period is 64.7 years for male and 64.2 for female, and the opposite disease periods are 14.5 years and 20.2 years for male and female, respectively, which represent 2.1 years and 2.5 years rise from 2012. The Life expectancy has improved rapidly from the past, yet as the period without healthiness has increased, suffering from various chronic illnesses such as high blood pressure, diabetes, and heart disease, quality of life of senior citizens is rather declining.

Imbalance between Life Expectancy and Healthy Period

Current healthy life expectancy is 65.2 years for males and 66.7 years for females



Resource : KOSTAT Life Tables for Korea. 2016



The Future of 'Bio-Healthcare' in the Era of Fourth Industrial Revolution

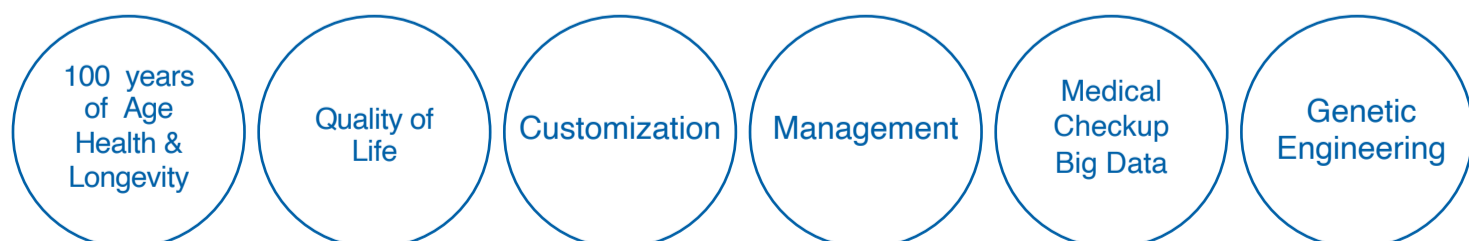
It is the eternal goal of the medical community to find a cure for illnesses, but more recently it has come to include prevention of diseases by providing proper medical information. In the face of the Fourth Industrial Revolution, some keywords related to health and medical treatment are 'prevention-focused,' 'customized precision medical treatment,' and 'advanced medical information.' The paradigm in medicine is shifting from cure-focused treatment to prevention and management of diseases. World governments and medical professionals are also weighing in on this change. Experts also highlight that more active treatments to lower the prevalence of diseases should be developed in order to increase the quality of life and lower the burden of social medical expenditure.

Preventive Medical Services

Preventive medical service is a medical field which focuses on methodology and application to protect, maintain and enhance human health based on science. Recently, its importance is increasing due to the spread of chronic diseases in today's aging society. Preventive medical service is playing an important role in a complex social phenomenon related to the current medical service, genetic research, and the development of various fields including medical informatics, in addition to various research on propriety of health and medical services for prevention and gene-environment interaction.

Preventive medical service is a medical service that is provided before the outbreak of a disease. Therefore, the subject of this medical treatment is not a patient but an ordinary person. It can be conducted on an individual or a group depending on whether the target is indiscriminate or specific. Experts stress that – to lower patients' onset rate of diseases, increase their quality of life, and to lighten the burden of social medical expenses – more active treatments as well as a reinforced system of preventing and managing diseases for preventive medical services are necessary.

Prevention-Focused Medical Science

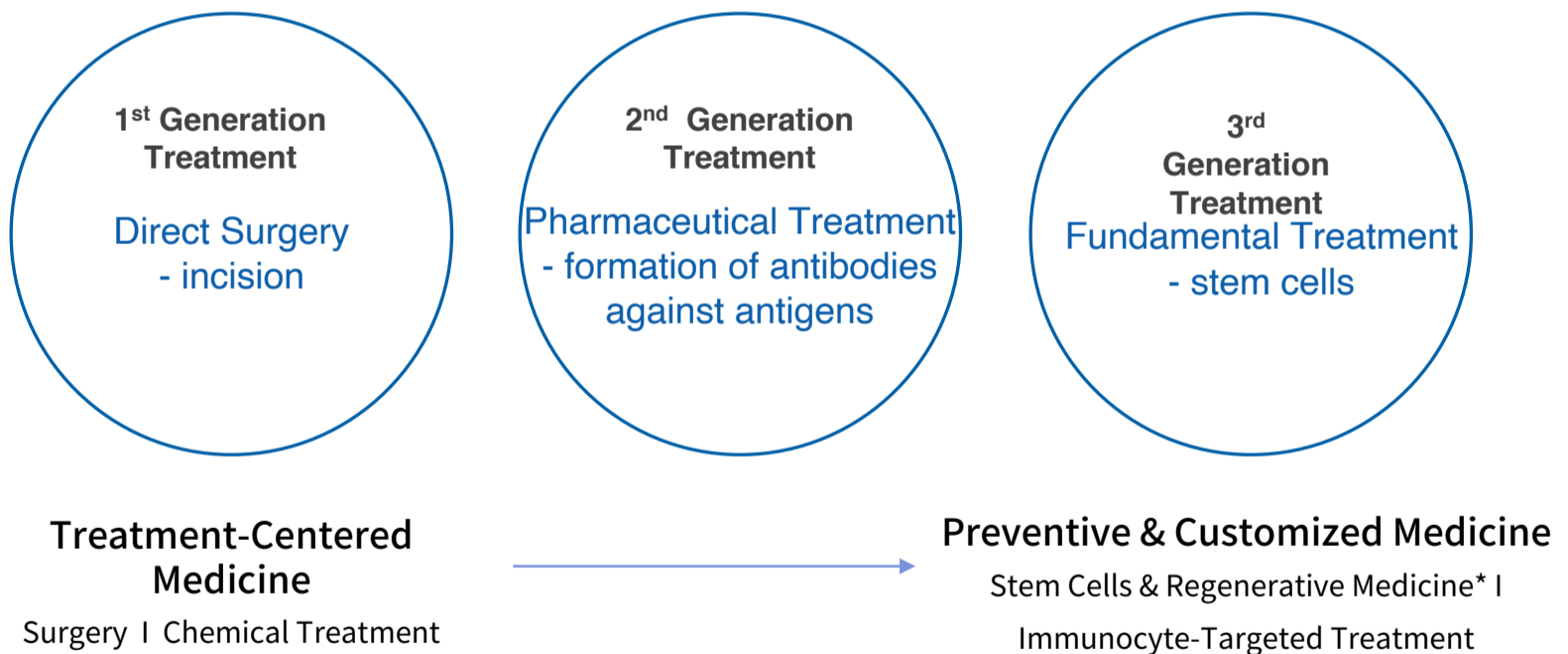


Cautions for Clinical Preventive Medicine

For the improvement of such preventive medical fields, we need scientific basis of clinical results of preventive medical services. Applying immediately to humans before scientifically validating new preventive medical services' safety and effectiveness can cause a damage with side effects. It would also cause an enormous economic damage due to high cost. Therefore, scientific assessments of safety and effectiveness of not only the preventive medical services that are newly being invented, but also every preventive medical service that is currently widely applied are extremely important. Medical institutions around the world are trying to create new scientific grounds by systematic scientific studies acquiring data of such clinical preventive medical services. The advancement of this field's medical information will play a vital role that leads the bio-healthcare industry in the future.

Development of Modern Medicine Today

Current medicine has been expanded and developed from a direct treatment based on surgery including incision, through the 2nd generation treatment method using drugs to fight against antigens and to cure, to gene therapy using stem cells treatment that seeks preventive medical services and personalized healthcare, and gene editing technology.



* Stem cells & Regenerative Medicine

It is a technology that regenerates body tissues including bones and skins, and a medicine that aims to maintain and restore bodily functions by creating substitutes for tissues or implanting stem cells.

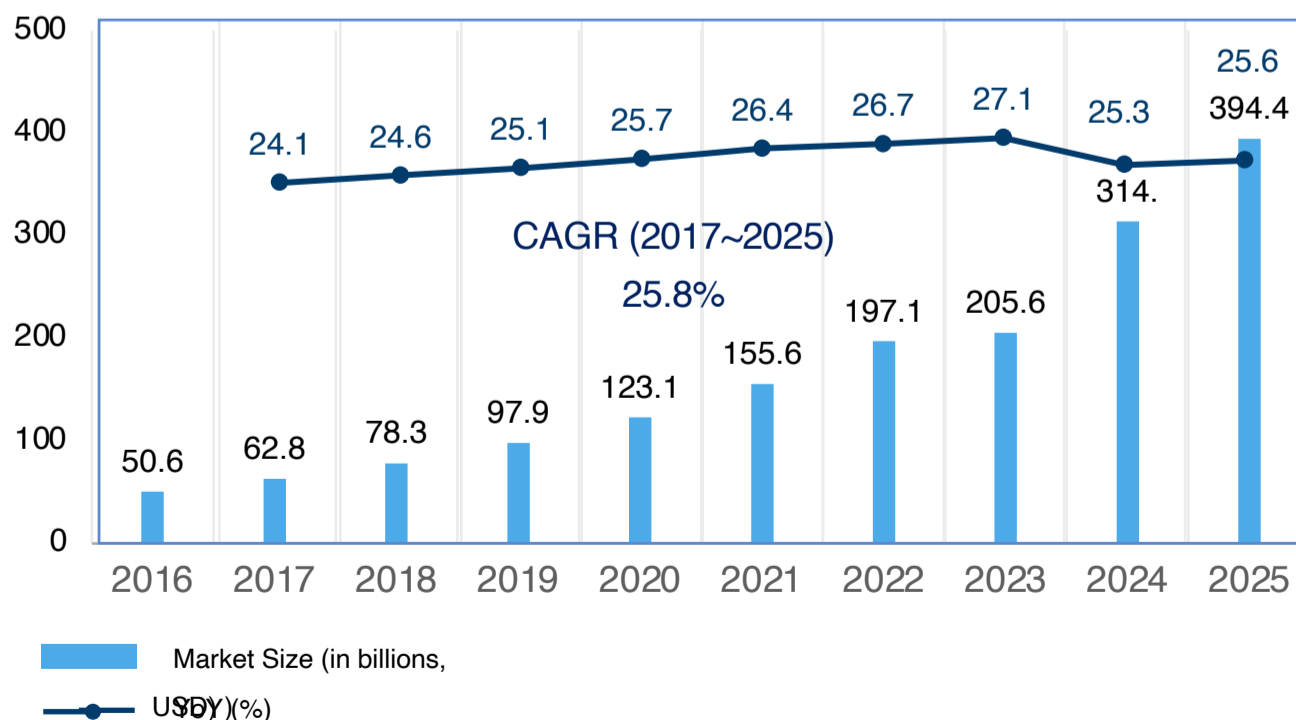
Stem Cells - Future of Longer, Healthy Period

In the era of longer and healthy life, medical society has been evolving in various fields such as genetic testing and telemedicine. Among these new technologies, our central focus lies on stem cell, a type of human cell capable of differentiating to any human body cells. Stem cell enables tailored medical services with reduced side effects. Furthermore, long-believed intractable diseases only to be treated with organ transplant can now be cured and stem cells can also be used for enhancing health and cosmetic purposes. Although we can trace back to 150 years ago to find the term stem cell used for the first time, research on stem cell did not produce any meaningful results to draw attention until the early 2000s. At the time, stem cells cultivation using embryonic cells was attempted only to be halted due to bioethics on using embryo, and problems like teratoma or cancer.

However, in 2007, research team from Kyoto University found iPSC (Induced Pluripotent Stem Cell), which is differentiated from adult cells, not from embryonic cells. Also, the head researcher Yamanaka Shinya won a Nobel Prize in Physiology/Medicine in 2012. This is when the potential of stem cells resurfaced in medical society.

Researches on stem cells have acquired clinical outcomes since the late 2000s and the technology also has been improved gradually. Procedures and medicines on stem cells are steadily studied and published. The market for stem cells is expected to show annual average growth of 25% until 2025 – area that everyone’s focus lies on with phenomenal technical innovation.

Market Status and Forecast of Global Stem Cells (2016~2025)

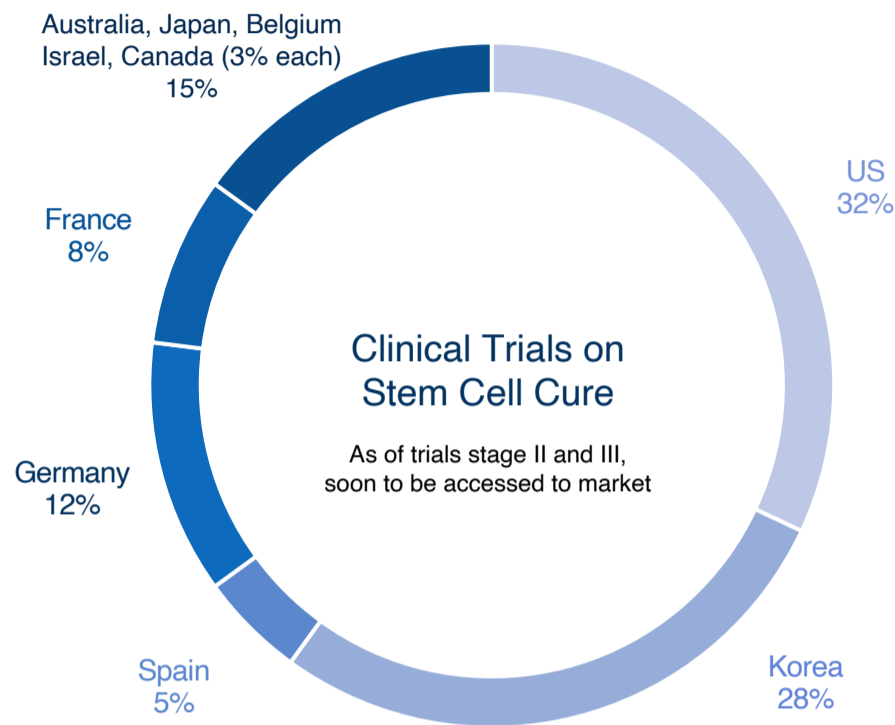


Resource: Inkwood Research, Global Stem Cell Market Forecast: 2017~2025(2017.4)[2]



Stem Cells for Longer, Healthier Life

Clinical Trial Status on Stem Cells by Counties



Research Status on Stem Cells by Counties

Countries	Political Stance	Investment	Key Strategies
US	Full support by the Federal Govt.	Increased from USD 500M in 2010 to 2B in 2013	Loosened policy to a human stem cell research scale
Korea	Selective support to stem cell technology development	Increased from KRW38B(2010) to 150B(2013)	65% of researches focused on adult stem cells extracted from bone marrow, umbilical cord or blood. Limited research on human embryonic stem cell
중국	Chosen as national strategic industry	Increased from CNY150B(2010) to 400B(2013)	Full-scale approval on embryonic stem cell researches for treating diseases 5-year-plan for Stem Cell Development by 2015
영국	Focused support to researches for commercialization	Increased from GBP50M(2007) to 100M(2013)	Proactive support on clinical trials for corneal restoration and cell treatment for stroke
일본	Focus on Induced Pluripotent Stem Cell research (iPSc)	Increased from JPY 6B(2008) to 20B(2013)	Focused investment on 3 specialized labs including Kyoto University



Treatment Areas of Stem Cells

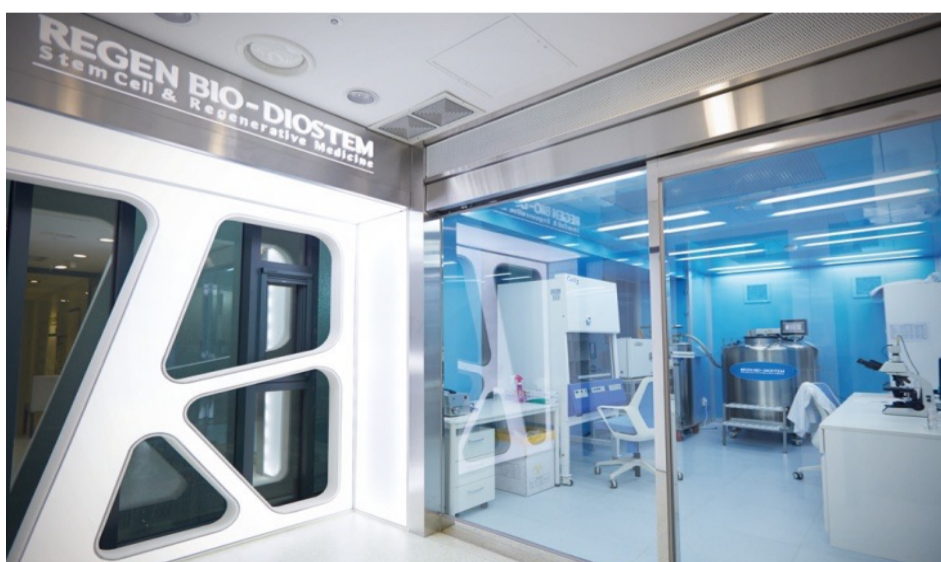
Stem cell refers to a type of cells that have the ability to self-replicate and differentiate into various cells. It can also be used for treating various tractable and intractable diseases as it plays a vital role in producing cell treatment cures. A stem cell is a kind of a primordial cell which can make any kinds of cells that form human bodies. Stem cells can recover injuries or fractures as well. Stem cells are currently used for immunity enhancement, pain relief, anti-aging cosmetic procedure and treatment for inveterate rare diseases.

THE NEW ERA OF REGENERATIVE MEDICINE
Dozens of biotech companies and university labs are developing ways to replace or regenerate failed body parts. Here are a few of the projects:

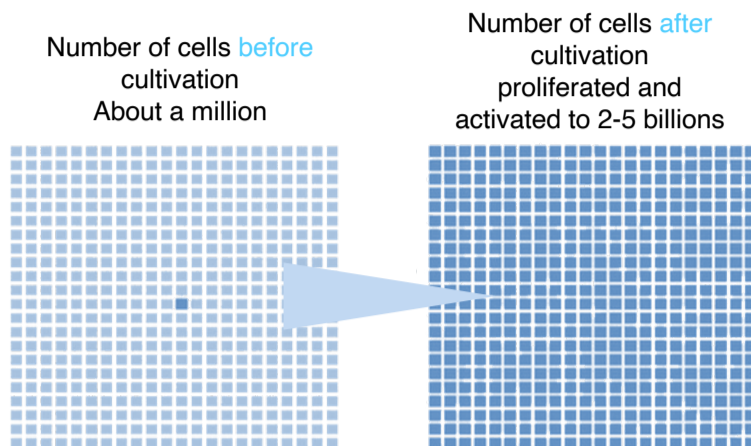
- BONE:** Bone growth factors or stem cells are inserted into a porous material cut to a specific shape, creating new jaws or limbs. A product that creates skin pores is in clinical trials.
COMPANIES: Creative Biomolecules, Orquest, Sulzer Orthopedics Biologics, Genetics Institute, Cairis Therapeutics, Regenon.
- SKIN:** Organogenesis' Apligraf, a human skin equivalent, is the first engineered body part to win FDA approval, initially for leg ulcers. Other skins are in the works for foot ulcers and burns.
COMPANIES: Organogenesis, Advanced Tissue Sciences, Integra LifeSciences, LifeCell, Ortec International.
- PANCREAS:** Insulin-manufacturing cells are harvested from pigs, encapsulated in membranes, and injected into the abdomen. The method has been tested in animals and could be in human trials in two years.
COMPANIES: BioHybrid Technologies, Naocrin, Circe Biomedical.
- HEART VALVES, ARTERIES, AND VEINS:** A 10-year initiative to build a heart has just started. Genetically engineered proteins have been successfully used to regrow blood vessels.
COMPANIES: Organogenesis, Advanced Tissue Sciences, Genetech, LifeCell, Regenon.
- SALIVA GLANDS:** Proteins called aquaporins that allow cells to secrete water are used to recreate saliva glands damaged by disease or radiation. Glands are also being engineered to secrete healing drugs. The technique has proven successful in mice.
COMPANIES: None yet.
- URINARY TRACT:** Cartilage cells are taken from the patient, packed into a tiny matrix, and injected into the weakened ureter, where they bulk up the tissue walls to prevent urinary leakage. The method is in late-phase clinical trials.
COMPANIES: Regenon, Integra LifeSciences.
- BLADDER:** Doctors at Children's Hospital in Boston have grown bladders from skin cells and implanted them in sheep. They are about to try the same process on a patient.
COMPANIES: Regenon.
- CARTILAGE:** A product is already on the market that regrows knee cartilage. A chest has been grown for a boy and a human ear on a mouse.
COMPANIES: Genzyme Tissue, Biomatrix, Integra LifeSciences, Advanced Tissue Sciences, Regenon, CytoTherapeutics, Guilford Pharmaceuticals.
- TEETH:** Enamel matrix proteins are used to fill cavities. It works in dogs; human trials are a few years away.
COMPANIES: Glora, Atrix Laboratories, Creative Biomolecules.
- BREAST:** In preclinical studies, several concepts have been able to create a cosmetic nipple by inserting a ball of cartilage. Researchers are now trying to grow a whole cosmetic breast.
COMPANIES: Regenon, Integra LifeSciences.
- LIVER:** A spider membrane built up and then seeded with liver cells. Organs the size of a dime have been grown, but a full-size liver could take 10 years due to its complexity.
COMPANIES: Advanced Tissue Sciences, Human Organ Sciences, Organogenesis.
- SPINAL CORD NERVES:** Scientists are investigating nerve growth factors, injecting them along biodegradable filaments and implanting them. Rats have been made to walk again.
COMPANIES: Accorda, Regenon, CytoTherapeutics, Guilford Pharmaceuticals.

Stem Cells Banking

Stem cells banking is a type of treatment of preventive medical services in which adult stem cells and immunocytes are extracted and saved from fat tissues and such. Cells that can be acquired by one's own body do not cause a problem for a future procedure or treatment. Also, as many of them can be acquired from a small amount of tissues, they became an essential option for extending youth and anti-aging.

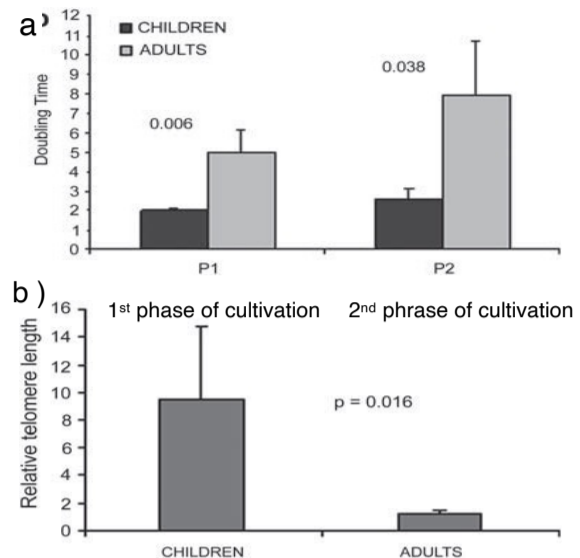


Extraction and Differentiation of Stem cells



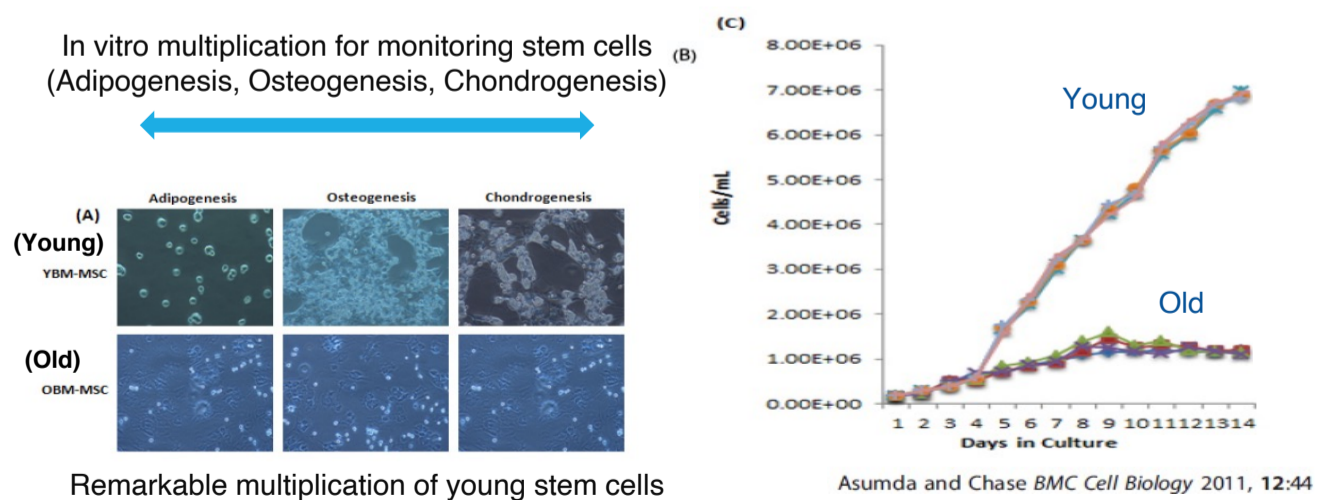
Stem cells multiplication by 200 ~ 500 times

Cytotherapy, 2010; 12: 881-887



Graph 1 : Comparison between young stem cells and old stem cells

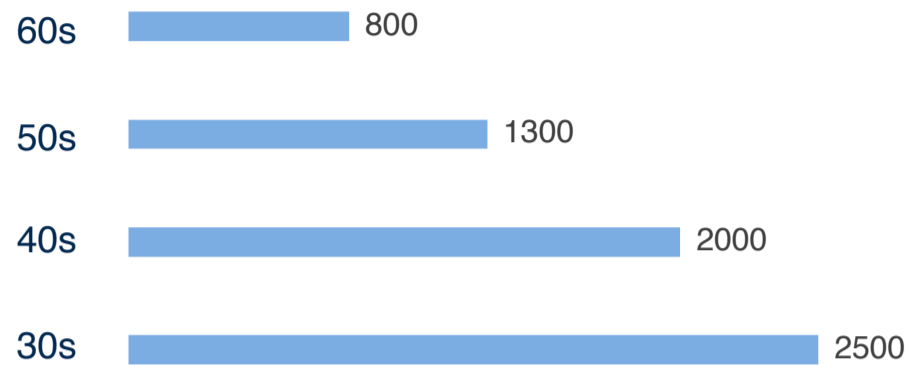
Treatment with stem cells is the only alternative for diseases that are incurable with current medicine, and the core of regenerative medicine. If an insurance is a preparation for 'medical expenses', storing one's own healthy stem cells is a preparation for 'medicine'. Storing your stem cells when you are the youngest and the healthiest is a 'medical insurance in the true sense' making provision for an inveterate illness which can be occurred in the future. Especially, adult stem cells of a young person are advantageous for cell treatment and tissue engineering. This is because, with advancing years, an adult stem cells loses its ability of proliferation and differentiation. A young person's stem cell differentiate faster compared to that of an old person, and the short differentiation time remains the same even when incubation time is lengthened. However, a stem cell of an old person shows a longer differentiation time as incubation time is increased and loses the proliferation ability markedly. Young cells show a firm proliferation ability – proliferating more than millions of times – yet, old cells don't differentiate after some.



Young adult stem cells are better at (A) differentiation and (B) proliferation. In the case of cell therapy which uses cells from the patient's own body, using young stem cells produced better results, and this is due to the decline in proliferation and differentiation abilities of stem cells as shown in the graph above.



Cell Number Decrease by Age



It is of utmost importance to store cells when young and healthy as global researches have proven that the younger the body is the more vitality and number of cells have. As stem cells, just like our bodies, age over time. Therefore, transplanting young and healthy cells can maximize treatment effects.

Cell Changes by Age



Younger

Older

Healthy

Aging and Diseases

Maximum number and functions of cell
Maximum anti-cancer ability
Usable as cell treatment
Easy extraction

Cell number decrease
Weakened anti-cancer activity
Decreased utility as cell treatment
Difficult extraction



Problems Stem Cells Tackle

Although it is certain that stem cells are the future of humanity, there still are certain problems that should be solved.

Firstly, there is a high possibility that embryo stem cells or iPSCs differentiate to unintended cancer cells. Secondly, stem cell regulations that vary by each country and sudden policy changes can hinder coherent, predictable medical services. Third, it is hard to find a reliable service provider. Fourth, there always exists a risk of identity theft. Due to these problems, medical services related to stem cells are very costly, and treatments and procedures are practiced in only very limited fields.

Technical Problems to Manage Stem Cells

Stem cells are vulnerable to even very low level of pollutant. Microbiosis and cellular alteration should be prevented through thorough supervision. Also, it has a potential side effect to differentiate to cancer cells as stem cell is highly differentiable to any human body cells.

Government Regulations on Stem Cells

There are scores of phases between stem cells and adult cells. The difficulty of handling increases as stem cells are closer to the early stage, therefore, each country has different stance towards stem cells. In Korea, the court reached its decision that the stem cell incubation of a bio company is applicable to making unauthorized medicine in 2016. A global paradigm change is necessary in order to enable stable stem cell research and new drug development in such volatility.

Threat to Personal Information Leak

In July, 2018, there was Singapore's worst cyber attack that hackers have stolen the personal information of 1.5 million patients from Singapore's largest health care institution. This included personal information of Singapore's prime minister. Stem cell-related information, much more sensitive than general medical information, requires a far higher level of monitoring attention.



Contributing to your happiness through accelerating healthy beauty

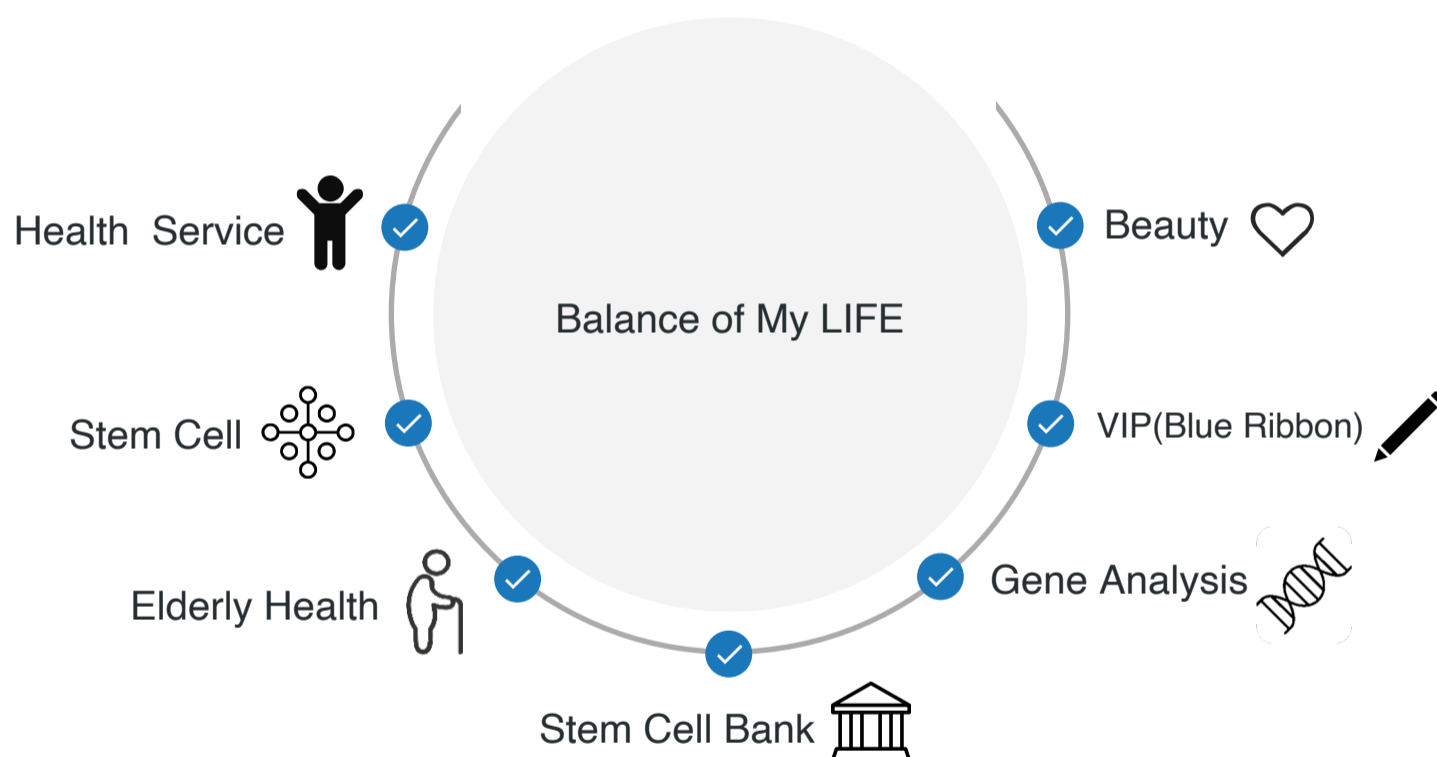
MEDICAL + ANTI AGING = **MEDI-AGING**

KEY WORDS of bio healthcare industries in the fourth Industrial
revolution

Forecast genetic tests, Big Data, Analysis

Prevention stem cell, life style, customization

Happiness With **LUX BIO EXCHANGE COIN** Project



As our vision “Contributing to your happiness through accelerating healthy beauty“ states,

LUX BIO EXCHANGE COIN will pioneer bio researches related with not only stem cells but also redox biochemistry that will lead medicine technology in the fourth industrial revolution era.

Through blockchain-based, top-notch medical services we provide, we are ready to play a vital role as Global Blockchain Bio Healthcare Hub. This will empower us to reach our goal to make everyone have a beautiful and healthy life.



Providing the Best Health Solutions Through LBXC Platinum Plan



Medical Checkup and Tailored Diagnosis

1:1 Checkup Programs Tailored to Individuals

Comprehensive Testing	Cancers	Brain/Heart/Lungs	Metabolic Syndromes	Musculoskeletal system	others		
Anti-aging Testing	NK Cell Activity	Telomere	Hormones	Organic Acid	Oxidation Stress		
Genetic Testing	Prenatal Checkup	Monitoring Diseases	Predicting Cancers	Specialized Testing			
Target Testing	Dementia	Climacterium	Alopecia	Insomnia	Smoking	Skin	Obesity

LBXC Platinum Plan MAIN PROGRAM



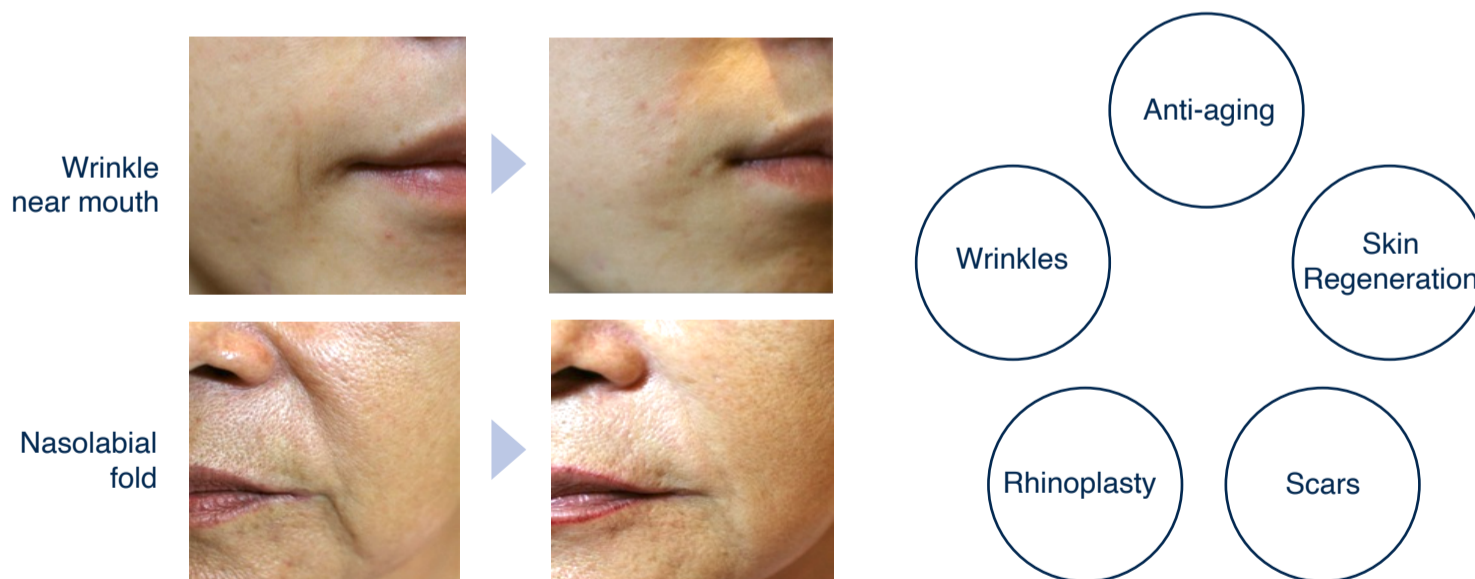
Immunocyte Treatment

Immunocyte treatment refers to a type of treatment utilizing human cells natural trait to defeat any foreign viruses or abnormal cells infiltrated into body. In essence, immunocytes in our body recognize any abnormalities, “counter homeostasis.” Immunocytes prevent viruses or germs coming into human bodies. Such cells are utilized for preventing and treating cancers, and also strengthening immunity and Anti-aging therapy. Immunocyte treatment is a next generation treatment that this has little or no pain, or side effects.

Characteristics of Immunocyte Treatment

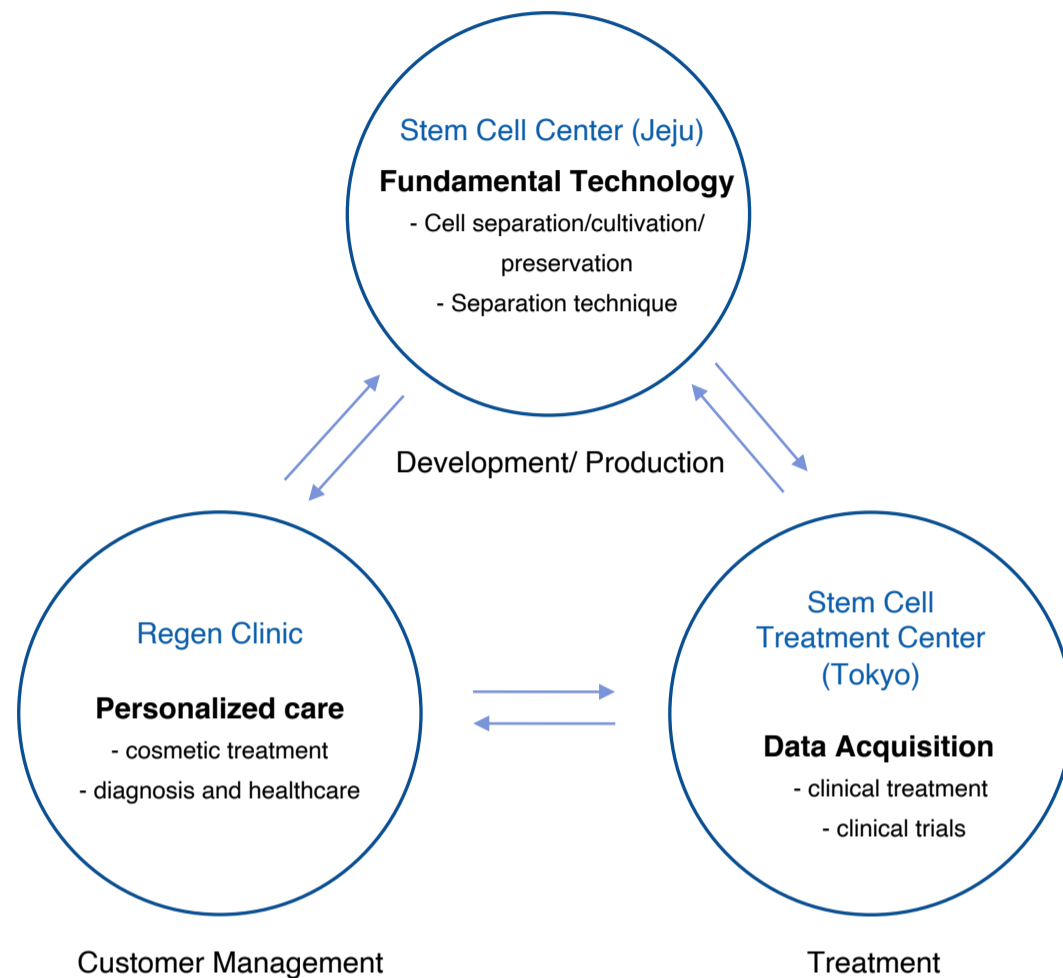
- It is highly effective when combined with surgeries, radiation, chemotherapy, etc.
- It normalizes bodies’ weakened immune system.
- It activates the immune function, which fights against cancer and other viruses at the maximum level.
- It is easy to use and convenient
- There is virtually no side effects as it is using patients’ own cells

Skin Fibroblast Treatment



Skin Fibroblast recovers the wrinkles and lost elasticity from aging by forming collagen and elastin which are the main components of dermal layers, and repairing damaged skin. Fibroblast that generates collagen is incubated after separated from a patient’s own skin behind ears. Self fibroblast incubated more than 1 billion will then be injected in dermal layers. It is an innovative way of treatment to recover the depressed skin.

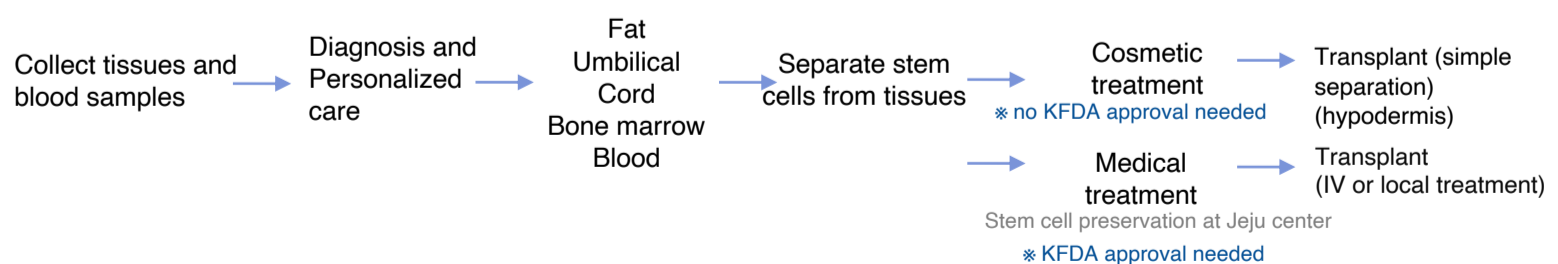
Stem Cell Treatment Operation Plan



Reliability of Adult Stem Cell Treatment

Stem cell treatment is perceived as a safe procedure in general, yet Japan stands as the only state legally allows it to be practiced. In case where differentiation process may be artificially induced, the government of Japan conditionally approves the productions for sales purpose with the requirements of appropriate clinical trials. Japan authorizes medical doctors to conduct the treatments with stem cells extracted within the same building. Discovery of cancer cell growing due to adult stem cell transplant has not been reported until today.

Stem Cell Treatment Process



Applicable Stem Cell Market: Cosmetic/ Plastic Surgery

Applicable Areas

Volume enhancement & Skin Rejuvenation

- forehead, temple, eye wrinkles, cheekbone, nasolabial fold, breasts, etc.

Plastic Surgery Trends

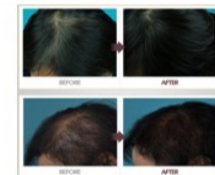
- Volume enhancement → adipose tissue + SVF or adipose tissue + PRP + SVF
- Skin rejuvenation → PRP + SVF or SVF + Growth Factors
- For lipo-related treatment, use SVF (Stromal Vascular Fraction)



1) Breast Implants Cast



3) Hair Loss Treatment



2) Facial Cosmetic Surgery



4) Other Applications: Wrinkles, freckle, etc.

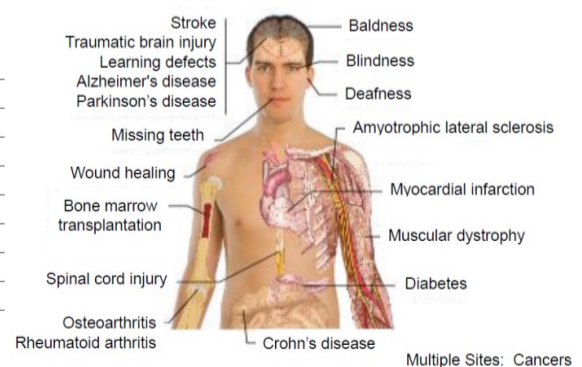
Applicable Stem Cell Market: Disease Treatment

Applicable Areas

- Cures : Direct local area injection, phleboclysis
- Alzheimer(direct injection) , Parkinson's disease, macular degeneration(direct injection), glaucoma(direct injection), arthritis(direct injection), plantar ulcer/ scar removal(direct injection), diabetes(IV), femur avascular necrosis, vertebrae compression fracture
- Degenerative arthritis, patella chondromalacia, rheumathritis, lupus, bronchiectasis, lung disease

Disease	Global Cases (Unit: Million)	질 환 병	Global Cases (Unit: Million)
Cardiovascular disease	840	Alzheimer's disease	26
Lung disease	500	Burns(severe)	10
Arthritis	290	Parkinson's disease	5
Incontinence	240	Liver failure	3
Osteoporosis	200	Multiple sclerosis	3
Diabetes	180	Critical limb ischemia	2
Cancer	150	Crohn's disease	2
Infertility(male)	50	Sickle cell disease	1
Orthopedics	48		

Case Number of Patients Treatable by Stem Cell (2007)



Market Access Strategy by Phase

Phase I: 2019 1st Half

Stem Cell Center

Establishing bridgehead market for disease treatment Accumulating inter-hospital clinical trial data

2019 2nd Half

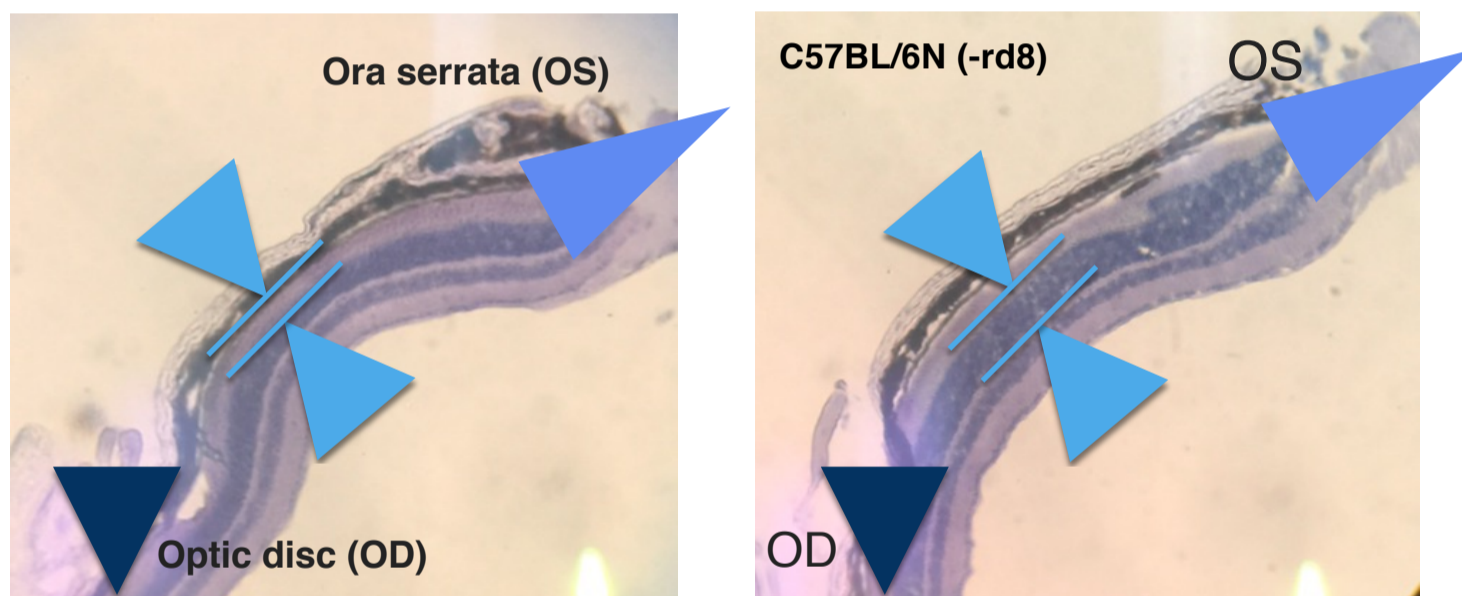
Key Hospitals in Japan

Phase II: 2020 ~

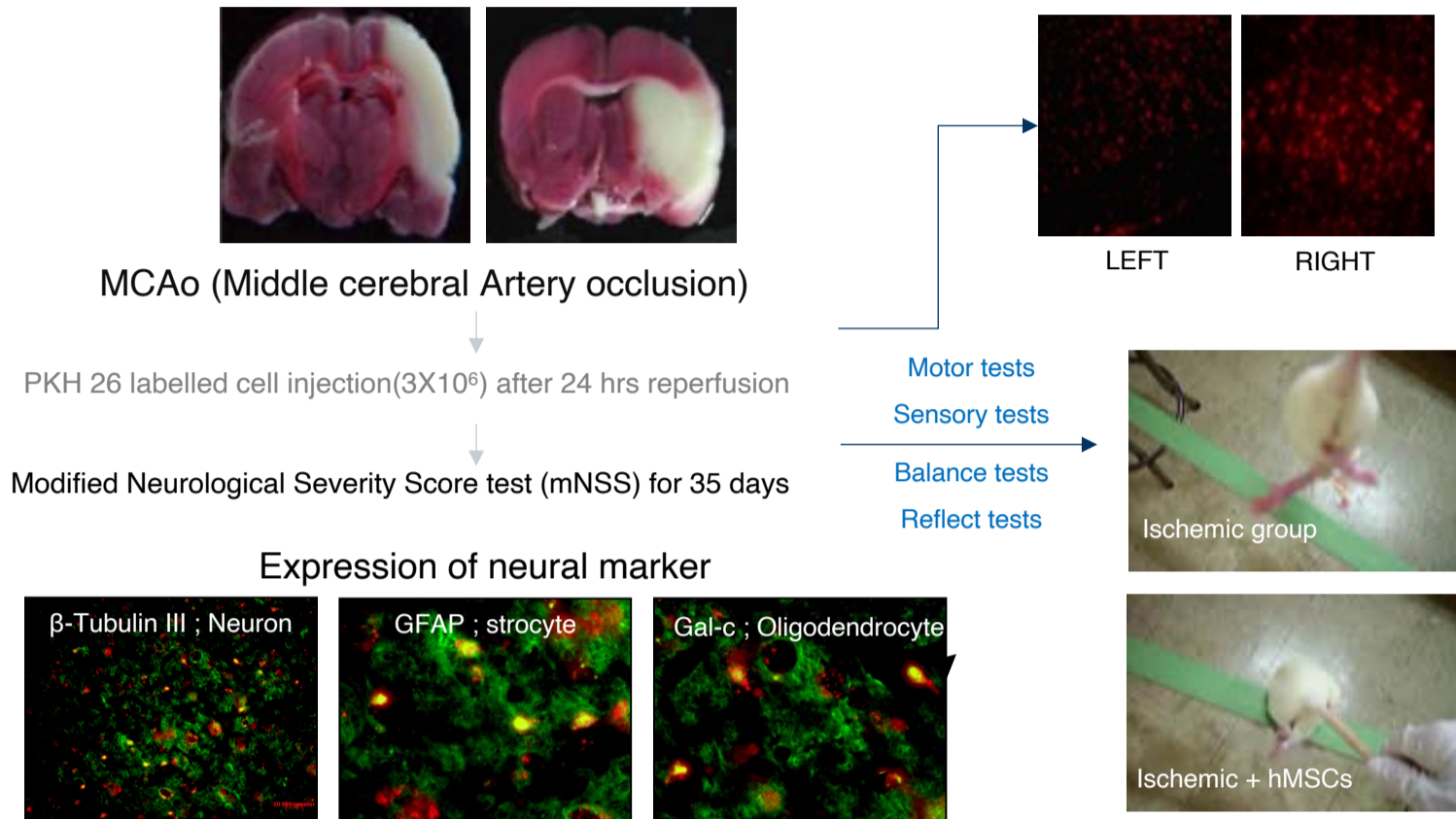
Other Diseases
Market expansion

Stem Cell Test Results: AMD

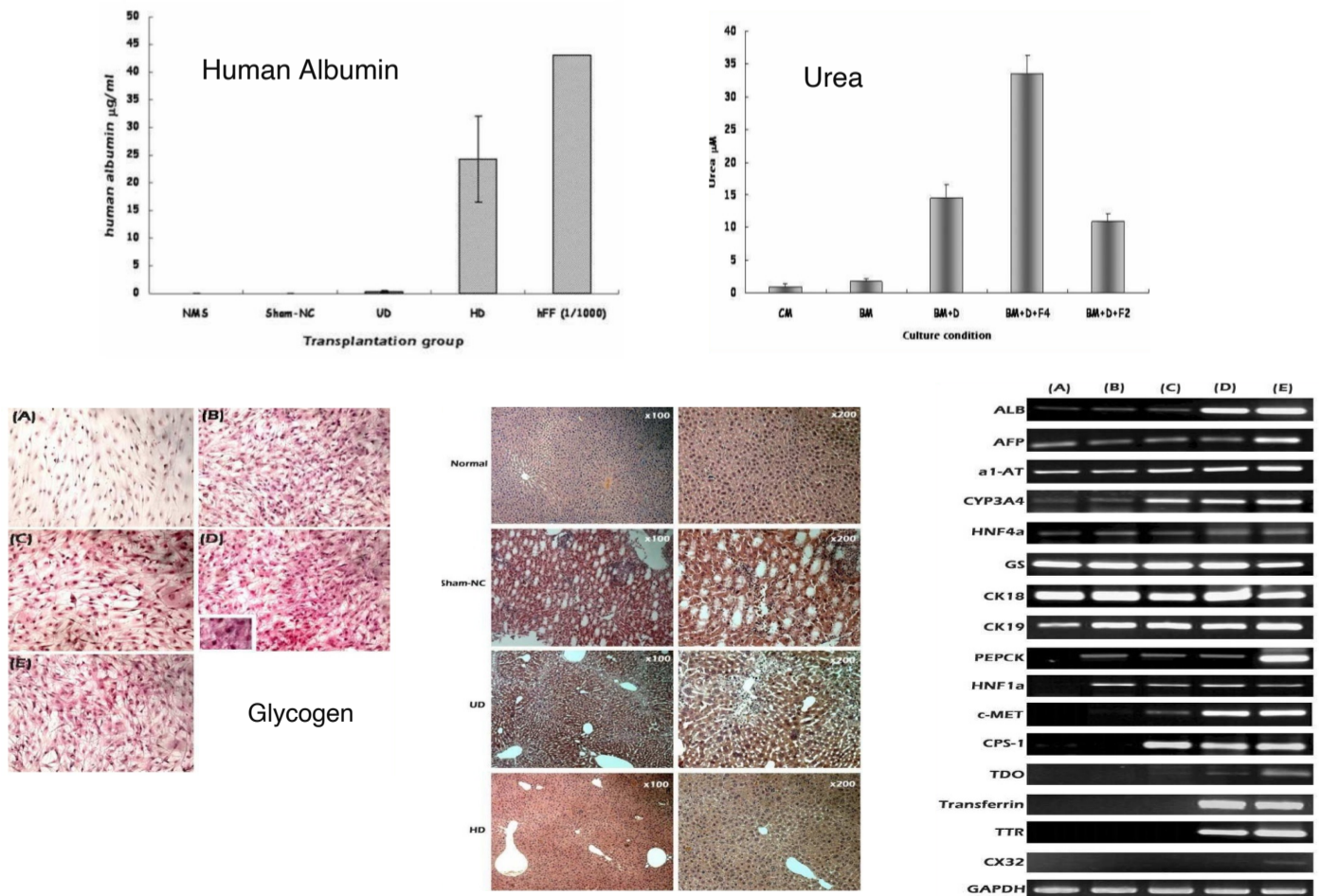
Animal Study



Stem Cell Test Results: Neurologic

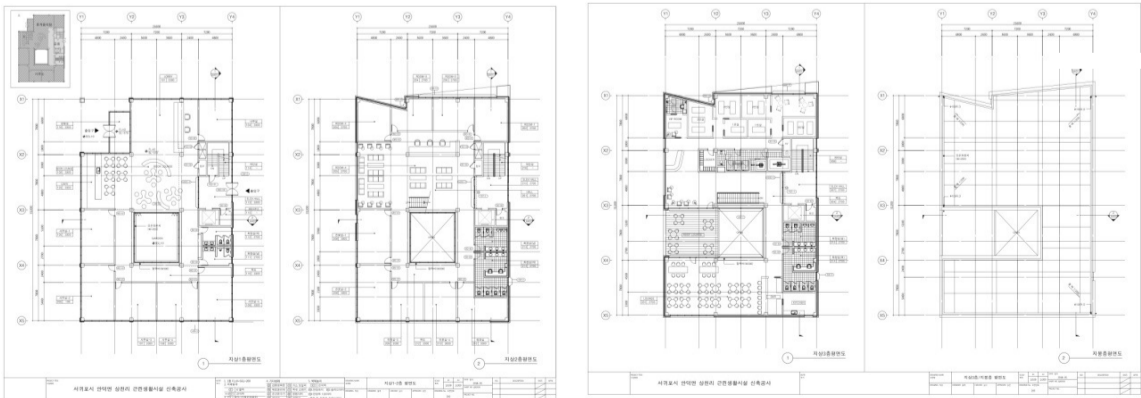
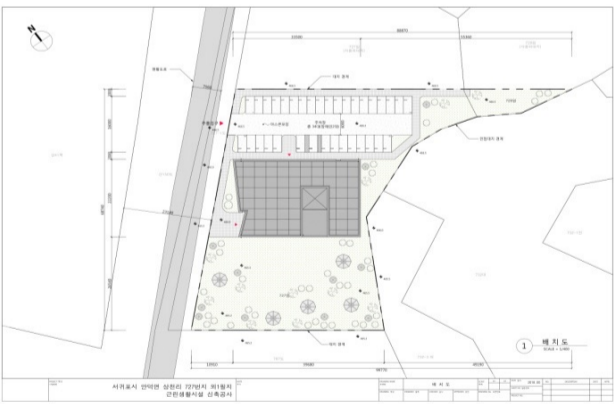
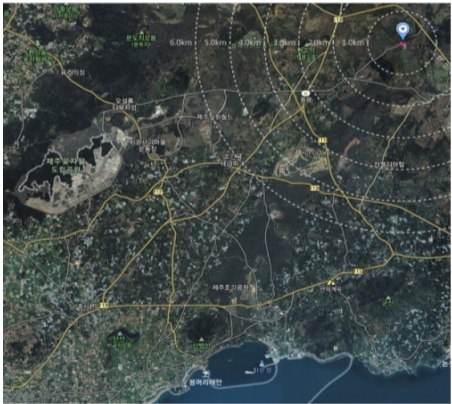


Stem Cell Test Results: Diabetes, Liver Disease



It is certainly the best to preserve stem cells as soon as possible as they tend to be healthier when they are younger. Closely cooperating with global professional stem cell organizations, LBXC accepts applications for stem cell preservation on DBE platform. The cells are to be preserved under cryogenic conditions through the life-time of each client. Cell bank is the pivot of LBXC's stem cell service. To enforce the long-term preservation of the cells, we are considering building additional cell banks in multiple locations, followed by the establishment of a medical facility that would have a capability of stem cell research. LBXC has a long-term scheme to provide clients with one-stop health care services regarding stem cell treatments with every different forms of resources ready.

Guaranteed Safety by Preserving Cell in Different Locations



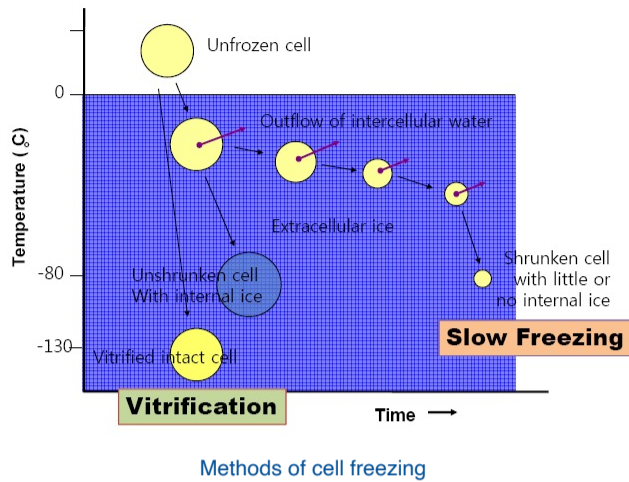
LBXC Cell Bank Planned in Jeju

A 10,000m² Private Wellness Center for foreign patients visiting Jeju, Korea
(scheduled to open in late 2019)

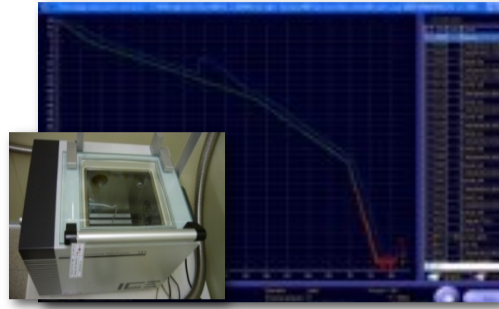
Center with private accommodation and tailored wellness programs only for REGEN Medi-aging clients



Medi-aging Stem Cell Center Japan



Computer controlled freezer Below -170°C vapor type LN₂ tank



1: -1Temp #79C on 7/13/2007 06:17
 Temp #1: -179C on 7/13/2007 07:17
 Temp #1: -179C on 7/13/2007 08:17
 Temp #1: -179C on 7/13/2007 09:17
 Temp #1: -179C on 7/13/2007 10:17
 Temp #1: -179C on 7/13/2007 11:17
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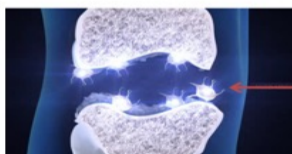
Separate storage in Korea, Japan and China

Stem Cell Key hospitals for anti-aging stem cell treatment and intractable disease



Approved stem cell treatment for securing clinical data and accumulating treatment technology

1) Chondrocyte Treatment

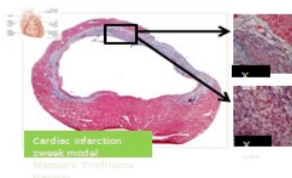


Stem cell transplant

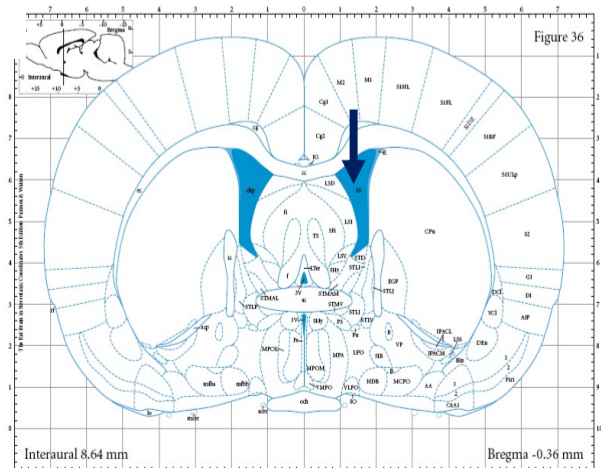
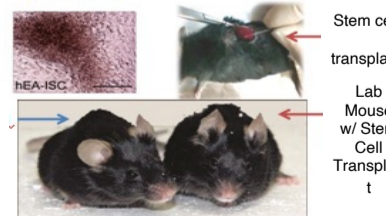
3) Brain Disease: Stroke, cerebral infarction



2) Cardiac Disease: Acute myocardial infarction, ischemic heart disease



4) Diabetes



For the convenience of visitors to the center, we provide one-stop service from visa services before arrival to prognosis management, and offer customized programs that truly define medical tourism including performances · exhibitions · sightseeing · shopping · cultural experiences etc. depending on the visitor's preferences.

REGEN MEDI-AGING



Before Arrival

- Issuance of medical visa
- Reservations for checkup and treatment

- Issuance of medical visa
- Flight reservation
- Hotel reservation

After Arrival

- Airport pick-up and drop-off
- Professional medical translator
- Counselling followed by examination
- 1:1 customized program

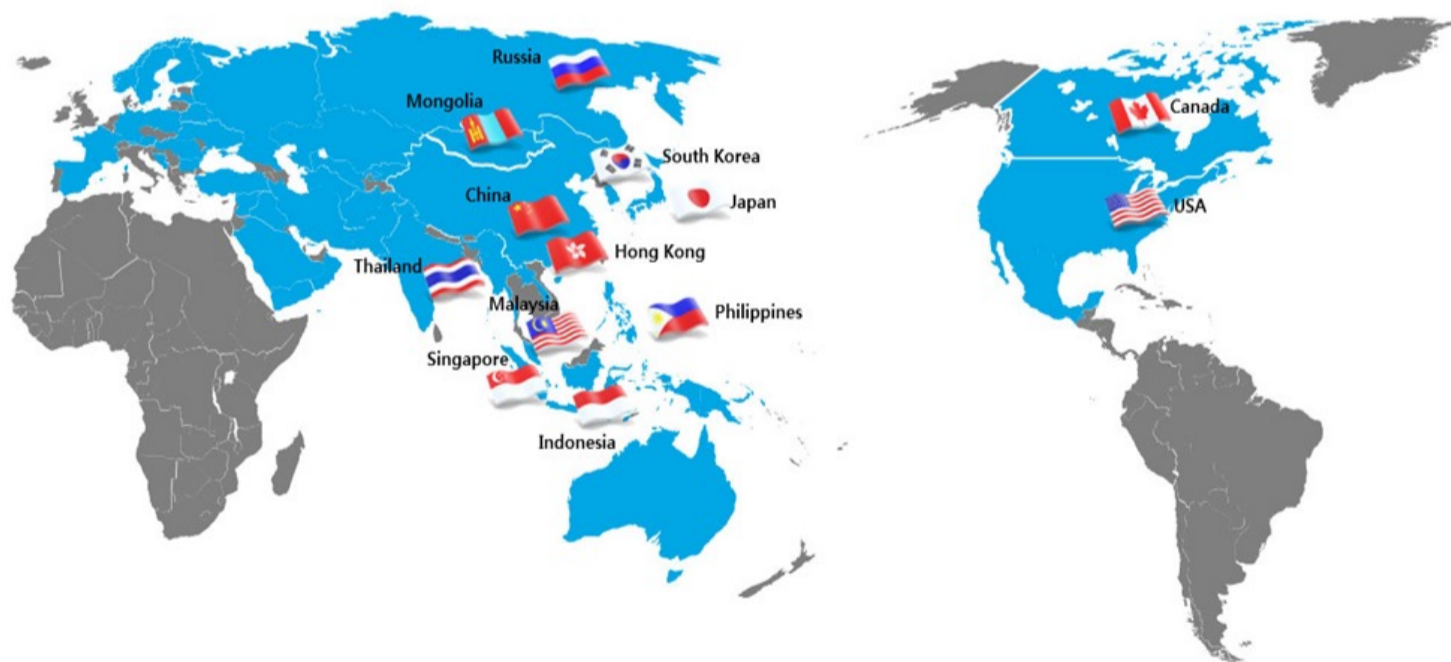
- Airport pick-up and drop-off
- Professional medical translator
- Sightseeing · shopping · cultural experiences
- Information on performances · exhibitions
- Information on Korean cuisine and restaurants

After Departure

- Prognosis management
- Lifestyle coaching
- Improvement (Customer survey)

- Purchasing agent for customer
- Improvement (Customer survey)

Establishment of network of local hospitals



The main program is operated in our centers in Seoul and Jeju, but we are expanding our network of hospitals all over the world in order to provide a smoother, more systematic follow-up service for our customers.

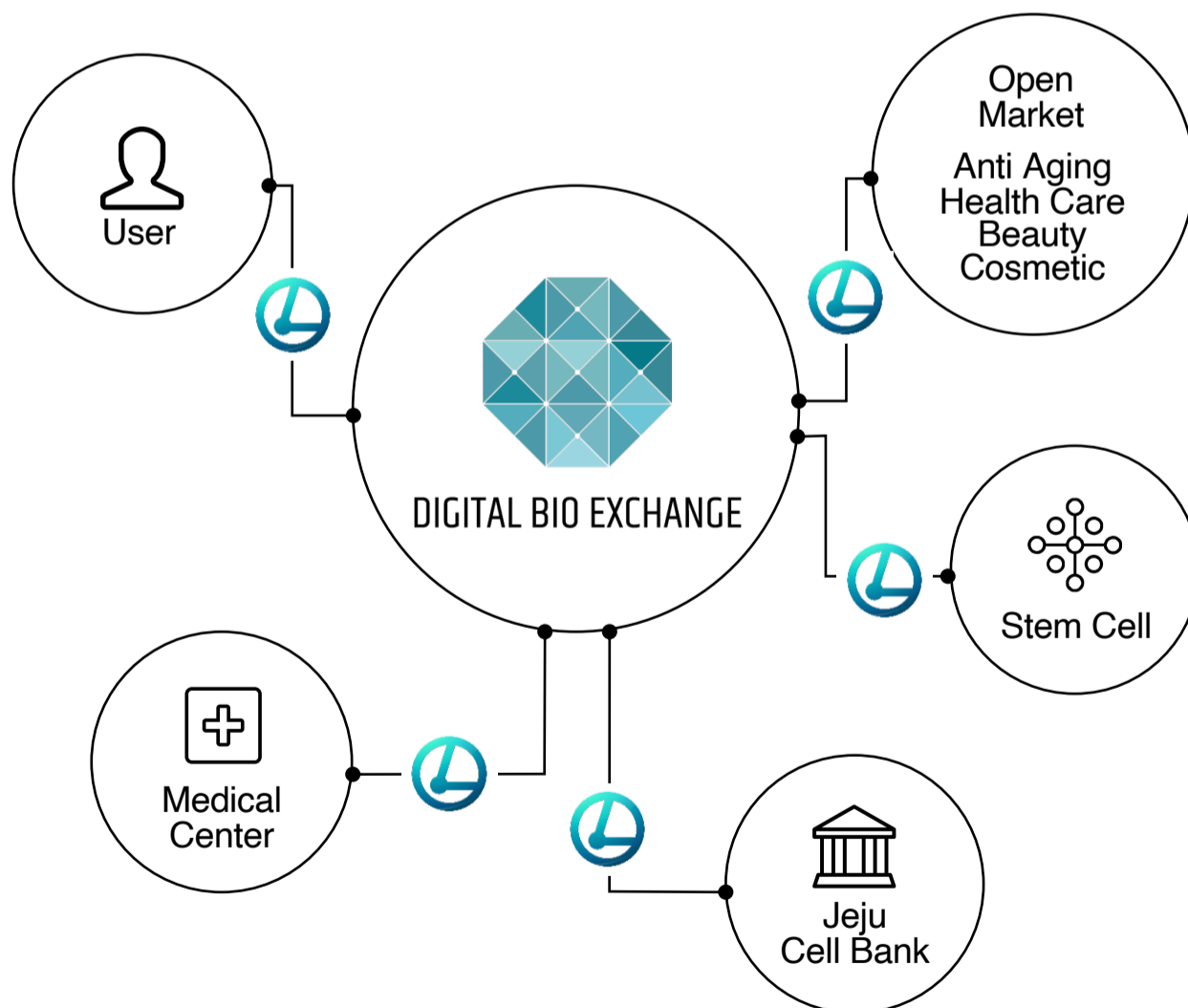
LUX BIO EXCHANGE COIN

LBXC Coin is a dream-realizing project that aims supporting the society to be where everyone stays away from sufferings from illness thus sustain healthy lives from efforts of professionals in stem cell, health care, and beauty care.

LBXC Coin is projected to be evolved to a one-stop health care system driven by stem cell technologies, and we are attempting to build an ecology merging with a block chain system. There are a number of companies developing services with stem cell technologies, yet it is not intuitively easy to clearly see the details of each nor how they fit each client. In LBXC, we are aiming to build a cooperative ecology with divergence of companies, so each client could be suggested with services fit right just for them

LBXC tokens can be used in the LBXC data marketplace and to obtain premium healthcare services offered through the Digital Bio Exchange.

LUX BIO EXCHANGE COIN Scheme



DIGITAL BIO EXCHANGE

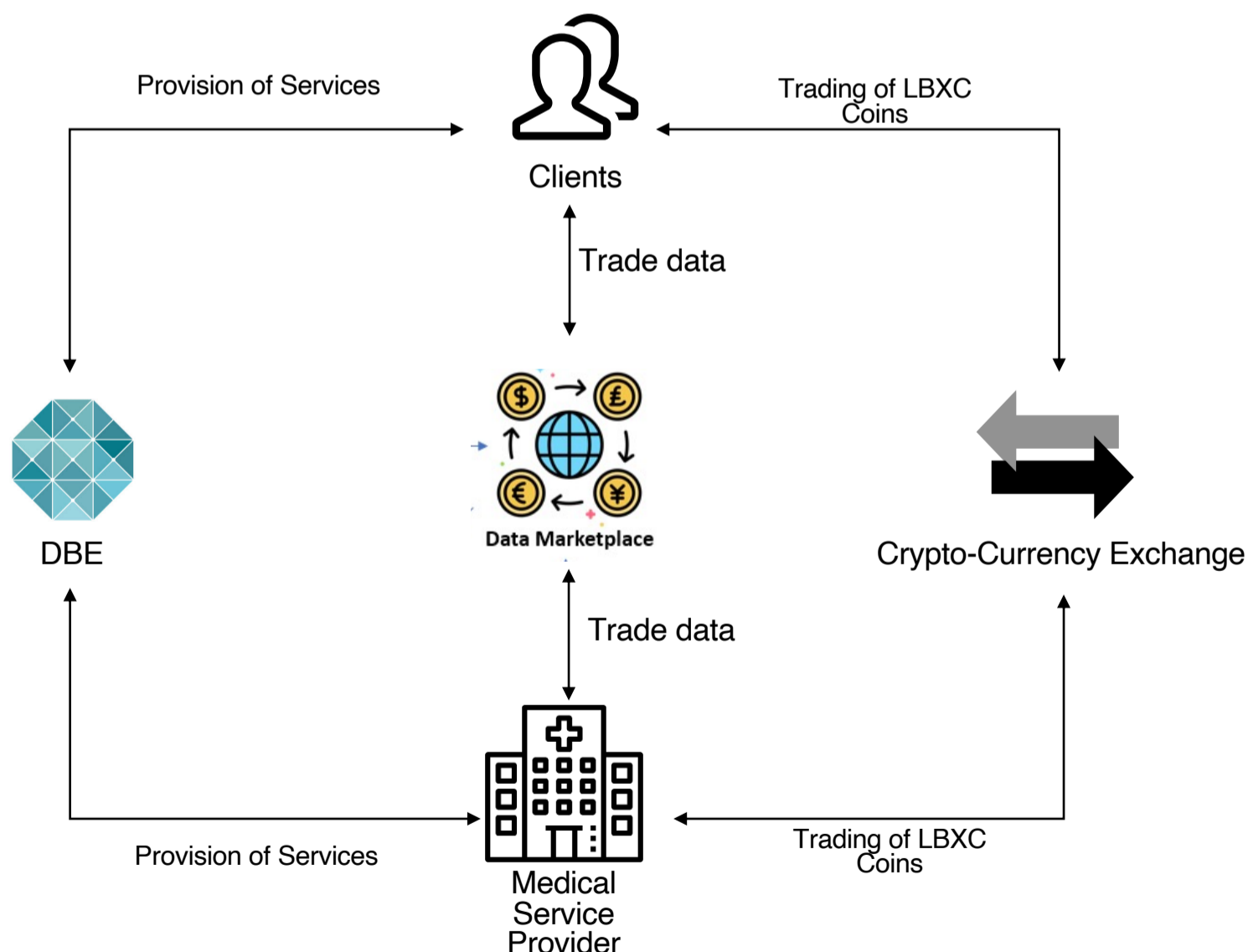
Digital Bio Exchange (“DBE”) platform will bring LBXC’s ideal to reality.

Digital Bio Exchange is a platform for trading and purchasing premium healthcare services associated with stem cell technology and the various medical procedures described in this whitepaper above.

Clients and Medical Service Providers are able to use the DBE for a unified marketplace where quality of services can be thoroughly vetted and trusted services can be provided. Medical service providers on the DBE platform are required to stake to be a part of the DBE and their stake might be slashed in the event of a complaint from clients. The slashed LBXC tokens will be used for compensation to the affected users, thereby providing a safer environment for users without the need for costly legal actions to obtain compensation.

Services such as anti-aging care, health care, cosmetic care will be available in an open market through DBE with LBXC Coins purchased from Cryptocurrency exchanges. Additional state-of-art stem cell treatment services will also be available [through LUX BIO EXCHANGE COIN Platinum Plan](#). Clients will be able to exchange their LBXC Coins through DBE, or store coins into their savings account on DBE and get rewarded with services from the medical providers at a discount.

LBXC Coin Ecosystem Flow



Staking By Medical Service Providers

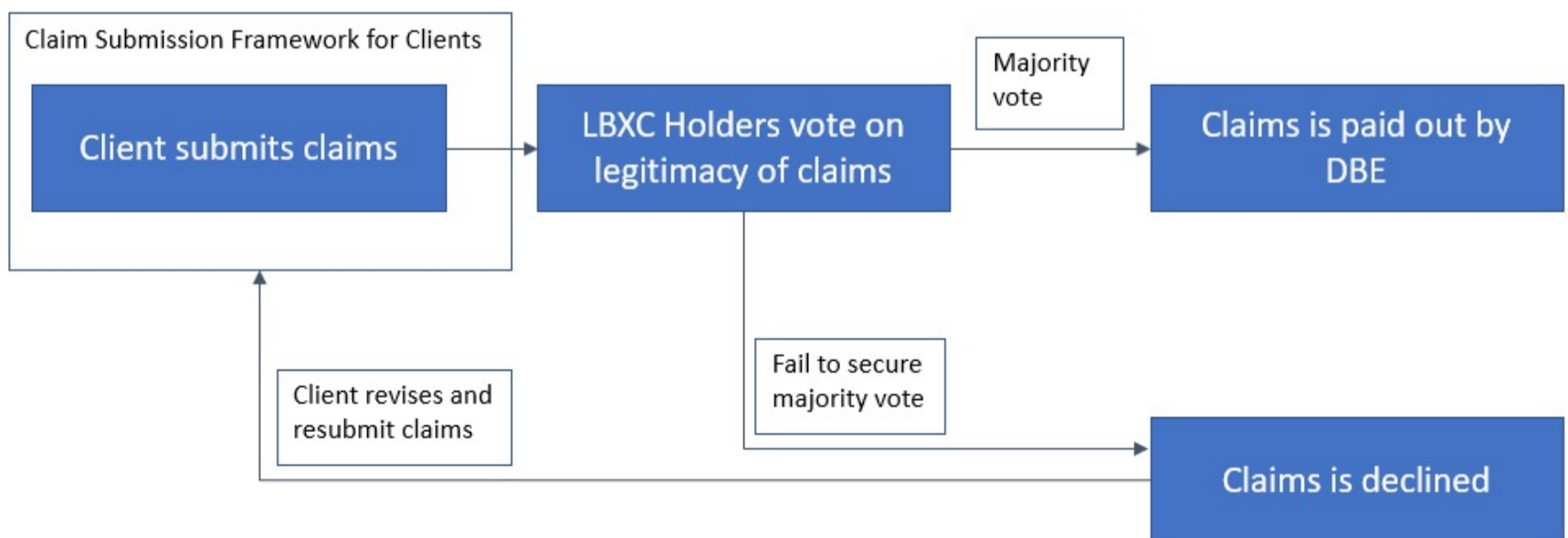
DBE is a open-platform and a membership, for both private and government medical service providers. It is designed to be inclusive for all high quality medical service providers. With the privatization of medical service providers, it is the common notion that both cost and quality of healthcare services will be higher at private medical service providers. In reality, this is not always the case, there will be times when accidents do happen and certain medical procedures are blotched, causing irreparable harm to the clients.

To add insult to injury, it can be extremely costly and difficult to seek recourse through the usual legal procedure. This creates significant burden on the clients who may not be able to seek compensation. Through DBE, all medical service providers are required to stake a minimum of 10% of their annual revenue earned through DBE in the form of LBXC tokens. In the event that the amount of tokens staked decreases and fall below 10% of their annual revenue, they will be prevented from doing additional sales on the DBE platform, limiting their ability to gain new clients.

The purpose of staking by medical service providers is to provide a form of private insurance and compensation funds for clients who have not received the quality of service expected by the medical professionals. For example, in the case of a failed plastic surgery, the stake of the medical service provider will be slashed and the slashed LBXC tokens will be used to compensate the client directly. The total quantum of LBXC tokens slashed will be proportionate to the damages suffered by the client.

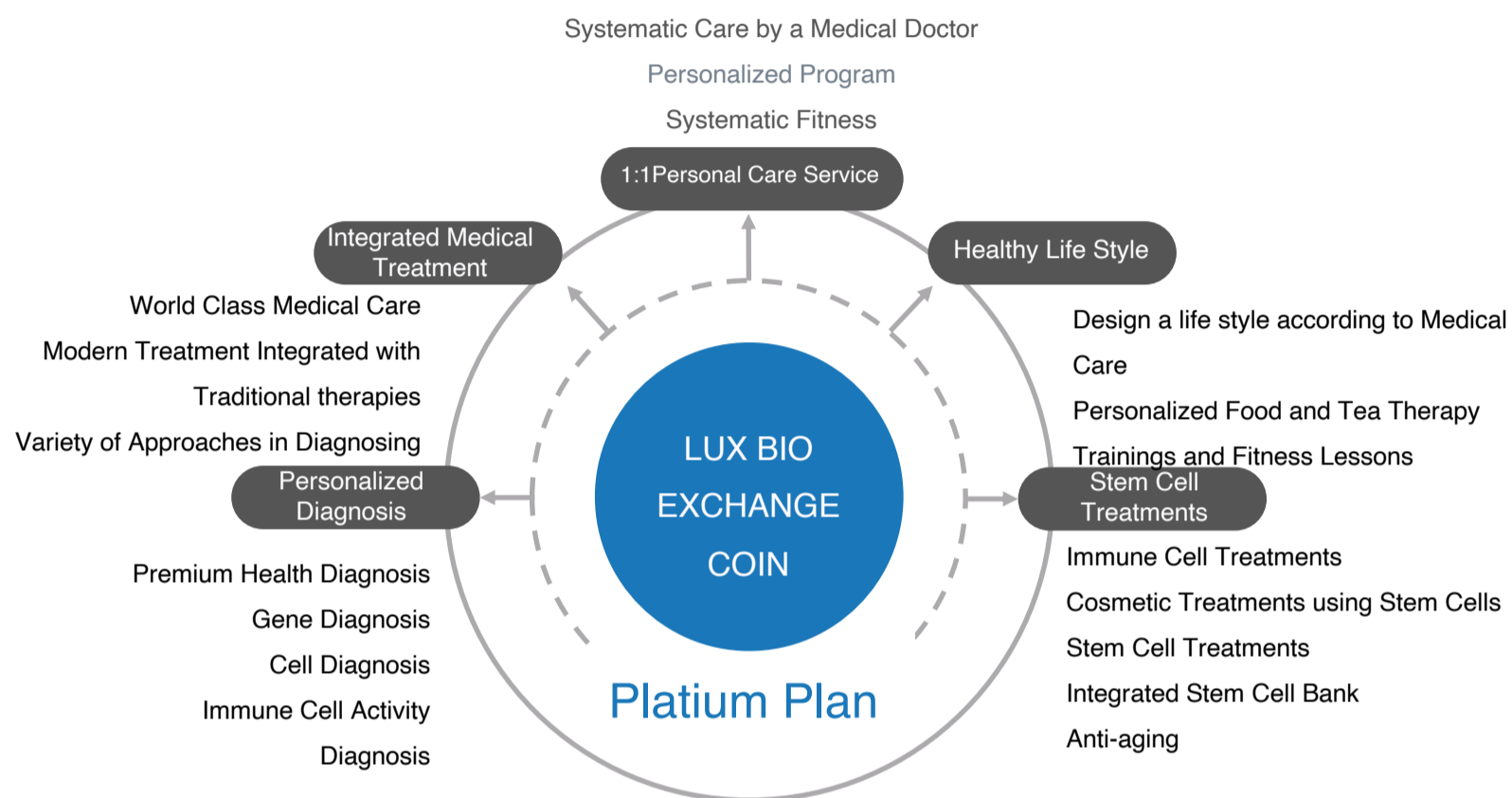
A quorum of LBXC token holders will be required to review and vote on the claims submission by the clients of the medical service provider. These LBXC token holders are incentivized to review and vote for these claim submission as it is in their interest to ensure that fraudulent claims are not paid out to ensure that the ecosystem can be sustainable and thrive in the long run. At the same time, keeping medical service providers and clients serviced will lead to a long term growth of the network value of LBXC.

To ensure that reviewers are not overwhelmed by fraudulent claims, each claimant will need to pay a fee of 30,000 LBXC tokens which will be distributed as rewards to reviewers.



LBXC PLATINUM PLAN

With the purchase of LBXC Platinum Plan, our primary service, clients are to be eligible for LBXC's stem cell treatments: preserving the cells at safe storages and information of the fitted treatments just for them. Stem cells are to be preserved through the client's life-time, and the client will be eligible for admission in facility near Cell Bank in Jeju on the top of wait list to receive stem cell treatment.



These are the packages currently available under the LBXC Platinum Plan:

- LBXC650
- LBXC480
- LBXC430
- Calming Maskpack
- Peptide Maskpack
- Aesthetic 25
- Aesthetic 55
- Aesthetic 105
- Cosmetic Giftcard

More details on the packages can be found on our website LBXC.io and provides huge value that can only be accessed through LBXC tokens.



OPEN MARKET SERVICES

You can purchase various Anti-aging/Healthcare services in DBE open market with LBXC and all purchased items will be managed in DBE blockchain ecosystem.

As DBE open market has a great potential to be expanded to global-level, we will always strive to maintain our effective business partnership with partner companies.

Available Open market services are as follow:

Open Market Services

Anti-aging

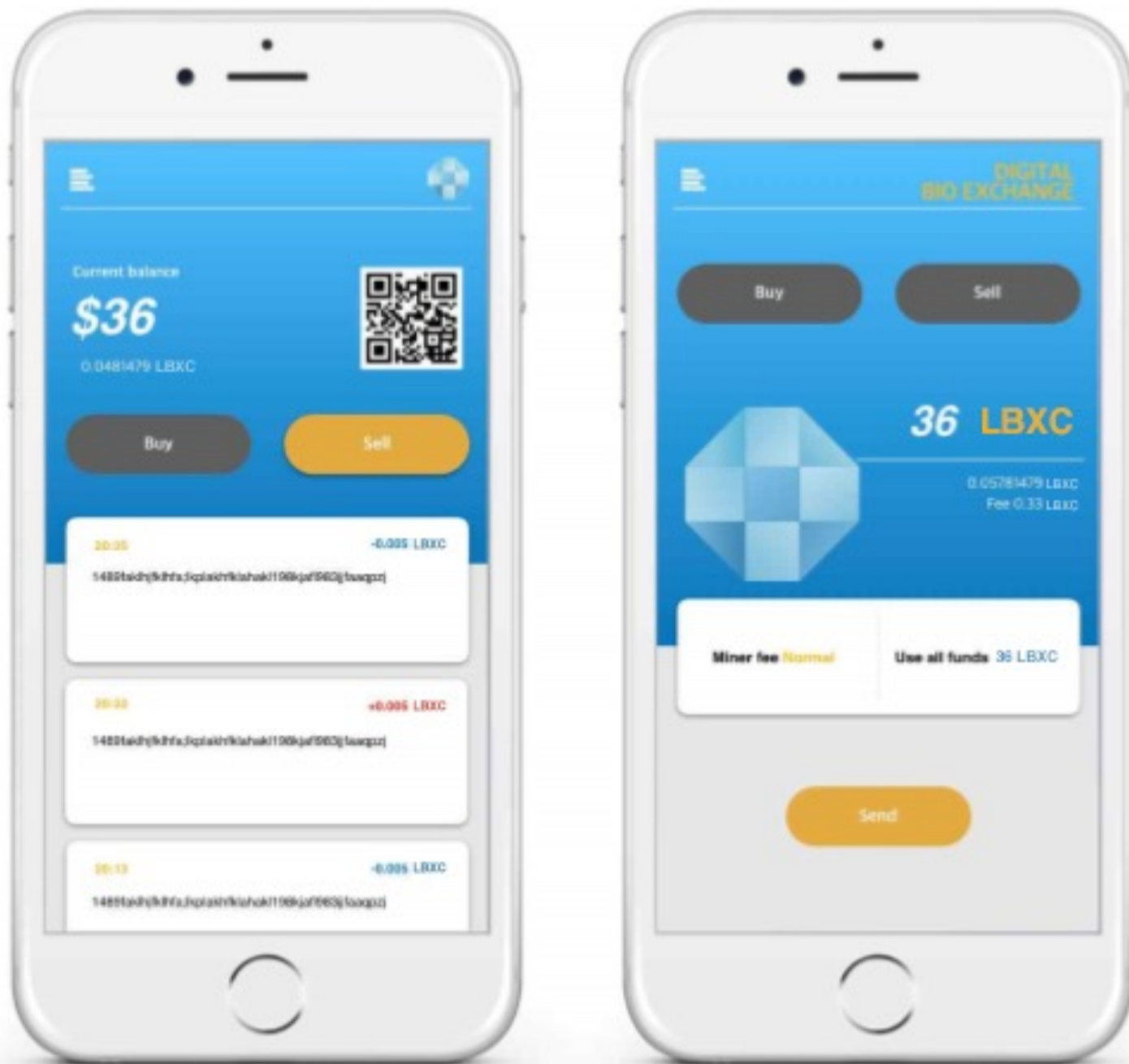
Health Care

Botox	Overall Health Consulting
Laser Treatment	Genetic Testing
Facial Contour Injection	Infirmarian Service
Thread Lifting	Nursing Home Service
Lifting Laser	Nutritional Diet
Fillers	Vaccination
DNA Injection	
Collagen Injection	
MTS Treatment	
Air Jet Lifting	

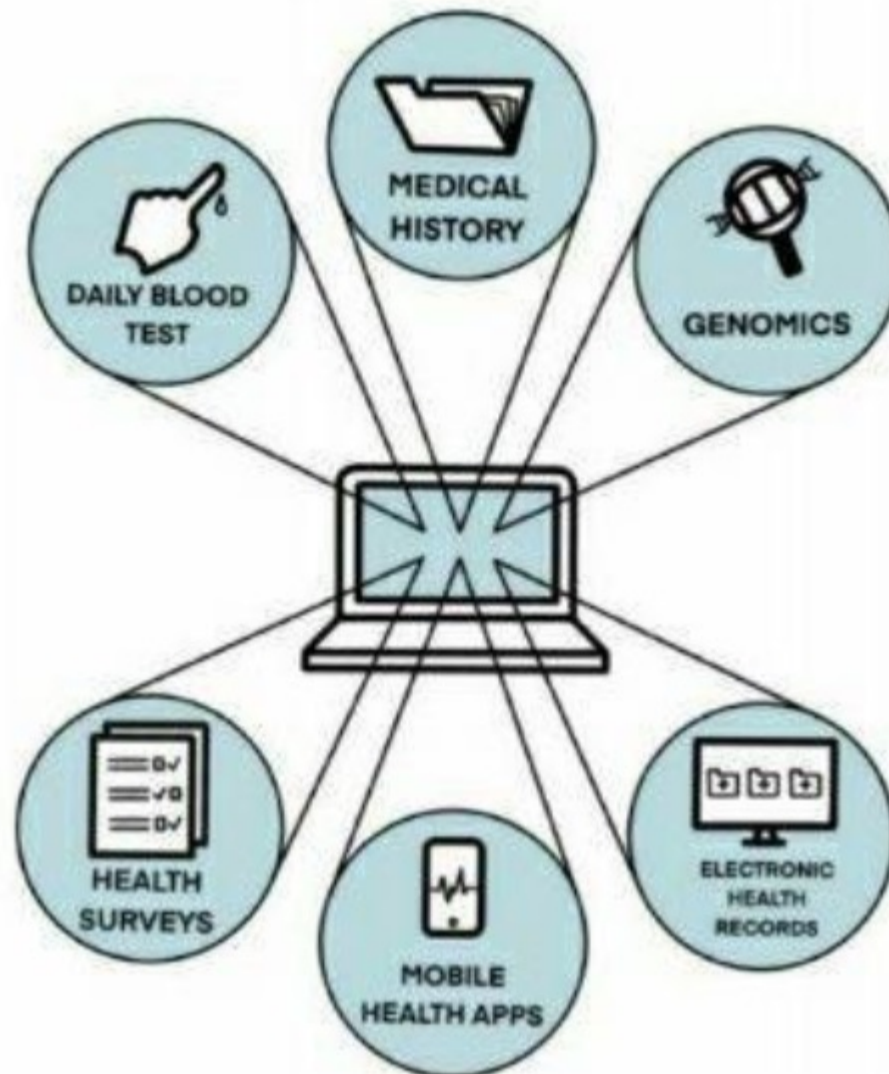


LBXC WALLET

LBXC holders can easily access DBE via LBXC Wallet to purchase membership services. Users also can find service history. Furthermore, if a user keeps her LBXC in DBE Wallet, she is eligible for airdrop of some of DBE's profits.



Smart Health Platform

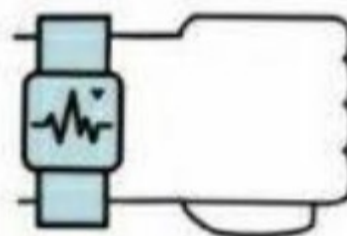


Medical data collected through IOT medical devices can provide critical insights for doctors when assessing the health of their patients. Data for patients is typically scattered in various devices and frequently not accessible by doctors. The doctors also do not have the suitable software needed to analyze the data to be used for diagnosis and monitoring of health statuses.

Through LBXC Smart Health Platform, we aim to manufacture suitable IOT medical devices which can record patients data that is useful to the doctors for diagnosis. The data collected can be in the form of types of physical activities engaged, duration of physical activity, sleeping habits, all of which provides valuable insights to the health of the patient.

Smart Health Platform

These wearable devices will have their data uploaded directly onto the LBXC platform. For users who are actively contributing data to the platform, they receive self-alert notifications that will be sent by our Artificial Intelligence doctor which will provide timely guidance on how the users can live healthier lives. For example, if the user has been detected to be stationary for too long – as it is common for most office workers – the AI will provide a notification suggesting that the user should conduct some physical activities. Upon completion of the activity, the user will receive a reward in LBXC tokens for living a healthier life.



With a premium monthly subscription, paid using LBXC tokens, users will also have access to remote medical care available on demand any time, any where. These doctors that can be accessed remotely, are trained to use the LBXC platform and will be able to draw on insights from the patients wearable medical devices to provide better quality diagnosis and to be able to provide tips on how the users can live a healthier life.

Most diagnosis in clinics these days relies on the patients ability to communicate on their health condition which may not be as effective for the doctor to make diagnosis. Through the Smart Health Platform, users can live healthier and better lives.

Data on Blockchain

Internet of Things (“IoT”) healthcare solutions have the potential to dramatically improve patient outcomes and save millions of lives – all while meeting the challenge of rising healthcare costs and an ageing population. However, 82% of healthcare organisations that have so far deployed medical IoT devices have experienced cyberattacks against those products - putting patient data at risk and undermining confidence in the sector.

The IOT market for medical devices, is estimated to be worth \$543bn in 2025, growing at a CAGR of 19.9%. Despite the huge potential, majority of doctors and healthcare workers believe that such IOT medical devices are unreliable.

To meet the needs of medical professionals, the IOT medical devices must meet the following requirements:

1. **Reliable connectivity** – these IOT medical devices records and send critical data which must have high availability and to stay connected for extended periods
2. **Compliance with privacy and security regulations** - devices must comply with privacy and security regulations such as IEC 62304, ISO 13485:2016, MDR 2017/745/EC, GDPR, and FDA standards.
3. **Long-lasting** - Devices must be future-proofed by being designed to allow remote software or security updates that provide optimal performance over extended periods.
4. **Ease of use** - it must be easy for patients and doctors to connect and run with minimal intervention or set up.

With these requirements, it is of LBXC’s assessment that building a medical blockchain platform for IOT medical devices is most apt given blockchains nature of being always available, stored securely through advance cryptography and provable security and authenticity of data.



Data Generated from Medical Devices

Through LBXC partnership with medical companies such as REGEN MEDICAL GROUP, there are countless of medical devices being utilized and data being created. These medical devices create vast amount of data daily which can be extremely valuable for researchers and the development of future advancement in healthcare techniques.

To ensure privacy, the data generated by these IOT medical devices will be automatically anonymized using Artificial Intelligence to ensure that the data cannot be used to traceback to the original patient whose data is based on.

Most of these valuable data is either lost or sold by healthcare companies without providing any benefits to the patients who helped to provide these data. LBXC aims to help users monetize their data and to help medical device manufacturers securely capture data created from these devices.

The data generated will be directly encrypted onto the blockchain and will be signed digitally by the medical device to ensure that data captured is accurate and tamper-proof. This way, researchers who are depending on the data for their research can have confidence that their findings are accurate.

LBXC Technology

Handling of personal and medical data generated from these medical devices can be risky due to privacy concerns. Past data leaks have led to disastrous outcomes for patients who have sensitive medical data leaked to the public.

LBXC data will be integrated directly into the blockchain network suitable for storing data for maximum security and ensure high availability of data. Through this process, users can also verify on the blockchain whenever their data has been accessed and ensure that they receive the relevant payment for access to their data.

LBXC will use the blockchain network for storing the data which should be made up of a large number of diverse storage providers which can create a robust and reliable service. Cryptographic proofs guarantee that the medical data stored remains available and unchanged over time.



Stakeholders within Data Marketplace

1. Data Buyers

Data buyers would typically be researchers from medical institutions or hospitals keen to do healthcare research. Other IOT medical developers may also be interested to use their data to identify which are the most useful data for the purpose of collection.

Data streams are offered on the LBXC platform at certain prices through bidding and will require LBXC tokens to purchase. Once the data is purchased using LBXC tokens, the data buyer will receive a proxied HTTP URL from which he can access the data. The link is unique and temporary, and the data can only be used for the time period that the data buyer has paid for.

2. Data Sellers

Data sellers on LBXC platform would be the base consumers who have purchased wearable devices which are also connected to the IOT. Such data are usually scattered in the hands of consumers and the full potential of the data is not well utilized. For example, data collected within an Apple Watch is not synced with the users healthcare data which reduces the value of the data. Data sellers can choose to link various devices that they use such as a smart watch, heartpacer, DNA genome and other relevant information which will be anonymized on the LBXC data platform, but provide valuable insights to the researchers.

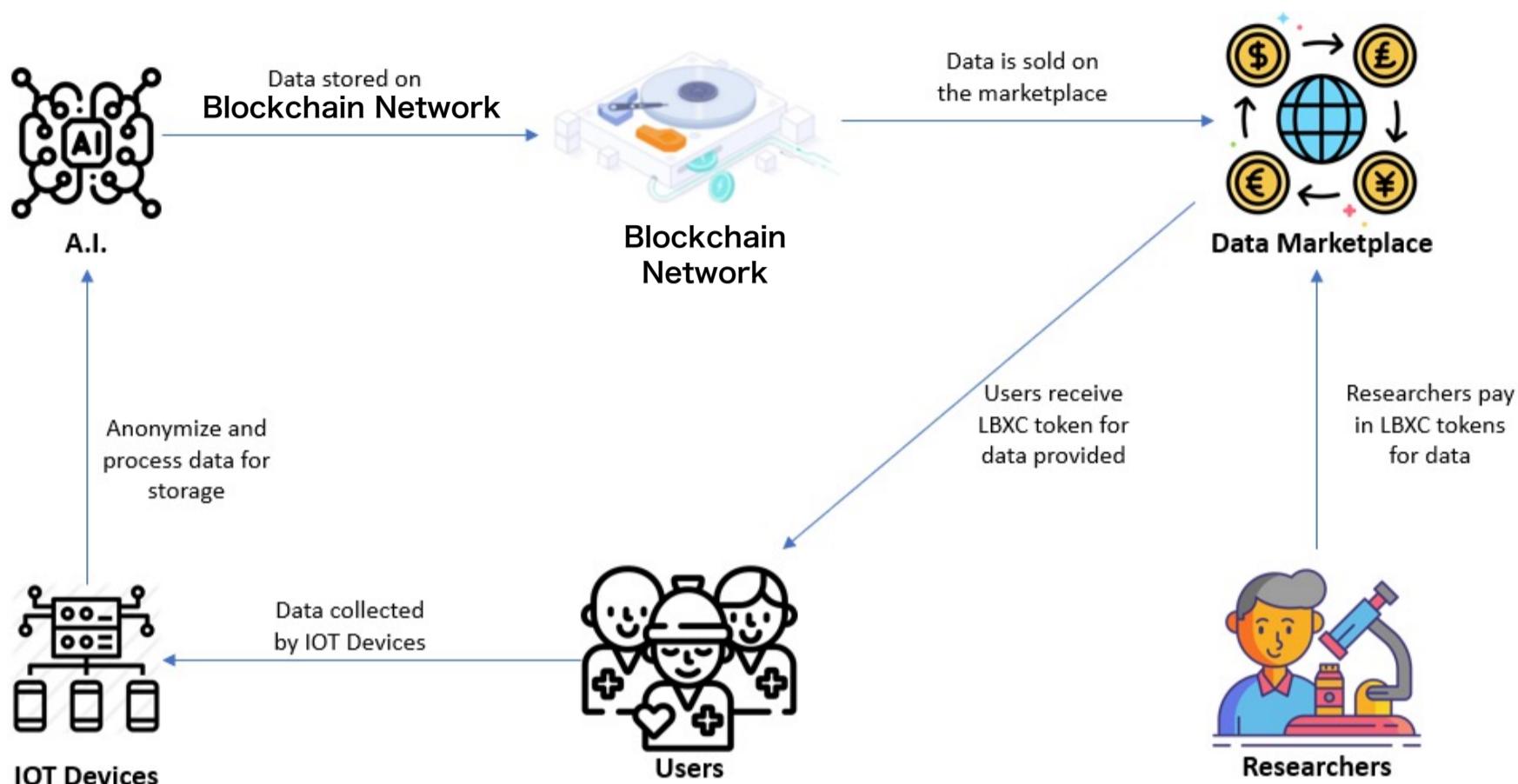
Depending on the rarity, completeness and demand of the data provided, the data sellers will receive a corresponding amount of LBXC tokens for the data that has been purchased and used by researchers within the ecosystem.

Data sellers are required to connect their IOT devices directly into the LBXC data platform to ensure that the data collected is accurate and has not been tampered with. This helps to ensure that high quality data can be provided to the data buyers.

Data sellers will be eligible to safely manage their own medical data collected through their IOT devices and have full control over the data that they are willing to share. Based on the amount of data shared, the users will then get rewards for data that has been purchased.



Ecosystem for LBXC Data Marketplace



This is how the ecosystem for LBXC Data Marketplace function with LBXC tokens as the base currency of the marketplace

1. Users will generate medical data when using IOT Medical Devices
2. The data collected by the IOT Medical devices will be anonymized and processed by the LBXC artificial intelligence to ensure that the data is clean and useful for research purposes. In this step, the artificial intelligence will also detect and remove fraudulent data to ensure high quality of data stored
3. The processed data will be transferred to LBXC's blockchain network for storage in a secure and decentralized environment with high availability
4. When researchers require the data for their work, they can browse the LBXC Data Marketplace for suitable data for their use. The data can then be purchased by the researchers using LBXC tokens.
5. Upon payment, the LBXC tokens will be proportionately distributed to all users who have contributed their data based on their respective share of data contributed. Users who have contributed more data will receive a large portion of the total payment.



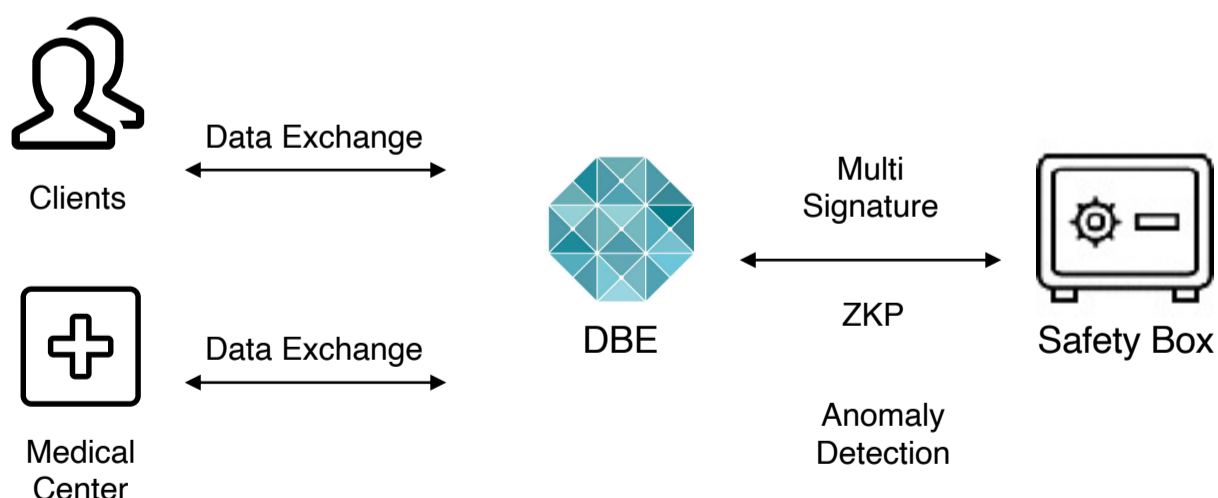
SECURITY & PRIVACY PROTECTION

We understand data can be hacked at any moment without warning and that is why the DBE was designed to run on the highest security level from the very early stage. DBE system will be designed to respond to all known security threats while preparing for the worst-case scenarios at all time.

In order to protect important privacy and assets of our clients, we are planning to introduce SafetyBox system, a management system based on off-chain and M-of-N Multisignature, to safely manage them. Partial data will be classified by significance, then separately managed by both DBE and zero-knowledge proof. An access to the entire data will be limited with Multisignature process. All anti-breach technologies stipulated above are impenetrable without an approval of the client.

However, we will not take any chances to compromise experience in the name of pursuing perfection in security, known that security is a part of the user experience. To deliver stable and secure services, we will utilize machine-learning methods to run anomaly detection for the highest level of security experience.

How Private Data are Exchanged





Dong-gwan Kim
CEO



Boyeong Cheon
CMO



Chris Won
Developer



Bella Park
Project Manager



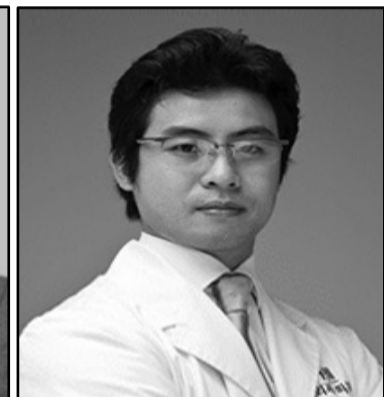
Seok-jun Lee
Director



Hae-kwon Kim



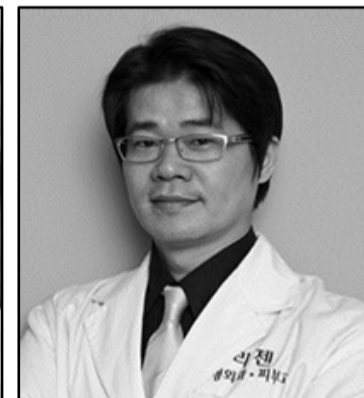
Ju-Tae Kim



Myeong-jun Oh



Dong-rak Kim



Young-geun Shin



Samada Takao



Hoon Han



Shuji Yamaguchi



Arai Ken



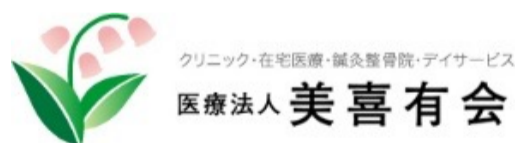
James Jeon



Partners



医療法人サンセール会



LUX BIO EXCHANGE COIN

Partners

Partners

Partners

BitUN

HIGGS

 **higgsblock**

 **higgschain**

 **TideBit**

 **TIDE iSUN**
泰德陽光集團

iSUN TV

n⁺ InfiniteChain

 **SUNTV**
陽光衛視

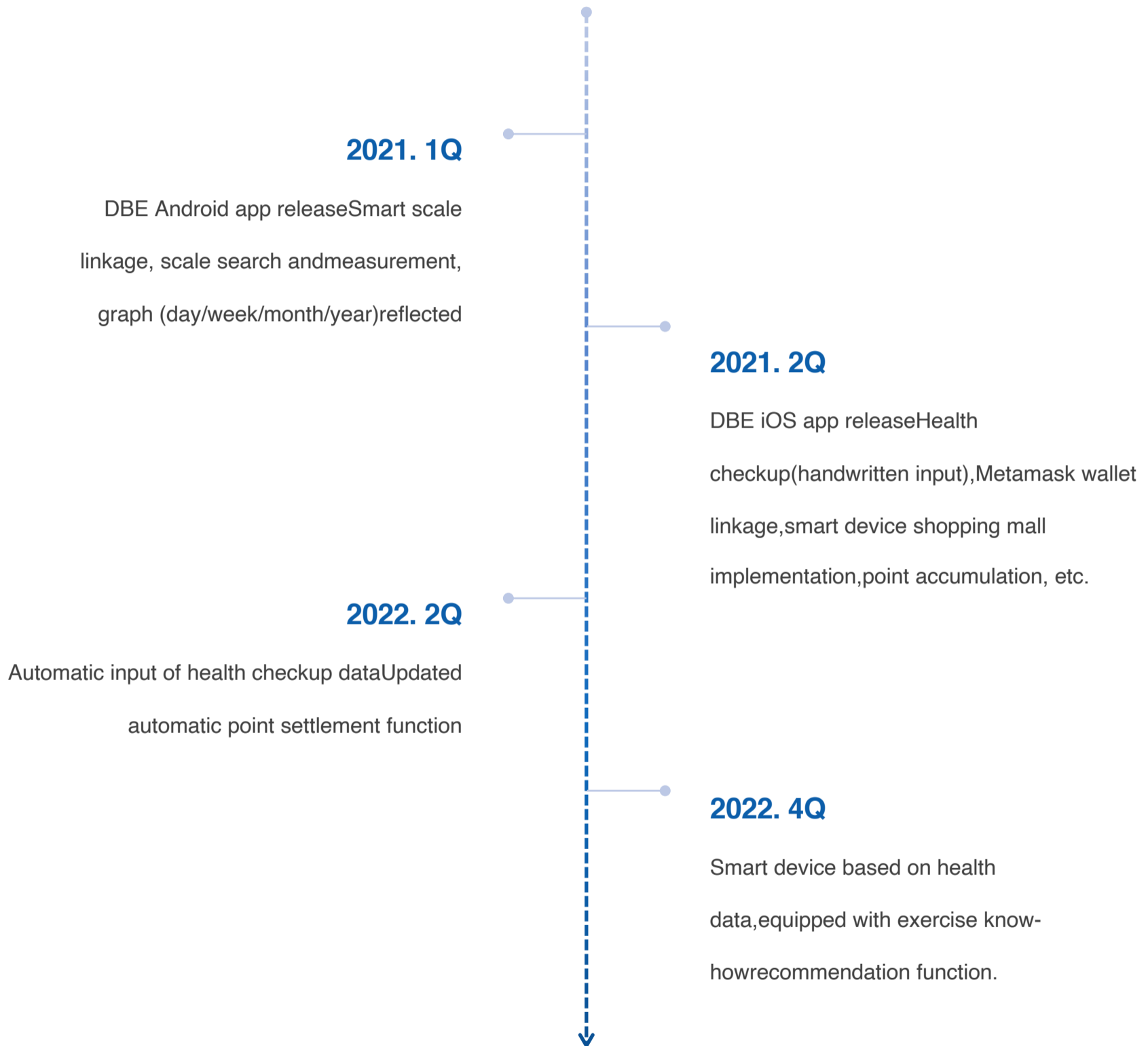
 **firsttree**
ventures

 **paylance**

 **MONEYBEES**

 **SNvia**





Token Specs and Distribution

LBXC Token Specifications

Users can trade LBXC Tokens via cryptocurrency exchanges. Purchased LBXC is usable in DBE platform and also tradable and transferrable to other users.

Issuance term

Total issuance	10,000,000,000
ICO issuance	3,000,000,000
The number of tokens to sell	3,000,000,000
Hard cap	ETH 300,000
Soft cap	ETH 30,000
Project protocol	ERC 20
Currency Accepted	ETH

LBXC Token Distribution Scheme



[1] KOSIS, “2016 Life Expectancy”, Dec 2017,

<http://kosis.kr/publication/publicationThema.do?pubcode=LL>

[2] GLOBAL STEM CELL ASSAY MARKET FORECAST 2017-2025, 2017

<https://www.inkwoodresearch.com/reports/global-stem-cell-assay-market-forecast/>

[3] Bio Spectator, “Court Rules Stem Cell Storage and Cultivation is Medical Practice”, July, 2016

http://www.biospectator.com/view/news_view.php?varAtcId=1355

[4] Boan News, “Biggest Privacy Leakage in Singapore History,” July 2018

<https://www.boanews.com/media/view.asp?idx=71582>

