

—
2023
DIPS 1000+
Project
Startup Directory

—
Semi-conductor
Bio Health
Eco Green Energy



중소벤처기업부



창업진흥원
STARTUP

KSA 한국표준협회
KOREAN STANDARDS ASSOCIATION



서울대학교
SEOUL NATIONAL UNIVERSITY



성균관대학교
SUNGKYUNKWAN UNIVERSITY



KIT 안전성평가연구소
Korea Institute of Technology



Y&ARCHER



PEN
VENTURES



Contents

2023
DIPS 1000+
Project
Startup Directory

Bio Health				
New Medicine	1	Galux Inc.	008	
	2	KoBioLabs, Inc	009	
	3	NEX-I	010	
	4	Neurade Science Co., Ltd.	011	
	5	MEDIFIC INC.	012	
	6	MEPSGEN	013	
	7	MolGenBlo Co., Ltd.	014	
	8	MolCube, Inc.	015	
	9	BIORCHESTRA Co., Ltd.	016	
	10	Biophammer	017	
	11	Brexogen Inc.,	018	
	12	Sci-Key Biotech Inc.	019	
	13	SPHEBIO Co., Ltd.	020	
	14	EyeBioKorea Inc.	021	
	15	AIGEN Sciences Inc.	022	
	16	AcesoStem Biostategies Inc.	023	
	17	AniMusCure Inc	024	
	18	SCBIO Inc.	025	
	19	S&E bio Co., Ltd.	026	
	20	SML Biopharm Co. Ltd.	027	
	21	ORGANOIDSCIENCES LTD.	028	
	22	Autotelic Bio Inc.	029	
	23	Oncodew Co., Ltd.	030	
	24	Ubix Therapeutics, Inc.	031	
	25	youthbioglobal	032	
	26	Eutilex Co., Ltd.	033	
	27	Innovo Therapeutics Inc.	034	
	28	ImmunAbs	035	
	29	ILIAS Biologics Inc	036	
	30	YiPSCell	037	
	31	Genopharm Inc.	038	
	32	ZTI BIOSCIENCES co., ltd.	039	
	33	GeneMedicine Co., Ltd.	040	
	34	Quratis Inc.	041	
	35	KYTECBIO	042	
	36	Tiumbio.	043	
	37	PEPGENE	044	
	38	POSVAX Co. Ltd.	045	
	39	ProAbTech Co., Ltd.	046	
	40	PINOTBIO	047	
	41	HysensBio	048	
Bio materials	42	Kookmin Bio Co., Ltd.	049	
	43	RAFIQ cosmetics	050	
	44	MYCEL Inc.	051	
	45	MEDIPOLYMER	052	
	46	ABIOTECH.	053	
	47	ANPOLY Inc.	054	
	48	PRECLINA INC.	055	
	49	HealthBiome Inc.	056	
Medical Devices	50	Neurogrin Inc.	057	
	51	DYPHI	058	
	52	Deep Bio Inc.	059	
	53	Depsonbio	060	
	54	LABnPEOPLE	061	
	55	Lepidyne Co., Ltd.	062	
	56	RecensMedical	063	
	57	realigner Co.,Ltd	064	
	58	MINDHUB	065	
	59	MEDiThings Co., Ltd.	066	
	60	MedInTech Inc.	067	
	61	Medicosbiotech Inc.	068	
	62	MMILR Inc.	069	
	63	Biofriends, Inc.	070	
	64	SURGINUS Co., Ltd.	071	
	65	CTCELLS, Inc.	072	
	66	ASSEMBLECIRCLE	073	
	67	AccuGene, Inc.	074	
	68	Alinsight Inc.	075	
	69	HME Square	076	
	70	OSSTEOBIONICS	077	
	71	1drop Inc	078	
	72	WELT Corp.	079	
	73	EROP Co.,Ltd	080	
	74	eMotiv CO., LTD.	081	
	75	Crescom Co., Ltd.	082	
	76	Todo Works Corp.	083	
	77	Plasmapp Co.,Ltd.	084	
	78	Hutom	085	
Digital Health Care	79	GradeHealthChain	086	
	80	neumafit co., ltd	087	
	81	Dr.Tail Inc.	088	
	82	LabSD, Inc.	089	
	83	MAUMLAB	090	
	84	Medivelbio Inc.	091	
	85	Mirabellsoft	092	
	86	BUD.on	093	
	87	BeauBrain Healthcare	094	
	88	VisualCamp	095	
	89	Sevenpointone Inc.	096	
	90	Stress solution	097	
	91	Silvia Health Inc.	098	
	92	Atommerce Inc.	099	
	93	AI.ble Therapeutics	100	
	94	HD Junction	101	
	95	EXOSYSTEMS Inc.	102	
	96	Genome Insight Technology, Inc.	103	
	97	GenieCup Inc.	104	
	98	GB SOFT	105	
	99	Caresquare Inc.	106	
	100	QSTag Inc.	107	
	101	PiQuant	108	
	102	Pie Healthcare	109	
	103	40FY	110	
	104	Promedius Inc.	111	
	105	pixelRo Co., Ltd.	112	
	106	HITS Inc.	113	

Powering the Future of Medicine with AI-Driven Drug Design

Revolutionizing drug development with its cutting-edge AI solutions.

Galux seeks collaborative partnerships to develop innovative medicines by leveraging its drug design platform. It is also seeking licensing opportunities for its internal pipelines.

Sales Amount				
Sales Amount	Domestic		Major clients	① Kakaobrain
	2021	2022		
	N/A	N/A		② Oscotec
	Overseas			③ N/A
	2021	2022		④ N/A
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount(\$)
2021	Intervest	Pre-A	3,000,000 \$
2022	Intervest, Kakaobrain, 3 others	Series A	21,000,000 \$

Company profiles

Established date	2020.09.08
CEO	ChaOk Seok
Employee No.	31
Business Category	Pharmaceutical R&D
Technology Field	Biotechnology
Main Item	AI-enabled drug design platform
Main Team members	ChaOk Seok CEO Professor, Dept. Chemistry, Seoul National University (2004~)
	TaeYong Park Executive VP Seoul National University Ph.D. Graduate
	JinSol Yang Director Seoul National University Ph.D. Graduate
Address	F3, 1837, Nambusunhwan-ro, Gwanak-gu, Seoul, Republic of Korea F3, 792-4, Magok-dong, Gangseo-gu, Seoul, Republic of Korea

Technology



AI-powered drug discovery platforms (BioDesign, AbDesign)

For the past two decades, Galux has continuously demonstrated its proficiency in accurately predicting protein structures and interactions through computational methods. Using AI-enabled drug design platforms, Galux can modulate protein affinity via amino acid substitution/insertion/deletion, design epitope-specific antibodies, and engineer an Ab's Fc region to elicit only the desired effector function(s).

BioDesign & AbDesign: Affinity modulation for proteins and Fc engineering for antibodies

BioDesign possesses the capability to alter protein affinity/specificity towards its target through amino acid substitution, insertion, and deletion. It can also be utilized to modify the Fc region of antibodies, selectively inducing desired effector functions. AbDesign manipulates the CDR region to modify antibody affinity/specificity, with the ultimate goal of de novo design of epitope-specific antibodies.

Rich legacy of excellence and globally renowned AI scientists

Galux, renowned for its expertise in molecular structure and interaction prediction using computational methods, has been gaining global recognition as one of the top solutions providers for protein structure and interaction prediction methods over the past 20+ years at international competitions like CASP and CAPRI. In addition, in an effort to accelerate advancements in its AI platform, Galux has forged a strategic partnership with a large-scale AI expert, KakaoBrain.

Core IP & Awarded Status



Key intellectual property rights and award status

N/A	N/A

Certification & award status

2020	CASP14: 1st and 4th place in Assembly category
2019	CAPRI 7th ed.: 2nd Place
2018	CASP13: 1st Place in Refinement category, 2nd place in Structure and Assembly categories

Translating Human Microbiome for Healthy Life

The industry-leading bio-venture company for groundbreaking human microbiome technologies.

Improving qualities of KoBioLabs' breakthrough microbiome-derived candidates to meet international standards from earlier stages of development. Moreover, acquiring widely-acceptable, high standard of clinical evidences for candidates through clinical trials at a global level with foremost experts.

Sales Amount				
Sales Amount	Domestic		Major clients	① N/A
	2021	2022		② N/A
	2,190,257 \$	8,785,448 \$		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2022.03	Emart Inc.	SI	7,566,586 \$
2021.11 ~ 2021.12	Multiple investors	Post-IPO funding	38,928,571 \$
2020.11	IPO (KOSDAQ)	IPO funding	25,650,726 \$
2019.09 ~ 2019.10	Multiple investors	Pre-IPO funding	20,151,332 \$
2019.02	CJ CheilJedang etc.	SI	3,024,803 \$

Company profiles

Established date	2014.08.11
CEO	GwangPyo Ko
Employee No.	55 (2022.12.31.)
Business Category	Bio/Medical
Technology Field	Human Microbiome
Main Item	Microbiome-based therapeutics
Main Team members	GwangPyo Ko CEO/Founder Professor, Graduate School of Public Health, Seoul National University Sc.D., Harvard University
	HanSeung Lee Senior Vice President Senior Vice President, Y-Biologics Ph.D., University of California Irvine
	SangKyun Lim CTO Senior Vice President, Kanaph Therapeutics Ph.D., University of Wisconsin-Madison
Address	Head Office #220-745-1, Seoul National Univ., 1 Gwanak-ro, Gwanak-gu, Seoul, Republic of Korea R&D Center 7F, Bld. C, Daewangpangyo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea

Technology



Smartiome, the platform technology for microbiome therapeutics

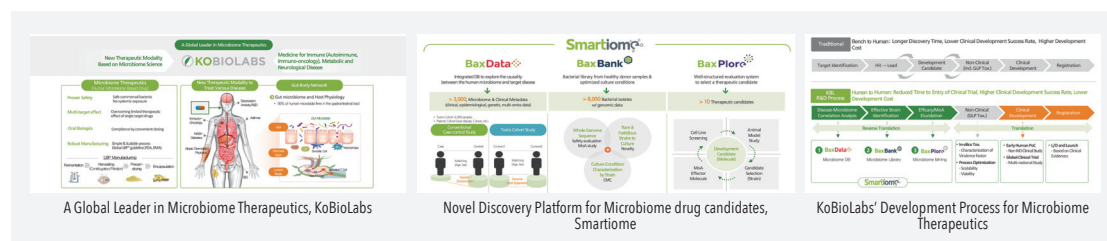
Smartiome is KoBioLabs' platform technology highly optimized for efficient identification and development of microbiome therapeutics, consists of a human microbiome database, a 8000+ bacterial isolates from the human donors, and a well-structured evaluation platform for a therapeutic candidate.

KBLP-001 Pipeline (Indication: psoriasis)

KBLP-001 is the most advanced program of KoBioLabs in phase 2. Psoriasis, a common and incurable chronic immune-mediated skin disease, has significantly negative impact on patients' quality of life. KBLP-001 is the safe and effective oral therapy for satisfying the needs for psoriasis patients.

Microbiome therapeutics, the new, effective and innovative approaches for various chronic diseases

Strong relationships between microbiome and chronic health disorders have been suggested. Microbiome-based therapeutics are based on reverse translation researches with the lower cost and the higher development success rate. Further, microbiome-based therapeutics will be effective alternatives or complements of chemical drugs.



Core IP & Awarded Status



Key intellectual property rights and award status

2020.07	Lactobacillus Gasserii KBL697 and Use thereof
2020.12	Akkermansia muciniphila and composition for controlling appetite or preventing, improving, relieving and treating metabolic disease comprising the same
2022.05	Composition and Method for Preventing, Alleviating, or Treating Liver Injury

Certification & award status

N/A	N/A

Breaking New Ground in Cancer Immunotherapy

NEX-I is a next-gen biotech company that can present a new paradigm in immunotherapy for cancers.

Development of a new therapeutic agent (NXI-101) that overcomes the limits of immune-resistant cancers. NEX-I is continuously exploring ONCOKINE®, secreted proteins that are associated with the refractory by Immune checkpoint inhibitors. Through the discovery of these ONCOKINE®, we have identified candidate substance NXI-101. Therefore, we are committed to ongoing research and development, aiming to validate its effectiveness through clinical trials.

Sales Amount				
Sales Amount	Domestic		Major clients	① N/A
	2021	2022		② N/A
	N/A	N/A		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount(\$)
2022.10	GC Biopharma	Series A	1,514,348 \$
2022.09	DSC, Schmidt, Hana Ventures, Atinum, Stonebridge, TS, Wonik, C.J, Medytox	Series A	15,143,485 \$
2022.02	Atinum	Pre-series A	757,174 \$
2021.12	DSC, Schmidt, Hana Ventures, Daewoong	Pre-series A	3,028,697 \$

Company profiles

Established date	2021.04.12
CEO	KyoungWan Yoon
Employee No.	N/A
Business Category	Medical and pharmaceutical research
Technology Field	Anticancer Immunotherapy
Main Item	Anticancer monoclonal antibody

KyoungWan Yoon | CEO

Genome & Company / CSO - EVP
MGH, Harvard Medical School /
Research Fellow

TaeWoo Kim | CTO

Korea University College of Medicine /
Professor
Johns Hopkins Medical School /
Research Professor

JinPub Son | COO

Dong-A Socio Holdings / SIM
DM Bio / General Manager, Business
Planning

Address
A-923 9F, Tera tower 2, 201 Songpa-
daero, Songpa-gu, Seoul, 05854,
Republic of Korea

Technology



NEX-I's unique First-in-Class drug development platform

The association between ONCOKINE-1, the first target, and immune checkpoint inhibitor resistance has not been reported yet, and the development of ONCOKINE-1 targeted antibodies is a unique technological advancement by NEX-I. Since ONCOKINE-1 is a protein that is up-regulated in immune checkpoint inhibitor-resistant tumors, it can also be developed as a biomarker for predicting responsiveness to immune checkpoint inhibitors.

Key Milestone

1. [NXI-101]

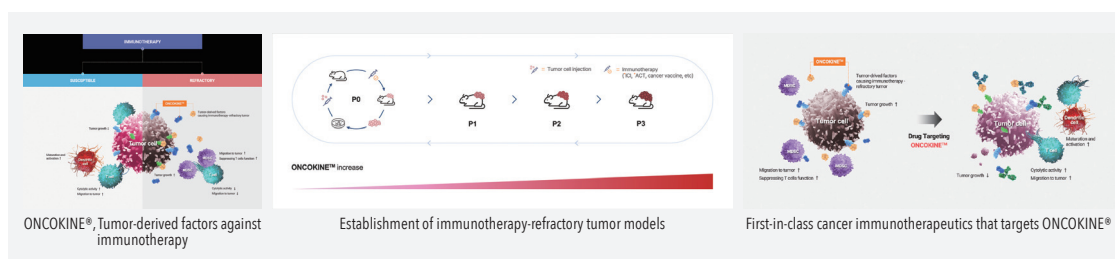
- Preclinical trials: Currently underway
- Phase 1 clinical trial: Targeted for the second half of 2024

2. [NXI-201]

- Preclinical trials: Currently underway
- Phase 1 clinical trial: Targeted for the second half of 2025

The differentiating features of NXI-101 and NXI-201

Based on over 20 years of research results, our company has established an in-house platform to identify "ONCOKINE®" as a factor for immune resistance in anticancer immunotherapy. We have constructed over 20 models of resistance to anti-cancer immunotherapy approaches in various cancer types. Through analysis of gene expression patterns and big data analysis in cancer patients, we have validated the clinical correlations and confirmed the anti-cancer efficacy of the targets.



Core IP & Awarded Status



Key intellectual property rights and award status

N/A	N/A

Certification & award status

2021.10	Ministry of SMEs and Startups / Awarded for TIPS
2021.11	KDDF / Awarded for the government initiative program
2022.01	Ministry of Science and ICT / Awarded for NRF

Neuracle Science Co., Ltd.

www.neuracles.com

Miracle via Neuroscience

Neuracle Science is a biotechnology company focused on the R&D of breakthrough therapeutics for neurological diseases.

Neuracle Science is a clinical-stage biotechnology company focused on the research and development of breakthrough therapeutics for neurological diseases. Our development strategy is to restore dynamic synaptic turnover in order to reduce neurodegeneration caused by pathological synaptic disconnection.

Sales Amount				
Sales Amount	Domestic		Major clients	① N/A
	2021	2022		② N/A
	N/A	N/A		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		
Investment attraction history				
Date	Investor		Stage	Amount (\$)
N/A	N/A		N/A	N/A



NEURACLE
SCIENCE

Company profiles

Established date	2015.10.01
CEO	JaeYoung Seong
Employee No.	38
Business Category	Biopharmaceutical Industry
Technology Field	Biotechnology
Main Item	N/A
Main Team members	JaeYoung Seong Founder & CEO Professor / Korea Univ., College of Medicine Professor / Chonnam Nat'l Univ., Biological
	Wonkyum Kim CTO Bio Analysis Group Leader / Hanwha Chemical
	Jeong Ryu CBO Head of Strategy & BD / InnoTherapy Sr. Manager, BD / Hanwha Chemical
Address	Research and Business Building 702-2, Science Campus, Korea University, 145, Anam-ro, Seongbuk-gu, Seoul(02841) Republic of Korea

Technology



NS101, first-in class targeting FAM19A5

FAM19A5 is a novel secreted protein, primarily expressed in the central nervous system. FAM19A5 mainly binds to a postsynaptic adhesion molecule and inhibits synaptic assembly, exacerbating synaptic dysfunction in neurodegenerative diseases. NS101 inhibits FAM19A5, promotes synaptic formation by normalizing the dynamics of synaptic turnover, and as the result restores impaired cognitive function.

Completion the first-in-human Phase 1 trial of NS101

Recently we successfully completed the first-in-human Phase 1 trial of NS101.

New mechanism to promote central nervous system regeneration

NS101 has a new mechanism of action that regenerates the central nervous system by promoting structural activation of synaptic connections. NS101 has a potential to be the key therapeutics for multiple synaptopathy-associated diseases, including Alzheimer's disease (AD) or sensorineural hearing loss (SNHL).

Core IP & Awarded Status



Key intellectual property rights and award status

N/A	N/A

Certification & award status

N/A	N/A

MEDICines for the First-In-Class Targeting Cancer Stem Cells

MEDIFIC is a pre-clinical stage biotech company developing first-in-class drugs to target cancer stem cells (CSCs).

- Innovative new drug development and corporate value enhancement through global partnership and technology transfer.

▶ Enhancing the value of technology & pipeline assets through collaboration and/or co-development with global pharma players.

▶ Efficient penetration into the global market through partnerships with global pharmaceutical companies and clinical research institutes.

Sales Amount

Sales Amount	Domestic		Major clients	① N/A
	2021	2022		② N/A
	N/A	N/A		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount(\$)
2019	Daekyo Investment, etc.	pre Series A	4.5m \$
2022	Daekyo Investment, etc.	Series A	3.7m \$



Company profiles

Established date	2018.02.07
CEO	SeungJun Yoo
Employee No.	16
Business Category	Professional, scientific and technical activities
Technology Field	Biopharmaceutical company
Main Item	MFC0101
Main Team members	<p>SeungJun Yoo CEO CSO, GENINUS, Inc. Managing Director, KoreaBio</p> <p>Hyunggee Kim CTO Professor College of Life Sciences, Korea University</p> <p>SangKoo Lee CDO CEO, Future Medicine Principal Researcher, LG Life Science</p>
Address	5F, Dongtangiheung-Ro 593-8, Hwaseong-Si, Gyeonggi-Do, Republic of Korea.

Technology



MFC0101: Pre-clinical stage, First-in-class SREBP degrader

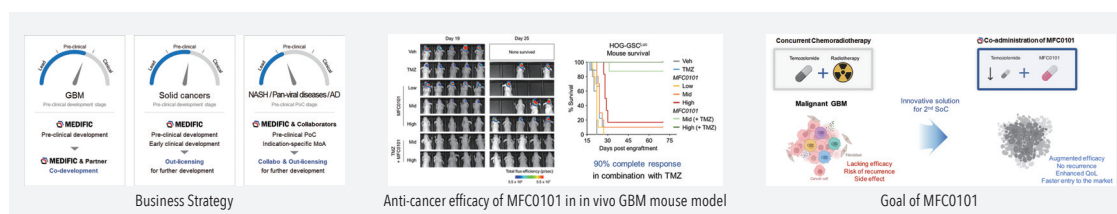
Cancer stem cells (CSCs) are the primary driver of metastasis, therapeutic resistance, and recurrence. Our drug candidate, MMFC0101 is a first-in-class small molecule inhibitor that induces the degradation of SREBP protein by inhibiting the protein-protein interaction between SCAP and SREBP. MFC0101 showed synergistic anti-cancer (GBM) efficacy resulting in excellent complete response (CR) when combined with temozolomide (TMZ).

Near-term milestones of MFC0101

MFC0101 is currently undergoing GLP-tox and is aiming for IND approval within 2024. In addition, MFC0101 applies to various SREBP-related diseases such as NASH, pan-COVID, and Alzheimer's disease.

Differentiation and innovation of MFC0101

- First-in-class small molecule: Currently undruggable target, SREBP1-dependent signaling pathway inhibitor.
- Synergistic efficacy: MFC0101 showed synergistic anti-cancer (GBM) efficacy with excellent complete response when combined with TMZ.
- Indication expansion: MFC0101 effectively targets cancer stem cells to treat GBM and other solid cancers.



Core IP & Awarded Status



Key intellectual property rights and award status

2022.12	[Pct](No.k2022/020728) Substituted Thiazolidinedione Derivative Compounds Andpharmaceutical Composition For Preventing Or Treating Cancer Comprising The Same
2022.12	[Pct](No.k2022/020866) Substituted Heterocyclic Derivative Compounds Andpharmaceutical Composition For Preventing Or Treating Cancer Comprising The Same
2021.12	[Kor](No.10-2021-0183632) Novel carbazole derivatives inhibiting SREBP1

Certification & award status

N/A N/A

Biomimetic Engineering Innovation for Advanced Therapeutics

Developing human microphysiological systems to predict drug toxicity and efficacy.

MEPSGEN develops human microphysiological systems (MPS) known as organ-on-a-chip and employs the innovative on-chip products to predict drug toxicity and efficacy for the rapid and effective translation of new medicines to market. MEPSGEN also develops a new microvortex device for the synthesis of LNPs encapsulating mRNAs.

Sales Amount					
Sales Amount	Domestic		Major clients	① ABL Bio Co., Ltd	
	2021	2022		② KRICT	
	132,459 \$	125,233 \$		③ SNU Bundang Hospital	
	Overseas			④ Emory University	
	2021	2022			
	9,050 \$	12,700 \$			
Investment attraction history					
Date	Investor			Stage	Amount (\$)
2022.07	Korea Development Bank, Dong-A Socio Holdings, Kolon Investment and 2 more			Series A	8,038,438 \$
2021.07	Korea Investment Partners Co., Ltd, Tiumbio, SBI Investment, Knotus			Series A's Bridge	3,493,061 \$
2020.11	Tiumbio			Series A	423,760 \$
2020.09	Korea Investment Partners Co., Ltd			Series A	2,542,565 \$

Company profiles

Established date	2019.08.19
CEO	YongTae Kim
Employee No.	31
Business Category	Scientific & technical activities/ Manufacturing
Technology Field	Microfluidics and Nanotechnology
Main Item	Organ-on-a-chip, LNP synthesis, Nanomedicine
Main Team members	YongTae Kim CEO Associate Professor Mechanical Engineering, Georgia Tech
	Hyuck Kim Executive Director Clinical Drug Development Division Postdoc, Univ. of Minnesota, Rutgers Univ. Ph.D, Brain Science, Seoul National Univ.
	HoonSuk Rho Executive Director Biochip Development Division Postdoc, Maastricht Univ., Univ. of Twente Ph.D, Chemical Engineering, Univ. of Twente
	Head Office Hanyang Tower 7F, 12, Beobwon-ro 11-gil, Songpa-gu, Seoul 035836, Korea Overseas Branch 1447 Peachtree ST. NE STE 350, Atlanta, GA 30309, USA
Address	

Technology



3D organ-on-a-chip platform (MEPS-X), Nanoparticle synthesis platform (MST-X), and Biomimetic drug delivery system (MG-X)

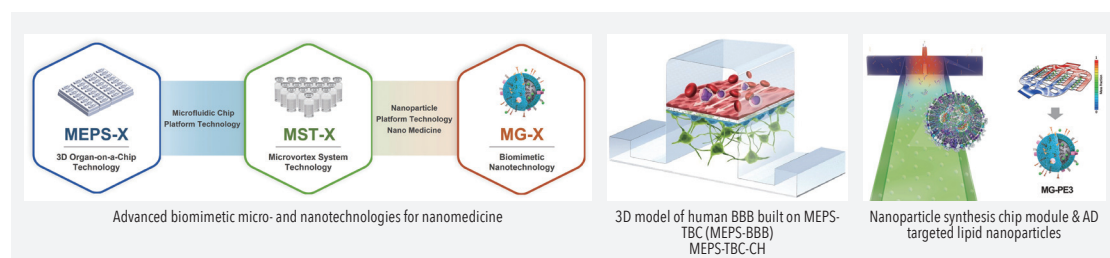
MEPSGEN has 3 platforms: i) MEPS-X, the MPS product platform of plastic-based microfluidic organ-on-chip in 3D to investigate the effect of therapeutics in human pathophysiology, ii) MST-X, the chip module platform for the uniform synthesis of nanoparticles and drug complexes in large-scale, and iii) MG-X, biomimetic drug delivery system to target neurological and cancer disease.

Developing an automated MPS system and uniform synthesis of mRNA-LNP and Evaluating MG-PE3 for AD treatments

In MEPS-X, MEPS-TBC for modeling tissue-to-tissue barriers, MEPS-BBB for modeling human BBB, and ready-to-use cryopreserved product of MEPS-BBB are produced and an fully automated MPS system is under developing. In MST-X, a new microvortex device to produce LNPs with greater and more stable encapsulation efficiency of mRNA and higher productivity and an automated nanoparticle synthesizer enabling mass production have been developing. In MG-X, lipid nanoparticles MG-PE3 to treat AD is currently in the preclinical phase.

The paradigm shift towards future drug development through human MPS

MEPSGEN's MPS enables researchers to predict drug toxicity and efficacy at human tissue levels, leading to reduction of substantial cost of clinical trials and increase the success rate in new drug development. MST-X platforms fixes low mRNA encapsulation efficiency and small-scale production. MG-PE3 is a bioinspired lipid nanoparticle targeting Aβ with high homogeneity, efficient BBB penetration, and no toxicity.



Core IP & Awarded Status



Key intellectual property rights and award status

2023.05	(No. 10-2531293) Novel Reconstituted High Density Lipoprotein Nanoparticle
2022.03	(No. 10-2380496) Cryopreservation Method For Organ-On-A-Chip
2021.10	(No. 10-2313280) Microengineered Tissue Barrier System

Certification & award status

N/A	N/A

Global leading company in Synthetic Microbial Therapeutics

Microbial Small Molecule Drug Development Based on Synthetic Biology.

We have pipelines for neurodegenerative diseases such as Parkinson's disease/dementia (MG-TA, MG-RA), anti-cancer (MG-LZ), and anti-tuberculosis (MG-AR). Starting with MG-TA, which has nerve regeneration, toxic protein aggregation inhibition, and anti-inflammatory effects, we are planning to enter non-clinical/clinical trials sequentially, and target L/O, M&A, or IPO within the next 3 to 4 years. We are also planning to attract investment for MG-TA non-clinical trials within 2023.

Sales Amount				
Sales Amount	Domestic		Major clients	① N/A
	2021	2022		② N/A
	N/A	N/A		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2022.04.20	Meritz Securities, etc	Angel	404,864 \$
2022.06.22	Meritz Securities, etcMedytox	pre-A	1,151,670 \$ \$

Company profiles

Established date	2021.03.29
CEO	YeoJoon Yoon
Employee No.	5
Business Category	Pharmaceuticals
Technology Field	Research and development
Main Item	Degenerative brain disease
YeoJoon Yoon CEO	Professor, Department of Manufacturing Pharmacy, Seoul National University
JungWoo Suh CDO	Research, production, and development at pharmaceutical companies over 35 years
SungChul Suh CFO	Financing & fund management including overseas equity investment for over 28years
Address	101, 141Dong, 1 Gwanak-ro, Gwanak-gu, Seoul, Republic of Korea

Technology



MolGenBio's drug discovery & development platform, MtG (Molecule through Gene)

- Molecule Through Gene (MtG) is an highly efficient drug development platform that combines ① genome scanning, ② biosynthetic gene cluster mining, ③ synthetic biological genome editing technology, ④ legoization of biosynthetic genes (combinatorial biosynthesis), which enables precise and free modification of complex structure of microbial small molecules that is difficult to access by chemical approach.

Excellent pipelines developed through MtG

- MG-TA (anti-CNS): Excellent neurotrophic efficacy and safety, Inhibition of α -synuclein aggregation, and efficacy demonstrated in a mouse PD model.
- MG-LZ (anti-cancer): Efficacy against 5-FU-resistant colorectal cancer and excellent synergistic effect of combination with FOLFOX / FOLFIRINOX.
- MG-RZ (anti-CNS): Inhibition and dissociation of amyloid- β & Tau aggregation.

Excellence as first-/best-in-Class drug

- MG-TA: A fundamental treatment for degenerative brain diseases that has excellent neuroregeneration activity and inhibits the aggregation of toxic proteins.
- MG-LZ: Anti-cancer drugs that can be developed as a new anticancer cocktail.
- MG-RZ: First small molecule for simultaneous dissociation of amyloid- β and Tau aggregates.

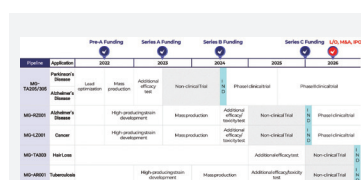


Figure 1. Development plan

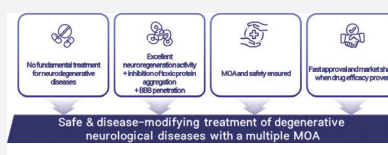


Figure 2. Excellence of MG-TA



Figure 3. Excellence of MG-LZ

Core IP & Awarded Status



Key intellectual property rights and award status

2021.06.18	[PCT](PCT/KR2021/007681)(Patent application: USA, EU, CN, JP) Novel poly(1FK506 derivatives and their usage with neurite growth and synaptogenic activity
2020.09.24	[PCT](PCT/KR2020/012966)(Patent application: USA, EU, CN)Cyclic peptide compound containing piperazine acid, a preparing method thereof, and a use thereof
2020.10.23	[PCT](PCT/KR2020/014554)(Patent application: USA, EU, CN) Tricyclic dilactone compound, preparing method and use thereof

Certification & award status

N/A N/A

Become a respected expert recognized by others in the field

CubeBuilder, a molecular dynamics-based cloud software service, is licensed to B2B clients. It supports pharmaceutical, biotech, and research firms in drug and bio-material development. MolCube also offers CRO services, attracting startups and generating revenue. Marketing efforts and MolCube USA, Inc., a US subsidiary, expand market reach.

Sales Amount

Sales Amount	Domestic		Major clients	① Bristol Myers Squibb
	2021	2022		② Shugai
	N/A	N/A		③ Altos
	Overseas			④ Eli Lilly
	2021	2022		
	20,000 \$	20,000 \$		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2022.06	Innopolis Partners and 2 more	Seed	400,000 \$
2022.09	WE Ventures	Seed	400,000 \$
2022.09	CKD Venture Capital	Seed	400,000 \$



Company profiles

Established date	2022.03.21
CEO	Wonpil Im
Employee No.	10
Business Category	Application Software Development
Technology Field	New drug and biomaterial development
Main Item	CubeBuilder
Main Team members	Wonpil Im CEO Lehigh University Professor (current) The University of Kansas Professor Seonghoon Kim COO Korea Institute of Advanced Study Sunhwan Jo CSO Baren Therapeutics SILC Bio
Address	Head Office 24 Seochojungang-ro 8-gil, 5th floor, Seocho-gu, Seoul, Republic of Korea, 06643 Overseas Branch 116 Research Drive, Suite 228, Bethlehem, PA, USA, 18015

Technology



Ultra-precise Molecular Modeling

Bioinformatics services for drug and bio-material design lack accurate drug-protein interaction simulations. CubeBuilder stands out with 600+ membrane component models and advanced polysaccharide modeling, giving it a competitive edge.

Step towards perfection

CubeBuilder's MVP, a cloud-based molecular simulation precision modeling software, is developed. 35+ global pharmaceutical firms are beta testing it, with ongoing inquiries from interested researchers. Actively incorporating feedback from beta testers to enhance and improve the product.

Become a respected expert

CubeBuilder supports 600+ membrane component models, complex polysaccharide modeling, and compatibility with diverse simulation programs. It uses Docker containers for platform, database, and analysis tool compatibility. Unique algorithms by MolCube ensure no license infringement. Prioritizing quality improvement through beta testing and customer feedback.

	지원 종류	Homogeneous 지원 시스템	Heterogeneous 지원 시스템
MolCube	> 600	생성 가능	생성 가능
BIOVIA	< 10	생성 가능	생성 불가
Schrödinger	< 10	생성 가능	생성 불가
Aceller	< 10	생성 가능	생성 불가
CCG	< 10	생성 가능	생성 불가

The number of geological types supported by MolCube

경쟁사와의 제공 가능 비교			
회사명	지원 종류	Homogeneous 지원 시스템	Heterogeneous 지원 시스템
MolCube	> 600	O	O
BIOVIA	< 10	O	X
Schrödinger	< 10	O	X
Aceller	< 10	O	X
CCG	< 10	O	X

O-Antigen containing OMP membrane complex system

Various types of biological molecules by MolCube

	MolCube	BIOVIA	Schrödinger	Aceller	CCG
CHARMM	O	O	X	X	X
NAMD	O	O	X	X	X
GROMACS	O	X	X	X	X
AMBER	O	X	X	X	O
GENESIS	O	X	X	X	X
LAMMPS	O	X	X	X	X
Desmond	O	X	O	X	X
OpenMM	O	X	X	X	X
ACEMD	X	X	X	O	X
MCE	X	X	X	X	O

Simulation environment compatibility

Core IP & Awarded Status



Key intellectual property rights and award status

N/A	N/A

Certification & award status

N/A	N/A

BIORCHESTRA Co., Ltd.

www.biorchestra.com

Together in Health Through Life

BIORCHESTRA is a biotherapeutics company focused on the treatment of rare and degenerative diseases within the Central Nervous System based on RNA technology.

BIORCHESTRA has developed a comprehensive business strategy aimed at facilitating early technology transfer to esteemed global pharmaceutical companies specialized in RNA drug development. Our approach centers on leveraging BIORCHESTRA's core technology, BDDSTM, which plays a pivotal role in this domain. The goal is to establish partnership with established companies, enabling the effective integration with BIORCHESTRA's cutting-edge technology with novel therapeutic asset. A key aspect of our business strategy lies on commercialization of our platform technology: BDDSTM. We have taken proactive step by establishing state-of-the-art pilot GMP production facility dedicated to the manufacturing of biodegradable polymers. Moreover, our commitment to diversifying our business endeavors has led us to adopt a sustainable revenue generation strategy, as part of this approach, we have devised a plan to supply polymers to our partner companies from our well-established GMP production facility. We will continue to support them throughout their clinical development and commercialization stage.

Sales Amount

Sales Amount	Domestic		Major clients	① N/A
	2021	2022		② N/A
	N/A	N/A		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount(\$)
2017.09	KITE Entrepreneurship Foundation	Seed	4,300,000 \$
2018.09	Daily Partners	Series A	2,820,000 \$
2019.08	Daily Partners and 7 others	Series B	17,100,000 \$
2020.12	IMM Investment and 1 other	Series B+	102,600,000 \$
2022.02	IMM Investment and 12 others	Series C	465,900,000 \$

BIORCHESTRA

Company profiles

Established date	2016.10.18.
CEO	JinHyeob Ryu
Employee No.	95
Business Category	R&D for DDS and Therapeutics
Technology Field	Development of DDS and Therapeutics based on RNA technology
Main Item	BDDSTM (Brain Targeting Drug Delivery System) Platform
Main Team members	JinHyeob Ryu CEO Ph.D. at the University of Tokyo, Internship at the Harvard Medical School
	Louis O'Dea President of US, CMO MB, BCH, BAO, CSPQ, FRCP(C), 28+ year industry professional at Akcea, Moderna etc.
	YoungGil Kim CFO CFO at GenoFocus for 7 years, KPMG for 13 years
Address	Head Office 116/216, Venture-dong, 125, Gwahak-ro, Yuseong-gu, Daejeon, 34141, Republic of Korea Overseas Branch 1 Kendall Square, Building 200, Suite 2-103, Cambridge, MA, 02139, USA

Technology



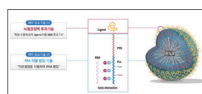
Brain Specific Drug Delivery Technology, BDDSTM (Brain Targeting Drug Delivery System) Platform

The BDDSTM (Brain Targeting Drug Delivery System) platform technology utilizes ligands with specific affinity for receptors expressed in brain blood vessels and brain cells, enabling effective passage through the blood-brain barrier (BBB) and targeted delivery of RNA drugs to brain cells.

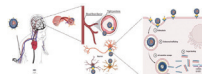
The essential components for safe and efficient delivery of RNA drugs beyond the BBB encompass two critical aspects. Firstly, the BBB penetration technology targets specific receptors, expressed in brain blood vessels and cells, facilitating successful BBB penetration. Secondly, the RNA drug encapsulation technology ensures the reliable and stable incorporation of RNA drugs. Through the synergistic interaction between the Transporter and Ligand, the BDDSTM platform technology has achieved an impressive 7% penetration rate through the brain-blood barrier for RNA drugs. Moreover, it has demonstrated the capacity to effectively deliver RNA drugs to brain cells, signifying a significant advancement in targeted RNA regulation.

Pens a Pact Worth up to \$861M for CNS-Targeted Polymeric Nanoparticle for Intravenous Delivery of Nucleic Acid Therapies

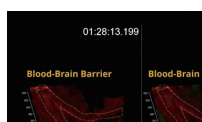
In February 2023, BIORCHESTRA has achieved a noteworthy milestone by successfully executing technology transfer of the BDDSTM, a CNS-targeted polymeric nanoparticle, to prominent global pharmaceutical companies. We secured an option agreement enabling us to engage in collaborative research and expand to diverse targets beyond the primary focused target. This contract represents the most substantial technology export among 10 accomplished transfers in the domestic market during 2023.2Q. at present BIORCHESTRA is actively collaborating with numerous leading global pharmaceutical companies on research endeavors.



Structure of BDDSTM



Action of BDDSTM



BBB penetration - in vivo confocal microscopy

Distinction and Innovation of BDDSTM

RNA drugs offer a potential for fundamental therapeutic effects by regulating intracellular mechanisms; however, their inherent instability within the biological milieu poses challenges as they may be rapidly degraded upon exposure to proteins and enzymes. Additionally, delivering RNA drugs to specific brain targets without effective drug delivery systems remains a formidable task. To address these limitations, our company has developed the proprietary polymer-based drug delivery system, BDDSTM, which enhances RNA carrier stability and improves drug release functionality. Through ion interaction BDDSTM encapsulates RNA drugs, ensuring their stable and targeted delivery to specific sites and cells without altering their integrity. Notably, BDDSTM accommodates both short RNA sequences (e.g., siRNA, ASO) and longer ones (e.g., mRNA), enabling efficient delivery to the brain. Distinguished from conventional drug delivery technologies, the administration of these drugs via intravenous injection showcases BDDSTM's distinctiveness. Our technological advancements have garnered recognition, exemplified by our Merck Grand Award (1st place) in the prestigious '2023 Merck's Advance Biotech Grant program' hosted by Merck Life Sciences, further attesting to our capability beyond global technology transfer.

Core IP & Awarded Status



Key intellectual property rights and award status

2020.06	PCT application (MICELLAR NANOPARTICLES AND USES THEREOF)
2020.11	US registration (USES FOR PREVENTION OR TREATMENT OF BRAIN DISEASES USING MICRORNA)
2020.12	US registration (METHOD FOR DIAGNOSIS OF ALZHEIMER'S DISEASE USING MICRORNA)

Certification & award status

2022.12	Citation from the Korean Minister of Trade, Industry, and Energy and Korean Minister of Health and Welfare Award, and mayor of Dajeon
2023.07	Grant the JungJinGi Press Culture Award in the Venture Startup
2023.07	Grant the Merck Grand Award of Merck Grand Merck Advance Biotech Grant Program

can provide a solution for urgent medical unmet needs in IBD

Developing Vactosertib as an effective anti-fibrotic drug for the treatment of intestinal fibrosis in IBD patients.

- The right to develop Vactosertib's IBD treatment has been transferred, and it is being developed with the goal of entering the US FDA's phase 1 clinical trial in the second half of this year.
- Preparing IND filing through KCRN, USA.
- We plan to promote license-out after entering clinical trials, and if L/O is successful, we will continue to invest in R&D based on the funds.

Sales Amount

Sales Amount	Domestic		Major clients	① N/A
	2021	2022		② N/A
	N/A	N/A		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2020.02	IBK Capital	Seed	400,000 \$
2022.03	Korea Investment Partners Penta Stone Investment KST	Series A	5,200,000 \$

Company profiles

Established date	2019.07.24
CEO	Wonmook Kim
Employee No.	11
Business Category	Pharmaceutical R&D
Technology Field	IBD(Fibrostenotic Crohn's disease)
Main Item	N/A
Main Team members	<p>WonMook Kim CEO ALS Pharma. Corp., Chief Executive Officer</p> <p>BonAm Koo Research Director Daewon Pharm. R&D Center Kolmar Korea, R&D Center</p> <p>JaeHoon Ryu Researcher Kcdpharm, R&D Center</p>
Address	409, 394, Jigok-ro Pohang-si, Gyeongsangbuk-do, Republic of Korea

Technology



Core technology of the product

- BioPhammer is committed to developing TGF-β Type I Receptor Kinase Inhibitor, Vactosertib for the treatment of fibrosis in IBD with experts in this field.
- Vactosertib is a highly potent, selective, and orally bioavailable small molecule TGF-β type I receptor (ALK5)/RIPK2 dual inhibitor.

Technology development progress

Preparing IND filing for US FDA phase 1 clinical trial

- Most of the data such as toxicity data are prepared, CMC data for clinical drugs expected to be completed in July-August

Differentiation and innovation

Vactosertib's dual activities against ALK5 (anti-fibrotic effect) and RIPK2 (alleviation of inflammation), Vactosertib is expected to work as an effective anti-fibrotic IBD treatment, a drug that society desperately needs.

- Anti-fibrotic effects (both the preventive and therapeutic effects) of Vactosertib have been demonstrated in various animal models and articles.
- Vactosertib is a safe first-in-class TGF-β type I receptor (ALK5) inhibitor, which can be developed quickly.

Core IP & Awarded Status



Key intellectual property rights and award status

2021.05	[US 8080568 B, PCK/KR201/00]46311]Vactosertip Exclusive Trade License
---------	---

Certification & award status

2020.12	Ministry of Science and ICT 2020 R&D Special Zone Technology Commercialization Award
---------	--

Meet exosomes, embrace the future

Brexogen paves innovative cell free strategies for targeting incurable diseases via stem cell exosome.

We are a leading company in the development of therapeutic exosomes. Currently, we have initiated a Phase 1 study for atopic dermatitis in the US, and we are also seeking opportunities in the areas of myocardial infarction and NASH.

Sales Amount				
Sales Amount	Domestic		Major clients	① Seoul 00 Hospital
	2021	2022		② Busan 00 Hospital
	N/A	N/A		③ 00 Electronic Co., Ltd.
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount(\$)
2019.10	Timefolio asset management etc.	Series Pre-A	1,885,370 \$
2020.09	Korea investment partners etc.	Series A	5,656,109 \$
2021.12	KDB Bank etc.	Series B	7,541,478 \$



BREXOGEN

Company profiles

Established date	2019.03.19
CEO	Sue Kim
Employee No.	21
Business Category	New drug development
Technology Field	exosome-based therapeutics
Main Item	Atopic dermatitis treatment
Main Team members	Sue Kim CEO · Asan Medical Center · Prostemics etc.
	Seung Taek Oh Vice-president (CBO) · Hanall biopharma · Boryung etc.
	Kook Hyang Kim CFO · KPMG · Handok etc.
Address	Head Office 3F, 9, Beobwon-ro 8-gil, Songpa-gu, Seoul, Republic of Korea Overseas Branch 9F, 9, Beobwon-ro 8-gil, Songpa-gu, Seoul, Republic of Korea

Technology



BG-platform

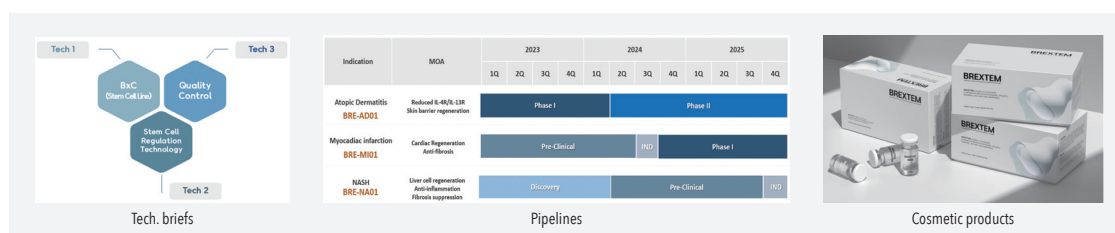
- BG platform mainly consists of iPSC derived mesenchymal stem cell(MSC) with high quality and homogeneity of the exosome, named BxC and priming procedure enabling the BxC to produce therapeutic function-enhanced exosome.
- The primed BxC makes exosome enriched in specific therapeutic cargo, which is more efficient in revitalizing or regenerating injured tissue compared to those from conventional stem cell-derived exosome. Depending on priming factors, the BxC secretes exosome with different cargo proteins, which enables the exosome to carry the controlled therapeutic cargo to certain indication.

Pipelines

- We have candidates for atopic dermatitis, myocardial infarction, NASH, renal failure and amyotrophic lateral sclerosis(ALS).
- Phase 1 study of atopic dermatitis on-going in the US and phase 1 study of myocardial infarction is planned in 4Q, 2023.
- We are looking for partners for research collaboration or licensing for further development and commercialization.

Effectiveness of exosomes

Injected stem cells couldn't survive enough time in the human body and can potentially lead to cancer due to their self-replication. Moreover, the process of culturing and extracting difficulties are also challenging. On the other hand, exosomes are highly stable within the human body, does not carry the risk of cancer, and can derived from specific individuals for treating multiple patients. These makes development of exosome-based products effective compared to stem cell therapies.



Core IP & Awarded Status



Key intellectual property rights and award status

2021.07	[KR] (Patent No. 10-2284117) Precursor cell of iPSC-derived mesenchymal stem cell and method for preparing the same
2021.03	[KR] (Patent No. 10-2135036+71Ps) COMPOSITION FOR PROMOTING PRODUCTION OF STEM CELL-DERIVED EXOSOMES
2023.06	(Patent No. 10-2095628+ect.) Other disease-specific IPs filed and registered

Certification & award status

2021.09	Best start-up company award (Korea Venture Business Association)
2022.11	Healthcare industry promotion and commercialization award (Ministry of Health & Welfare)
2023.05	Invention day award (Korean Intellectual Property Office)

Company with novel technology for aptamer discovery with global competitiveness

Simple, Fast, Convenience.

Sci-Key Biotech's entry to market strategies from technology application.

- Profit generation by commercialization of original technology.
- Revenue generation through Scimer (aptamer) technology and material transfer.
- Entering the market after developing treatment and diagnostic products based on self-developed scimers (aptamers).

Sales Amount				
Sales Amount	Domestic		Major clients	① N/A
	2021	2022		② N/A
	362,000 \$	369,000 \$		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		
Investment attraction history				
Date	Investor		Stage	Amount (\$)
2020.09	Personal (2)		Seed	7,600 \$
2021.12	Personal (9)		Seed	227,300 \$



Company profiles

Established date	2020.09.08
CEO	Eun oung Kim
Employee No.	4
Business Category	Medicine and Pharmaceutical R&D
Technology Field	Biohealth
Main Item	Aptamer
Main Team members	EunYoung Kim CEO Ph.D KAIST Cell Biochemistry (Obesity and Metabolic Diseases) / 24 years of research experience
	Jihyang Ha Director Ph.D Chungbuk National University Protein Structural Biology/Drug Repositioning 9 years of research experience / 5 years of Regulatory Affairs
	Jaemyong Chang Director MS Georgia Institute of Technology Specializing in Machine Learning 8 years of software development experience
	Address 511,160, Techno 2-ro, Yuseong-gu,Daejeon, South Korea 34028

Technology



Aptamer Library Pre-Organized Structure (ALPS) technology

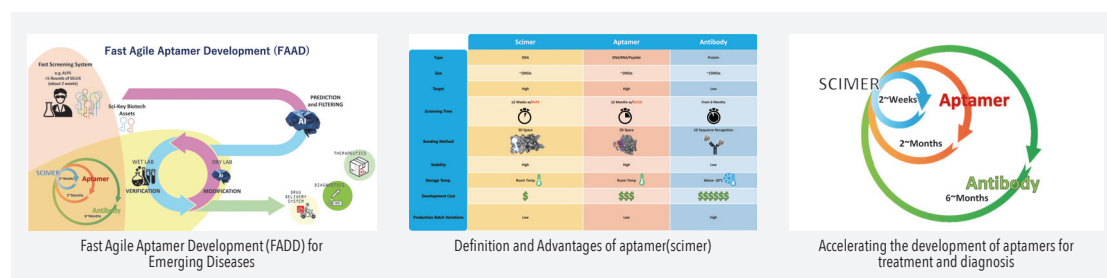
It was developed to minimize the aptamer discovery period. It's 4 to 12 times faster than normal aptamer and antibody development. 7 scimers were obtained for the use of development of anti-obesity and non-alcoholic Steatohepatitis (NASH) drugs. 2 of 7 aptamers are being used for drug delivery system development, and their potential has been confirmed.

Fast Agile Aptamer Development (FAAD) system

Our FAAD system consists of ALPS screening system to minimize the number of SELEX rounds needed for aptamer discovery and our aptamer modification software utilizing ML techniques to optimize aptamers and increase performance. Scimers our DNA aptamers were developed through our speedier screening system.

Our aptamer platform and computational tools

- Our aptamer platform and computational tools can achieve strong aptamer candidates which will help us enhance our technology
- Reduces time required to derive candidate Scimer (aptamer) by 1/12 compared to antibody based on the original technologies
- Minimize time to acquire mutated Scimer based on our own AI/ML (e.g. >2,000 candidate Scimers/20 min)
- Performance prediction to create and test for Scimers (aptamers) is reduced compared to antibodies (e.g. >100 Scimer/month)



Core IP & Awarded Status



Key intellectual property rights and award status

2022.12	DNA aptamers that specifically bind to coronavirus spike glycoproteins and uses thereof, Patent No.: 10-2022-0063329
---------	--

Certification & award status

2021.03	Ministry of SMEs and Startups, Pre-startup package support project / Preliminary Startup Package was Awarded
2022.11	AMGEN-KKIDI, Pitching Day / 2nd prize Awarded
2023.06	W-Startup Award

A leading company in biomaterials based on biomimetic production technology

SPHEBIO produces and commercializes various biological agents based on 3D cell culture platform technology, a next-generation bio-production technology.

- Stage 1: SPHEBIO Lab.: 3D cell culture model/biologics production/analysis service.
- Stage 2: SPHEBIO Plant-factory: Commercialization of Plnat cell-derived biologics.
- Stage 3: SPHEBIO 3D-CDMO: Biopharmaceutics CDMO by 3D Cell culture platform.

Sales Amount				
Sales Amount	Domestic		Major clients	① Kyungpook University
	2021	2022		② XCELL therapeutics
	62,399 \$	103,646 \$		③ Loreal Korea
	Overseas			④ Powerplayer
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount(\$)
2023.06	Korea Investment Partners	Series A	1,423,000 \$
2022.06	Hisstory Investment & Angels	SEED	323,000 \$
2021.08	DG Tech Holdings	SEED	308,000 \$
2020.10	POSTECH Holdings	SEED	154,000 \$
2020.09	POSTECH Holdings	SEED	77,000 \$



Company profiles

Established date	2020.08.24
CEO	Keunsun(Morris) Ahn
Employee No.	13
Business Category	Biologics manufacturing
Technology Field	3D cell culture-based biological manufacturing
Main Item	Biologics-based biomaterials
Main Team members	<p>Keunsun(Morris) Ahn CEO M.S. POSTECH T&R Biofab, NANOBASE</p> <p>Dongwoo(Ryan) Kim COO M.S. Dankook University RecensMedical, Prosternics, Daewoong Phar.</p> <p>SeungJin Kim CTO Ph.D. Yonsei University MX Bio, RokitHealthcare, T&R Biofab</p>
Address	541-ho, 87, Cheongam-ro, Nam-gu, Pohang-si, Gyeongsangbuk-do, Republic of Korea

Technology



Biologics Production based on 3D cell culture model

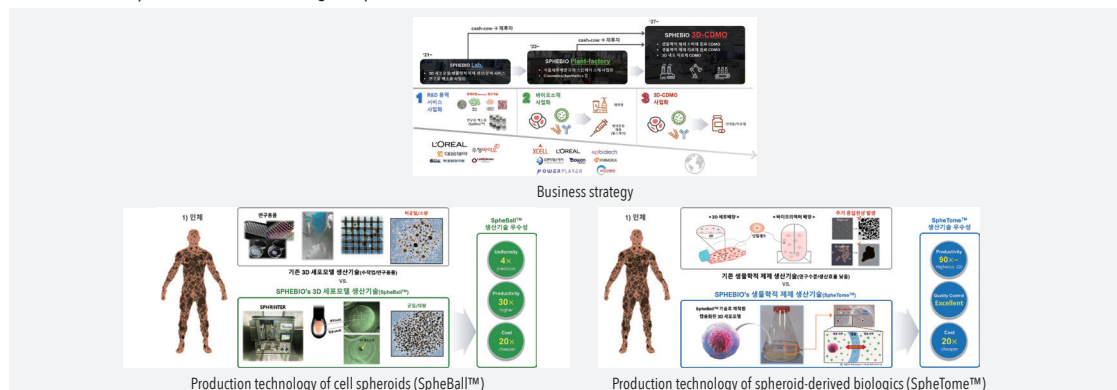
- Human / Animal / Plant cell-based 3D cell culture model production.
- Mass production of biologics using 3D cell culture model.
- Commercialization of biologics-based Biomaterials.

3D cell culture models and biologics based Biomaterials commercialization

1. Production of cell spheroid and spheroid-based biologics.
 - Stem cell spheroids-derived exosome standard(completed).
2. Production of plant callus-derived biologics.
 - Cosmetics & aesthetics commercialization(in progress).

First-in-Class & Best-in-Class biomimetic production technology

- Production technology of cell spheroids(SpheBall™).
- Production of spheroids-derived biologics(SpheTome™).



Core IP & Awarded Status



Key intellectual property rights and award status

2023.02	Method for preparing cellular spheroid and method for producing extracellular vesicles by using cellular spheroid prepared by such method (US application)
2023.02	Method for preparing cellular spheroid and method for producing extracellular vesicles by using cellular spheroid prepared by such method (EP application)

Certification & award status

N/A N/A

VISION FOR A BETTER LIFE: Illuminating the World with Innovation

EyeBioKorea is a research and development company.

specialized in the development of eye disease treatments with a "vision for a better life". Major pipelines include treatments for macular degeneration, diabetic retinopathy, dry eye, and thyroid eye disease. In the future, we will successfully complete global technology commercialization to become a world-class company specializing in the development of innovative new drugs in the field of ophthalmology.

EyeBioKorea is a company that specialized in research/development of new drugs for ophthalmic diseases, and its main pipelines are research/development targeting macular degeneration, diabetic retinopathy, dry eye syndrome, and thyroid eye disease. Among them, the treatment for macular degeneration has successfully completed the phase 1 clinical trial, and is preparing for the phase 2 clinical trial IND application, and aims to commercialize the technology to domestic and overseas multinational pharmaceutical companies.

Sales Amount

Sales Amount	Domestic		Major clients	① N/A ② N/A ③ N/A ④ N/A
	2021	2022		
	N/A	75,000,000 (₩)		
	Overseas			
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2023.05	Korean Venture Investment Corp.	Series B	1,500,000 \$
2022.08	Korea Investment Partners and 3 others	Series B	3,700,000 \$



Company profiles

Established date	2016.01.12
CEO	JaeWook Yang
Employee No.	16
Business Category	Research and Development
Technology Field	Ophthalmic New Drug
Main Item	Treatment for Macular Degeneration
Main Team members	<p>JaeWook Yang CEO Vice President of Busan Paik Hospital Head Professor of Inje Univ. Busan Paik Hospital Ophthalmology Department</p> <p>YunSeok Cho Vice President Research Director of Hanlim Pharmaceutical Senior researcher of HL Genomics Bio Business Team</p> <p>JinWook Jang Director R&D Director of EYEGENE</p>
Address	Imjae building 1010, 75, Bokji-ro, Busanjin-gu, Busan, Korea

Technology



Development of eye drops for macular degeneration using new peptides

The prevalence of eye diseases is increasing as we enter a super-aged society. Among them, macular degeneration, the main cause of blindness in the elderly, is showing an exceptionally high share and growth rate in the global treatment market. Existing macular degeneration treatments are mainly intraocular injections and antibody treatments, which have disadvantages such as patient discomfort, side effect, and economic burden depending on the administration method. The macular degeneration treatment being developed by EyeBioKorea is an eye drop preparation using a novel peptide. It lowers the production cost to reduce the economic burden, improves patient compliance, and also treats patients who are refractory to existing antibody injection treatments.

Current status of pipeline development for innovative new drug development for ophthalmic diseases

EyeBioKorea is continuously researching and developing innovative new drugs to derive an eye disease pipeline. In particular, in the case of macular degeneration treatment, the Ministry of Food and Drug Safety (MFDS) approved the IND for the phase 1 clinical trial in May 2022 and is preparing to apply for the phase 2a clinical trial IND. In the case of diabetic retinopathy treatment, we are preparing to apply for phase 2 clinical trial IND. In addition, new drugs for improving ocular surface diseases are under development. In order to commercialize the technology of the developed pipelines, we are promoting commercialization through licensing out or joint R&D with domestic and foreign ophthalmic pharmaceutical companies.

Development of an eye drop treatment for macular degeneration as an innovative new drug that overcomes the disadvantages of existing treatments

Macular degeneration treatment under development by EyeBioKorea is being developed as an eye drop formulation that overcomes the disadvantages of intraocular injection formulations of existing treatments. The development of an eye drop formulation has the advantage of improving patient compliance, eliminating side effects, and reducing the patient's economic burden.

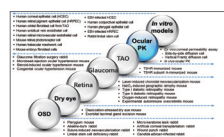
In addition, existing antibody treatments not only cause side effects due to frequent intraocular administration, but also cause refractory patients, making continuous treatment difficult. The treatment we are developing is a synthetic peptide material with a remarkably low production cost, which can reduce the patient's economic burden, and has a different mechanism of action from existing treatments, making it possible to treat refractory patients. As such, we are developing a first-in-class eye drop treatment for macular degeneration by developing a low-molecular peptide eye drop formulation.



Development of eye drop treatment for macular degeneration



Eye drop treatment for macular degeneration (for clinical trials)



EyeBioKorea Effectiveness Evaluation System

Core IP & Awarded Status



Key intellectual property rights and award status

2016.04	Chondrocyte extracellular matrix-derived peptide (10-2016-0043300)
2022.04	Novel peptide compound or pharmaceutically acceptable salt thereof (10-2022-0053844)

Certification & award status

N/A	N/A

Harnessing AI for Real-World Drug Discovery

Developing life-saving treatments with AI technology and human-AI collaboration.

Sales Amount				
Sales Amount	Domestic		Major clients	① Yuhan
	2021	2022		② Incurix Co., Ltd.
	N/A	136,000\$		③ Novelty Nobility Inc.
	Overseas			④ Avelos Therapeutics
	2021	2022		
	N/A	N/A		

Investment attraction history



Company profiles

Established date	2021.04.13
CEO	Jaewoo Kang
Employee No.	8
Business Category	Professional, scientific and technical
Technology Field	AI-driven Drug Discovery / AI Platform
Main Item	Innovative Drug Pipelines / AI Platform

Jaewoo Kang | CEO

Professor, Computer Science, Korea U.(2006~)
 Assist. Prof., North Carolina State U.(2003~2006)

Kwangok Lee | VP, Chief Science Officer

Head of R&D, Yungjin Pharma(2017~2021)
Drug Discovery/Global L/O,
Hanmi(1995~2015)

Jongho Kim | VP, Chief Business Officer

BD/Product Dev., Boryung
Pharma(2017~2021)
Planning/BD, CKD Pharma(2014~2017)

Address

Office 507, 25 Ttukseom-ro 1-gil,
Seongdong-gu, Seoul, Republic of
Korea

Technology



Human-in-the-loop(HITL) Drug Discovery Platform

AI GEN Science employs a Human-in-the-loop approach for drug discovery, combining AI and human expertise to overcome limitations and enhance accuracy. Its platforms, AI GEN InSight, ChemTailor, and Transcriptome, handle complex queries, enable collaborative drug design, and analyze transcriptome changes.

Current development phase and practical use

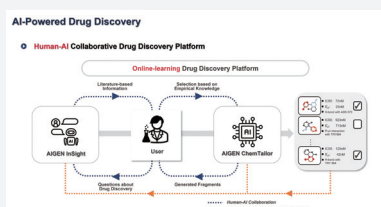
AI GEN Insight is in the experimental stage, winning multiple international competitions. ChemTailor, in prototype stage, aids actual drug development projects. TranscriptomeMap, in practical use, efficiently discovers compounds from a large library to induce desired transcriptomic changes.

Human-AI collaborative drug discovery overcoming traditional AI-based drug development methods limitation

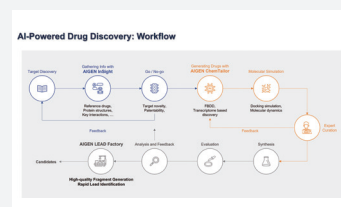
Traditional AI-based drug development methods face limits in novelty and synthesizability, largely due to insufficient training data. AIGEN Science overcomes this by using a 'Human-in-the-loop Drug Discovery' approach, combining expert insights with AI, enhancing efficiency and addressing data scarcity.



Novel ADC payload development
collaboration w/ Novartis Nobility



Human-AI Collaborative Drug discovery platform



AI technology platform and lead discovery

Core IP & Awarded Status



Key intellectual property rights and award status

2021.10	[KP](No. 10-2316989)Method and system for discovery of new drug candidate
2021.11	[KP](No. 10-2322884)Method and apparatus for discovery of new drug candidate

Certification & award status

2021.11	1 st place in BioCreative VII NLM-Chem Track, 3 rd place in DrugProt Track
---------	--

AcesoStem Biostrategies Inc.

Introducing a standard of care in cell therapy into daily practice for the treatment of common but intractable musculoskeletal diseases

Cell therapy and strategy using 3CX cell therapy platform that makes any cell therapeutics available for off-the-shelf use.

- Service Model: Ready-to-use cell therapy platform '3CX'
- '3CX' consists of CPX (ready-to-use cell cryopreservation technology), CNX (cell engraftment and function recovery promotion technology), and CTX (lesion treatment technology for tissue regeneration).
- Revenue model: Revenue from providing surgical therapeutic cell therapy products for advanced regenerative medicine research + revenue from non-surgical therapeutic cell therapy products through traditional product approval.

Sales Amount

Sales Amount	Domestic		Major clients	① KOLON BIOTECH Inc.
	2021	2022		② OSONG Medical Innovation Foundation
	N/A	N/A		③ GC Cell
	Overseas			④ Korea Institute of Toxicology
	2021	2022		
	N/A	N/A		

① KOLON BIOTECH Inc.

② OSONG Medical Innovation Foundation

③ GC Cell

④ Korea Institute of Toxicology

Investment attraction history

Date	Investor	Stage	Amount (\$)
2021.10	Blissvine Vintage 1 Investment Fund	Series A	N/A
2021.11	Seoul National University STH Private Equity	Series A	N/A
2022.02	Atacama Bio Private Investment Fund No. 1	Series A	N/A
2022.02	TAP BIO Investment Fund No. 8	Series A	N/A
2022.10	DreamCIS		N/A



Company profiles

Established date	2019.02.28
CEO	Hyunchul Jo
Employee No.	3
Business Category	Professional, scientific, and technical services
Technology Field	R&D for ready-to-use cell therapies
Main Item	Cell therapies with '3CX' ready-to-use platform
Main Team members	<p>Hyunchul Jo CEO Professor, Department of Orthopedic Surgery Seoul National University</p> <p>Kwihoon Jang Principal Researcher Post-Doc, Stem Cell & Orthopedic Research LAB, Seoul National University</p> <p>Jongsoo Kim Senior Researcher Leader, Manufacturing management, Novocellbio</p>
Address	813, 7 Boramae-ro 5ga-gil, Gwanak-gu, Seoul, Republic of Korea

Technology



Core technology of the product

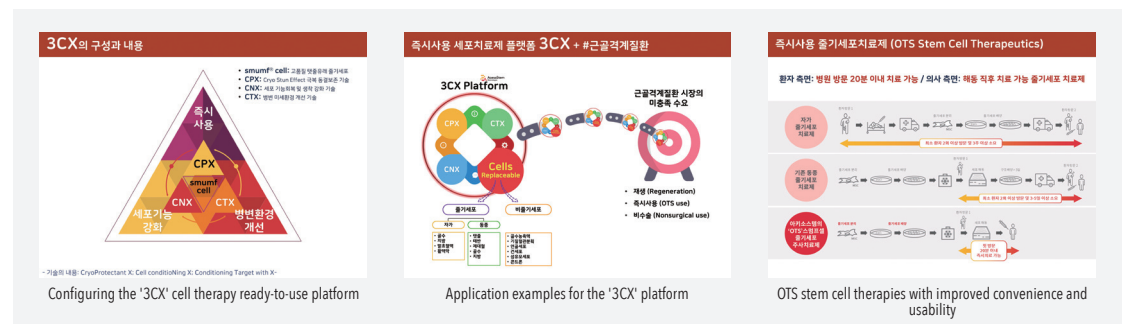
- High-quality umbilical cord-derived mesenchymal stem cells specialized for tendon regeneration (smumf cells).
- Advanced cryoprotectant (CPX) customized for smumf cells to minimize cell damage and induce rapid recovery after thawing.
- Cell conditioning technology (CNX) to enhance cell function before administration.
- Target (Lesion) conditioning technology (CTX) to improve the lesion environment at the administration site.

Technology development progress

- Completed characterization of high-quality allogeneic umbilical cord-derived mesenchymal stem cells (smumf cells).
- Completed GLP toxicity test and in vitro and in vivo test for efficacy.
- Completed manufacturing and quality control of finished drug products for clinical trials.

Differentiation and innovation

- Conventional cell therapy development strategies need to be revised.
- Ready-to-use is not just a matter of convenience, it's the difference between success and failure for cellular therapies.
- '3CX' ready-to-use platform: Advanced Cryopreservation (CPX), Cell Function Enhancement (CNX), and Lesion Treatment (CTX) to realize OTS use of cell therapies.



Core IP & Awarded Status



Key intellectual property rights and award status

2017.03	(No. 10-1716771) A method for prevention of chromosomal aberration in pluripotent stem cells through the inhibition of SIRT1 activity
2019.08	(No. 10-2015502) Method for isolating stem cells from human umbilical cord
2019.03	[PCT] (No. KR2019/003674) Method for isolating stem cells from human umbilical cord

Certification & award status

N/A N/A

Specialized R&D Company for Aging / Frailty

Specialized R&D companies seeking to improve the quality of life by overcoming aging

- Growth into a sustainable company through domestic and international clinical trials and technology transfer of muscle disease treatments.
- Improving corporate value by developing muscle disease treatments and maximizing shareholder value by pushing for an IPO in 2026.
- Diversifying indications and promoting research and development of new pipelines to develop into sustainable companies after IPO.
- Global Sarcopenia and Cachexia Drug Market, Over 20% Each (Target for 2030).

Sales Amount

Sales Amount	Domestic		Major clients	① N/A
	2021	2022		② N/A
	N/A	N/A		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2022.08	Korean Technology Finance Corporation	Bridge	1,000,000 \$
2022.05	KC	Bridge	500,000 \$
2020.10	Angel Investment	Seed	1,000,000 \$
2020.04	Angel Investment	Seed	500,000 \$

Company profiles

Established date	2020.04.01
CEO	JongSun Kang, GyuUn Bae
Employee No.	13
Business Category	medical / pharmaceutical research
Technology Field	muscle differentiation/regeneration
Main Item	muscle wasting treatment
JongSun Kang CEO (present) Professor, School of Medicine, Sungkyunkwan University	
GyuUn Bae CEO (present) Professor, College of Pharmacy, Sookmyung Women's University	
SangJin Lee Vice President (former) Professor, College of Pharmacy, Sookmyung Women's University	
Main Team members	
Address	#85304 Corporation Center, Sungkyunkwan Univ. 2066 Seobu-ro, Jangan-gu, Suwon, Korea

Technology



Enhancing Technology of Muscle function based on Muscle Stem Cell Differentiation / Regeneration

- Differentiated Innovative Technology to Develop Innovative Muscle Wasting Treatment.
- AniMusCure's Proprietary Indicator Genes based on the molecular regulation of muscle stem cell proliferation, maintenance and differentiation.
- Development of an innovative treatment for muscle wasting that implements muscle mass, muscle strength, and muscle function together.

Technology development progress

- AniMusCure develops the treatments for muscle diseases including sarcopenia and rare diseases for muscle-motor neuron.
- AMC#9156, a treatment for sarcopenia is undergoing IND filing to enter clinical trial phase IIA.
- AMC#9005, a treatment for metabolic muscle wasting, is pursuing a non-clinical study.
- It is conducting joint research and development with domestic pharmaceutical companies to develop muscle diseases.

Differentiation and innovation

It has its own indicator genes based on previous studies on the proliferation, maintenance, and differentiation/renewal of muscle stem cells studied by Core Members at AniMusCure over the past 30 years. Treatment development of innovative muscle diseases that not only increases muscle mass but also strengthens muscle strength and improves muscle function by maintaining the homeostasis of independent indicator gene-based muscle cells, inhibiting early aging of muscle stem cells, and activating neuromuscular joint functions.

Core IP & Awarded Status



Key intellectual property rights and award status

N/A	N/A

Certification & award status

N/A	N/A

Driven by Innovations Powered For Healthy Future

We are focus on developing innovative small molecule drugs to fight cancer.

We have currently 6 drug pipelines in various stages. A leading drug candidate entered GLP-tox and DP for IND filing, which is scheduled at early next year. We also developed 3 platform technologies (immune profiling based on single cell analysis system, patients derived immune cells and tumor cells based analysis system, AI & SAR-based compound design and synthetic system) to facilitate drug development process of targeted drug candidates.

Sales Amount				
Sales Amount	Domestic		Major clients	① N/A
	2021	2022		② N/A
	N/A	N/A		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		
Investment attraction history				
Date	Investor		Stage	Amount (\$)
2022.06	Multiple Venture Capitals		Pre A	6,200,000 \$
2023.06	Multiple Venture Capitals		Series A	16,000,000 \$



Company profiles

Established date	2021.10.14
CEO	ChangHoon Lee
Employee No.	26
Business Category	Bio Technology
Technology Field	New drug development
Main Item	Anti Cancer drug
Main Team members	ChangHoon Lee CEO Korea Research Institute of Chemical Technology, Principal investigator, Ph.D.
	JaeUk Chung Head of Research Division KainosMedicine, JW-Pharma, Ph.D.
	DukSu Lee Head of Global Business Development & Management Bayer, Fresenius Medical care, MBA
Address	94-14, Techno 2-ro, Yuseong-gu, Daejeon, Republic of Korea

Technology



Core technology of the product

Bio-Team: Target validation, Drug screening, integrated comparative analysis of multiomics analysis for MOA study, Various evaluation test system including humanized mouse system, and comparative analysis of human patients's data with test animal model for similarity analysis.

Technology development progress

Medicinal chemistry team: highly experienced lead optimization and bulk synthesis for animal test, CADD .

Differentiation and innovation

- PK team: In vivo PK study, metabolic stability, protein binding study, CYP toxicity study.
- Clinical team: clinical design and monitoring.

Core IP & Awarded Status



Key intellectual property rights and award status

N/A	N/A

Certification & award status

N/A	N/A

Safe & Efficient bio friendly EV-based Therapeutics

Safe & Efficient bio friendly EV-based Therapeutics.

- Plan to commercialize as a ready-to-use pharmaceutical, differentiating from existing stem cell therapies.
- Key business model: Global licensing, collaboration with domestic pharmaceutical companies for clinical trials and regulatory approval, joint research with synthetic drug companies.
- Completed Series A funding, enabling clinical trials for acute stroke therapy and securing new pipeline. Aim to grow as specialized exosome therapeutics venture through subsequent funding rounds.

Sales Amount				
Sales Amount	Domestic		Major clients	① N/A
	2021	2022		② N/A
	67,000 \$	67,000 \$		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount(\$)
2020	KB Investment, Company K Partners, Korea Investment Partners, LSK Investment, Samsung Life Public Welfare Foundation	Series pre-A	4,385,960 \$
2022	KB Investment, Company K Partners, Korea Investment Partners, Korea Venture Investment, JW Pharmaceutical, Infobank, Samsung Life Public Welfare Foundation.	Series A	7,894,673 \$



Company profiles

Established date	2019.01.14
CEO	OhYoung Bang
Employee No.	23
Business Category	R&D of Medicine
Technology Field	Development of EV Therapeutics
Main Item	EV Therapeutics
Main Team members	<p>OhYoung Bang CEO (Present) Professor, Dept. of Neurology, Samsung Medical Center & Sungkyunkwan Univ. School of Medicine</p> <p>SeungWoo Yeon CSO (Former) Director, Ildong Pharmaceutical Central Research Institute</p> <p>EunHee Kim CTO (Former) Senior Researcher, Samsung Medical Center Stem Cell & Regenerative Medicine Institute</p>
Address	81, Ilwon-ro, Gangnam-gu, Seoul, Republic of Korea

Technology



Core Technology

- ExoWell™: Neuroregenerative therapy (EV-miRNA therapeutic technology)
- ExoCourier™: Active ingredient discovery technology.
- ExoCarrier™: Delivery vehicle manufacturing platform technology.
- NGE™: non-genetically modified EV-based gene therapeutics.

Technology Development Progress

Cat.	Project	Indication	2021				2022				2023				2024				2025				2026				2027			
			1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
ExoWell™ (NGE™)	Eximir-Stroke™	Stroke	Scale-up				Pre-Clinical				Phase I/IIa				Phase IIb															
	Eximir-Vessel™	Moyamoya	Discovery				Pre-Clinical				Phase I/IIa				Phase IIb															
	Eximir-PD™	Parkinson	Discovery				In vivo PoC				Pre-Clinical				Phase I/IIa															
	Eximir-Skin™	Skin ulcer	In vivo PoC				Pre-Clinical				Phase I																			
	Eximir-AD™	Alzheimer	Discovery				In vivo PoC				Pre-Clinical																			
ExoCarrier™ (NGE™+API)	Eximir-AD™ / PD™	AD/PD	Discovery				Scale-up				In vivo PoC				Pre-Clinical															
ExoCourier™ (Diagnosis Kit)	S&D01, S&D02, S&D03	Stroke / Cancer / Moyamoya	Discovery				Prototype Development				Clinical Trial																			

Differentiation and Innovation

- Possession of core technology for EV production using 3D bioprocessing.
- Enhanced clinical applicability.
- High-purity brain-targeted delivery system.
- Maximizing the characteristics of stem cell-derived EVs.
- Overcoming donor variation.
- Securing price competitiveness.

Core IP & Awarded Status



Key intellectual property rights and award status

2014.06	Patent Registration (No. 10-1405437): Composition Including Stem Cell-Derived Microvesicles for Promoting Neurogenesis
2019.06	Patent Registration (No. 10-1991038): Method for producing stem cell-derived extracellular vesicle
2021.10	Patent Registration (No. 10-2320800): Stem cell-derived microvesicles with enhanced efficacy, use thereof, and method for enhancing efficacy

Certification & award status

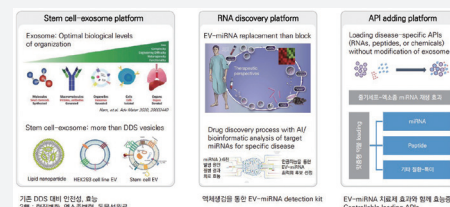
N/A N/A



Excell-RD™
(EV for research, Powder type)



Excell-R™
(EV for research, Liquid type)



Exosome-RNA therapeutics

SML Biopharm Co. Ltd.

www.smlbiopharm.com

Specializing in mRNA platform for preventive and therapeutic vaccine

Conducting preventive and therapeutic mRNA vaccine platforms and LNP research.

SML Biopharm is conducting various research such as preventive and therapeutic vaccines using mRNA platforms, which have been in the spotlight since COVID-19, and is holding the only mRNA expression platform patent in Korea. Our roadmap includes advancing linear mRNA and LNP tech, securing next-gen mRNA (Circular, SAM) platforms, and conducting clinical trials for our linear mRNA pipeline.

Sales Amount				
Sales Amount	Domestic		Major clients	① SK Bioscience Co., Ltd.
	2021	2022		② Raphas Co., Ltd.
	27,972 \$	298,951 \$		③ ST PHARM Co., Ltd.
	Overseas			④ GeneOne Life Science Inc
	2021	2022		
	N/A	N/A		
Investment attraction history				
Date	Investor		Stage	Amount (\$)
2021.12	SamKwang Labtree		Seed Round	2,230,769 \$
2022.06	MERITZ SECURITIES Co., Ltd. etc		Series A	3,076,923 \$



Company profiles

Established date	2021.09.06
CEO	YongKwan Kim
Employee No.	9
Business Category	Medical and pharmaceutical R&D
Technology Field	Biohealth
Main Item	Preventive & therapeutic vaccines using mRNA and LNP platforms
Main Team members	<p>YongKwan Kim CEO TIRIBOS, C.E.O SK Bioscience, Director and Research Fellow</p> <p>Daegeun Kim Vice President (C.S.O) Samsung Biologics, R&D GC Biopharma, Team Leader of Bioassay</p> <p>Jaehwan Nam C.T.O Professor, Department of Biomedical Sciences, Catholic University, Korea</p>
Address	1407, 17, Deogan-ro 104beon-gil, Gwangmyeong-si, Gyeonggi-do, Republic of Korea

Technology



mRNA Vaccine Platform Technology

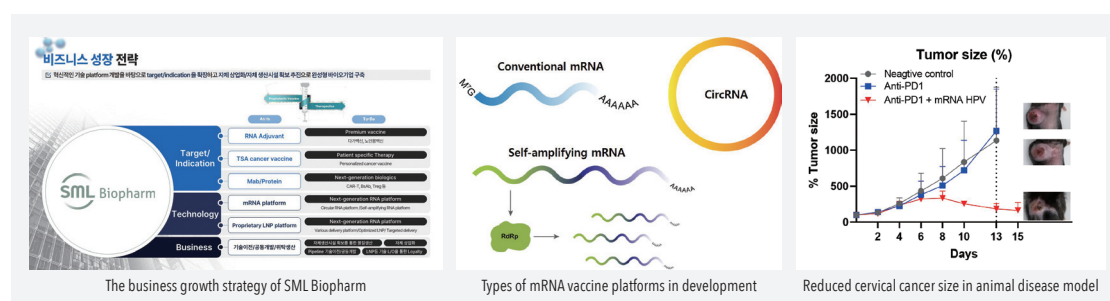
We are working on improving mRNA vaccines by exploring circular RNA and self-amplifying mRNA platforms. Additionally, we are creating lipid nanoparticles as delivery systems for mRNA vaccines. Our library contains over 25 ionized lipids for this purpose, and we are developing targeted delivery technologies for specific organs.

Entering Nonclinical and New Platform Development

Our mRNA vaccines generate antibodies against diseases like severe thrombocytopenia and influenza. They have shown promise in animal models for treating HPV-induced cervical cancer and are now prepare nonclinical development. We're also developing antibody therapeutics through protein expression and testing a next-gen mRNA vaccine platform design.

Patented mRNA Vaccine Platforms and LNPs Optimization

Our platform optimizes 3' untranslated region and poly(A) tail to enhance protein expression and stability. It's adaptable to next-gen platforms and can be rapidly studied in an in-house animal lab. We have patent-free LNPs that we can synthesize and formulate internally. Moreover, we can directly optimize LNPs based on mRNA's structural changes specific to the target gene.



Core IP & Awarded Status



Key intellectual property rights and award status

2016.07	(No. 10-2015-0062516) Process For Viral Proliferation And Application Thereof
2021.06	(No. 10-2019-0067129) Pharmaceutical Composition Including Stabilized Nucleic Acid Adjuvant
2021.07	(No. 10-2021-0100098) Nucleic Acid Based Adjuvant And Composition For Promoting Immune Activity Including Thereof

Certification & award status

N/A	N/A

ORGANOIDSCIENCES LTD.

<https://organoidrx.com>

Global Innovation Bio tech Better Differentiated Experience With New Science and Technology

Companies that have the ability to commercialize organoid-based technology. Under the vision of 'Experience the New Sciences', organoid-based regenerative therapy and new drug evaluation platform were developed and commercialized via stem cell exosome.

ORGANOIDSCIENCES is a clinical stage biotech company developing regenerative medicine focused on curing many incurable diseases through the use of organoids; the most advanced platform used to regenerate human organs. With the establishment of our proprietary technology, our goal is to address and fulfill many of the global unmet medical needs and envision a life without ailments.

We are expanding our business to health functional foods, cosmetics, etc. In addition, we are also working with Severance Hospital to advance into the field of shared diagnosis/ precision medicine.

Sales Amount

Sales Amount	Domestic		Major clients
	2021	2022	
	260,000 \$	430,000 \$	
	Overseas		
	2021	2022	
	N/A	N/A	

Investment attraction history

Date	Investor	Stage	Amount (\$)
2019.06	Cha Biotech Co., Ltd. etc.	Seed	416,000 \$
2020.03	AJU IB Investment. etc.	Series A	6,666,000 \$
2022.04	KDB Bank. etc.	Series B	34,742,000 \$



**ORGANOID
SCIENCES**

Company profiles

Established date	2018.12.22
CEO	Jongman Yoo
Employee No.	75
Business Category	Physical, chemical and biological R&D businesses/services
Technology Field	Organoid regenerative therapy/drug
Main Item	Organoid regenerative therapy/drug
Main Team members	Jongman Yoo CEO
	-MD, PhD, CHA University Medical School
	-Associate Professor, CHA University Medical School
	-Director, CHA Group Organoid Center
	Woojung Son COO
	-Manager of Green Cross Management Planning Office
	-Head of JW Creagen Planning and Management Office Manager and Production Headquarters
	Kyungjin Lee CTO
	-CHA Group Research Institute Organoid Research Center, Deputy Director
	-ORGANOIDSCIENCE Co-Founder
Address	Head Office 338, Pangyo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea
	Overseas Branch USA: 11F, 1 Broadway, Cambridge, MA 02142 USA
	Bienam: 17 Floor, Vincom Center Buildings, 72 Le Thanh Ton Ben Nghe ward, District 1, HCMC

Technology



Organoid based Regenerative Medicine



Research Use Organoid Product



Organoid based Efficacy Evaluation Service

organoid-based regenerative therapy(ATORM) and Drug Evaluation Platform (ODISEI)

- Our organoid based regenerative medicine exhibit high self-renewal and differentiation capabilities by cultivating adult stem cells in a three-dimensional environment, making them highly promising as regenerative therapies. Moreover, our organoids, generated from adult stem cells, overcome the challenges of two-dimensional cultivation, allowing for enhanced self-renewal and differentiation capabilities in a three-dimensional setting, further increasing their potential as regenerative therapies.
- Due to their high resemblance to the human body, our organoids offer organoid-based in vitro drug evaluation services to enhance the efficiency of drug development. We provide services not only for evaluating the efficacy of anticancer agents, antiviral agents, antifibrotic agents, and drug toxicity but also for the development processes in various fields such as cosmetics and health functional foods. We are expanding our business to utilize organoids in diverse areas, aiming to improve the effectiveness of novel drug development.

Progress of technology development

- ATORM-C is our lead pipeline for gastrointestinal disorders, we have received regulatory approval under the Act on Regenerative Medicine. We plan to commence clinical trials within this year, and we will submit an IND document to the domestic regulatory authority while also preparing for global clinical trials. Additionally, we are engaging in discussions for clinical trials with various global companies and institutions, including Mount Sinai Hospital in New York, as part of our efforts to expand internationally.
- In terms of our drug efficacy evaluation platform, we have successfully commercialized platforms for evaluating anticancer agents and immunotherapies against various types of cancer. Furthermore, we have recently expanded the application of our platform to industries such as cosmetics and health functional foods, which are animal testing-free industries.

Technology Differentiation and Innovation

- The organoid-based regenerative treatment under development by our company can not only secure cells through simple procedures, but can also be supplied in large quantities by utilizing high self-growth capabilities. Therefore, stability and tissue regeneration ability are very excellent.

Core IP & Awarded Status



Key intellectual property rights and award status

2022.06	Media composition for two-dimensional culture of three-dimensional organoids and their uses
2022.09	Pharmaceutical compositions for the prevention or treatment of inflammatory bowel diseases, including organoids and anti-inflammatory drugs
2022.09	Media composition for the production of colon organoids

Certification & award status

2022.10	Awards of The Minister of SMEs: Technological innovation contributions
2021.12	Awards of Ministry of Trade, Industry and Energy: Contributing to the development of the bio-industry
2020.12	Awards of the Ministry of Health and Welfare: Contributions to the Commercialization of Technology in the Health Industry

RNA Therapeutics New Drug Development

Making Innovative New Drug Available to Patients

- We have a total of 6 assets under development: 2 in clinical trials and 4 in non-clinical trials.
- For the market entry strategy, we can employ a two-track approach, including directly licensing out to global pharmaceutical companies and strategic partnerships for joint development and licensing out.

Sales Amount				
Sales Amount	Domestic		Major clients	① Jeil Pharmaceutical Co., Ltd.
	2021	2022		② Firson Co., Ltd.
	414,753 \$	38,598 \$		③ Youngjin Pharm
	Overseas			④ ST-Pharm
	2021	2022		
	N/A	N/A		
Investment attraction history				
Date	Investor		Stage	Amount(\$)
2021.11	IBK, etc		Series B	12,916,925 \$
2020.12	Kukjeon Pharmaceutical, etc		Strategic Investment	2,242,017 \$
2020.02	Stonebridge Ventures, etc		Series A	3,712,500 \$
2019.12	Mega Investment, etc		Series A	2,062,500 \$
2019.10	Korea Credit Guarantee Fund, etc		Series A	825,000 \$



Company profiles

Established date	2015.11.10
CEO	Taehun Kim
Employee No.	32
Business Category	Drug Development
Technology Field	Anti-sense Oligonucleotide drug R&D
Main Item	ASO anti-cancer, HTN+T2DM
Main Team members	Taehun Kim CEO Boryung Pharm, New Drug Global Business Team Head
	Y.R. Hong Executive Vice President (CTO) - CrystalGenomics R&D Center Head Tanabe Pharm, New Drug Development
	James Jun Executive Vice President (MD) Boryung Pharm R&D Center Team, Head KT&G Life Science President
Address	194-41, Osongsaengmyeong 1-ro, Yeonje-ri, Osong-eup, Heungdeok-gu, Cheongju-si, Chungcheongbuk-do, Republic of Korea

Technology



ASODE™ (Anti-sense Oligonucleotide Development)

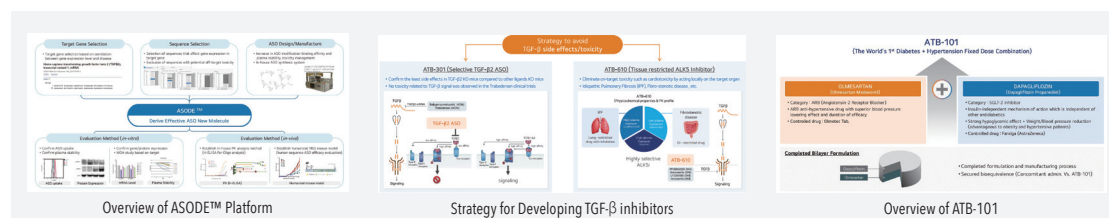
The ASODE™ is Autotelic Bio's unique ASO drug development system, which encompasses ASO sequence design, chemical modification, and in vitro / in vivo evaluations to derive optimized ASOs.

Autotelic Bio's 6 Assets Under Development

We possess a total of 6 pipelines, including 2 clinical pipelines and 4 pre-clinical pipelines. Among them, 3 are being developed as ASO new drugs addressing unmet needs of existing anticancer agents, and the other 3 are small molecule drugs with reduced side effects and enhanced efficacy.

Pipelines That Can Fulfill the Unmet Needs of Existing Treatments

- ATB-320 is an improved next generation ASO drug with increased binding affinity, reduced toxicity and ease of administration.
- ATB-101, a fixed dose combination of Dapagliflozin and Olmesartan, is expected to be world's first treatment for patients with hypertension and diabetes.



Core IP & Awarded Status



Key intellectual property rights and award status

2019.01	[Patent registered in Korea] Medicinal composition comprising sglT-2 inhibitor and angiotensin receptor blocker (ATB-101)
2020.10	[Patent registered in Korea] Anticancer composition (ATB-301)
2021.04	[Patent registered in US] Medicinal composition comprising sglT-2 inhibitor and angiotensin receptor blocker (ATB-101)

Certification & award status

2022.11	Taehun Kim, CEO of Autotelic Bio, awarded commendation from the Minister of the Health and Welfare at the 36 th Medicine Day
---------	---

Creating the most accurate system to make a cancer free world

Creating the most accurate system to make a cancer free world.

Through our patient-derived tumoroid biobank, our primary goal is to offer comprehensive solutions that optimize the entire process of anticancer treatment. These solutions encompass various aspects, including drug development, patient care, and collaboration with private companies, public institutions, and research institutes.

Sales Amount				
Sales Amount	Domestic		Major clients	① Seegene Medical Foundation
	2021	2022		② SG Medical
	N/A	N/A		③ Microfit
	Overseas			④ Molecular Devices
	2021	2022		
	N/A	N/A		
Investment attraction history				
Date	Investor		Stage	Amount (\$)
2021.06	Angel investment		Angel	392,768 \$
2021.09	Seegene Medical Foundation		Seed	2,356,610 \$
2021.09	INFINITT healthcare		Seed	785,536 \$



Company profiles

Established date	2021.02.22
CEO	Sejin Jang, Gunsik Cho
Employee No.	17
Business Category	R&D
Technology Field	New anti-cancer drugs development
Main Item	Patient-derived tumoroid bank
Main Team members	<p>Sejin Jang Co-CEO (Previously) Chief of Pathology at Asan Medical Center</p> <p>Gunsik Cho Co-CEO Johns Hopkins School of Medicine Postdoctoral Fellow</p> <p>Yunsik Choi Director Doctor of Science, Seoul National University, MOT, Sogang University</p>
Address	#901-902 Seoul Forest M Tower, 31 Ttukseom-ro 1-gil, Seongdong-gu, Seoul

Technology



TDEA (Tumoroid Drug Efficacy Assay)

We have successfully established a drug evaluation method for our TDEA platform and have initiated corresponding services for colorectal cancer and lung cancer. Building upon this success, we are planning to expand our TDEA services to encompass additional cancer types.

TDRA (Tumoroid Drug Response Assay) system

Currently, we are actively engaged in conducting clinical studies focused on three types of cancer; ovarian cancer, lung cancer, and colorectal cancer. These studies are part of our efforts to develop the TDRA platform, which aims to provide patient-specific precision medical services. Through these clinical studies, we are working towards refining the TDRA platform and optimizing its effectiveness for diagnosing and treating the aforementioned cancer types. The insights and data gathered from these studies will play a crucial role in enhancing the accuracy and reliability of the TDRA platform.

TBDD (Tumoroid & Big-data based drug development)

Utilizing our own tumoroids and leveraging big data, we have identified and selected two specific targets that play a role in inhibiting cancer cell death and promoting cancer cell growth and survival. With this valuable knowledge, we are currently engaged in the development of 'best-in-class' anticancer drugs that specifically target and suppress these identified targets.

1. TDEA: Tumoroid Drug Efficacy Assay



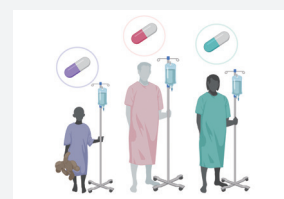
A development anti-cancer drug evaluation platform

2. TBDD: Tumoroid & Big-data based drug development



A new drug development based on Tumoroid and big data

3. TDRA: Tumoroid Drug Response Assay



A precision medicine platform

Core IP & Awarded Status



Key intellectual property rights and award status

2022.05	Manufacturing method of customized tumor organoid panel and anticancer agent screening system using the panel manufactured by the method
2023.01	Method for producing sarcoma tumoroids

Certification & award status

2022.07	Cancer organoid, stromal cell, and immune cell one-stop isolation and culture method using cancer tissue
---------	--

Ubix Therapeutics, Inc.

www.ubixtrx.com

Transforming Medicine to Transform Lives

We develop novel anti-cancer drugs based on Degraducer® platform technology

We are conducting research and development on various anti-cancer drugs using the Degraducer® technology. Our business model involves licensing out the project after demonstrating its efficacy and marketability through research, preclinical studies, and early clinical trials.

Sales Amount

Sales Amount	Domestic		Major clients	① Debiopharm
	2021	2022		② NeolmmuneTech, Inc.
	N/A	380 \$		③ SK biopharmaceuticals
	Overseas			④ N/A
	2021	2022		
	700,000 \$	300,000 \$		

Investment attraction history

Date	Investor	Stage	Amount(\$)
2023.04	UTC Investment	Series C	758,000 \$
2023.03	BNH Investment and other 3 VCs	Series C	4,546,000 \$
2023.02	GeneN Investment Partners and other 1 VC	Series C	2,273,000 \$
2023.01	QUAD Investment Management	Series C	2,273,000 \$



Company profiles

Established date	2018.06.28
CEO	BK Seo
Employee No.	40
Business Category	Drug development
Technology Field	Drug development
Main Item	Degraducer® platform technology
Main Team members	BK Seo CEO SK Telecom, IVD Business Team Leader Genexine, BD Office Head SongHee Lee VP, R&D Emory University, Research Scientist UW-Madison, Post Doctoral Fellow JeHo Ryu Vice Research Director Huons, Head of Open Innovation SK Chemicals, Chief Research Scientist
Address	(05836) #1401, 7, Beobwon-ro 11-gil, Songpa-gu, Seoul, Republic of Korea

Technology



Degraducer® technology

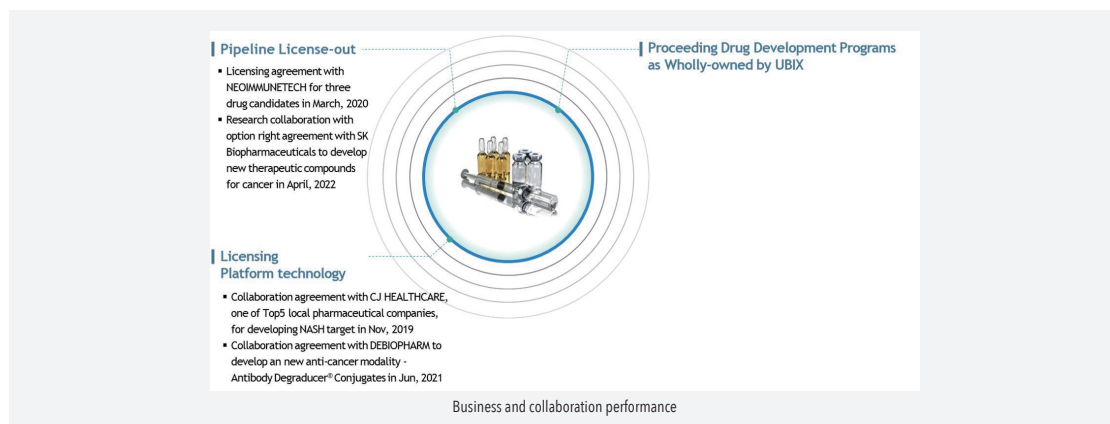
Degraducer® is a powerful inhibitor technology that enables targeted protein degradation and consequent therapeutic effects by placing a disease-related target protein nearby E3 ligase, which is an enzyme that can initiate the protein degradation system.

UBX-303-1: BTK Degraducer®

UBX-303-1 has been specifically designed to degrade over-expressed BTK proteins, utilizing a distinct modality compared to other existing BTK inhibitors. Our plan is to submit an IND application for UBX-303-1 within this year, with the aim of conducting clinical trials for B cell-related diseases.

Advantages of UBX-303-1

Its unique mechanism of action, involving the decomposition and removal of BTK proteins within cells, is anticipated to offer numerous advantages, notably superior efficacy, the ability to overcome resistance, and increased selectivity in targeting proteins.



Core IP & Awarded Status



Key intellectual property rights and award status

2018.05	[PCT] (No. PCT/KR2018/005444) Novel Piperidine-2,6-Dione Derivative And Use Thereof
2018.05	[PCT] (No. PCT/KR2018/005478) Pyraolopyrimidine derivatives, preparation method thereof, and pharmaceutical composition for use in preventing or treating cancer, autoimmune disease and brain disease containing the same as an active ingredient

Certification & award status

2022.11	IR52 Jang Young-shil award (Technology innovation)
2021.11	Minister of Health and Medical Technology Commercialization Commendation

YOUTH BIO GLOBAL

Goal of becoming a leading company in the advanced regenerative medicine

Leading Global Healthcare Provider improving the health and quality of life of humanity.

YOUTH BIO GLOBAL is a company that introduces a novel approach and strategy for the management of uncommon and stubborn illnesses. It is showcasing a distinctive culture technology for in vitro cultivation of vascular endothelial progenitor cells. We are working on the development of cell cultures that are formulated with proprietary cell-active substances and wound covering materials for their application. Furthermore, we are also developing cartilage therapeutics that mimic the electrical stimulation phenomenon in vivo to promote cell differentiation. We are suggesting a basic technique for vascular regeneration to treat diabetic foot ulcers that fall under FDA RMAT. We are taking a strategic approach to speed up clinical trials and approvals. Since the beginning of development, we have been making advanced efforts to meet regulatory factors targeting the global market, and we are seeking a quick launch at domestic and abroad.

Sales Amount

Sales Amount	Domestic		Major clients	① N/A
	2021	2022		② N/A
	6,800 \$	9,100 \$		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2020.08	Chungbuk Creative Economy Innovation Center	SEED	1000 \$
2020.12	Hanyang Digitec	SEED	400 \$
2021.06	SEED	SEED	1,180 \$
2022.07	SEED	SEED	500 \$

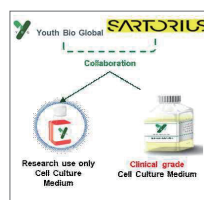


YOUTH BIO GLOBAL

Company profiles

Established date	2017.08.02
CEO	SeungHo Yoo
Employee No.	19
Business Category	Pharmaceuticals, Manufacturing
Technology Field	Stem cell therapy & Culture media, wound dressing, ES-induced cell differentiation
Main Item	Vascular stem cell
Main Team members	<p>SeungHo Yoo CEO of YOUTH BIO GLOBAL Medical Doctor from Seoul National University Medical School Adjunct Professor at Dongguk University Head of Clinical Evaluation Team in Collaboration with the Ministry of Food and Drug Safety</p> <p>DukSang Kim CEO of Sartorius Korea Professor of Pharmacy at Ewha Womans University president of the International Society of Pharmaceutical Engineers</p>
Address	194-25, 3rd floor A-06, Osongsengmyeong 1-ro, Osong-eup, Heungdeok-gu, Chungju-si, Chungcheongbuk-do

Technology



Culture Medium



Wound Dressing



Stem Cell Therapeutics

**XEPC priming media ; ** YBG's newly formulated culture media with cell-activating substances. **

The culture medium for producing these cells excludes animal-derived serum and large amounts of growth factors and replaces them with natural ingredients to optimize cell activation and enhance their proliferation and mass production capacity. Through cooperation with Sartorius, a global company, we are jointly seeking the commercialization of culture media.

XEPC: vascular stem cell

XEPC refers to a cell therapy product of YOUTH BIO GLOBAL, which is presented as a new concept of a method of culturing EPCs as a vascular endothelial progenitor cell made by a xenofree culture method. As the first vascular endothelial progenitor cell presented with high purity and uniform quality, it shows excellent vascular regeneration ability in vivo and is a strategy to gradually expand its indications as a treatment for ischemic disease. The technology has undergone CMC development and non-clinical trials, with plans to launch in the first half of 2025. Clinical trials are also being initiated with the goal of releasing stem cell therapeutics by 2028.

Scalability of Cell Activation Factors

YOUTH BIO GLOBAL has developed a new stem cell culture medium with specific composition to overcome the problems of stability and aging of cultured cells, and to enhance the function and clinical utilization of vascular stem cells. Unlike the conventional technology that includes various pharmacological growth factors, YOUTH BIO GLOBAL's culture medium contains only three natural ingredients and VEGF, without any heterologous animal-derived components that may carry the risk of cross-contamination, and can be developed into a xeno-free culture medium. In addition, the vascular stem cells produced using this technology have acquired differentiation characteristics, inhibited cell aging, improved proliferation capacity, and obtained more characteristics as vascular stem cells, which can survive for a long time in the harsh disease environment of patients and demonstrate therapeutic efficacy.

Core IP & Awarded Status



Key intellectual property rights and award status

2023.02	Control device and method for electrical stimulation variables according to cell and culture conditions
2021.12	Composition for increasing the biological activity of stem cells using mixture 4F
2021.09	Device and method for forming chondrocyte aggregates

Certification & award status

2021.06	1,000 National Representatives of Innovative Companies
2021.06	Designation of Innovative Products
2021.02	New excellent technology Certification

Breakthrough immunotherapeutics against incurable diseases

Eutilex strives to pave new paths for the treatment of incurable disease through innovative drug development.

- We are actively exploring strategies to shorten the development timeline through systematic and thorough preparations, aiming for swift entry into clinical trials and approvals.
- Once the product is launched and commercialized, we have plans to enter into sales agreements with domestic and global partners and increase revenue through licensing out.
- We are consistently searching for potential partners in various regions, and we anticipate the ability to generate continuous revenue.

Sales Amount

Sales Amount	Domestic		Major clients
	2021	2022	
	170,700 \$	507,600 \$	
	Overseas		
	2021	2022	
	N/A	N/A	

Investment attraction history

Date	Investor	Stage	Amount(\$)
2021.05	Private	Private	17,370,000 \$
2022.07	Private	Private	40,000,000 \$



Eutilex Co., Ltd.

Company profiles

Established date	2015.02.27
CEO	Byoung S. Kwon, Yeonho Yoo
Employee No.	106
Business Category	Biohealth
Technology Field	Cancer immunotherapy
Main Item	Immune cell Therapy, Therapeutic Antibody
Main Team members	Byoung S. Kwon CEO Distinguished Professor, NCC, Korea / Professor, University of Ulsan, Korea / Professor, Indiana Univ., School of Medicine / Postdoc, Yale University
	Yeonho Yoo CEO Former CEO of Samsung Muticampus / Former Vice President of Samsung SDS / Formal Head of Global Industrial Products, IBM HQ
	Youngho Kim CDO/Vice President 18 years of professional experience in R&D of immunotherapeutics including antibodies and cell therapeutics development and production
Address	Suite 408, Gasan digital 1-Ro 58, Geumcheon-gu, Seoul, Republic of Korea, 08591

Technology



Affinity-Enhanced Antibody Generation Technology

Eutilex has the technology to produce antibodies with a wide range of affinity. Using this platform technology, various antibody therapeutics and CART cell therapeutics are being developed.

EU103 (Anti-VSIG4 Humanized Antibody)

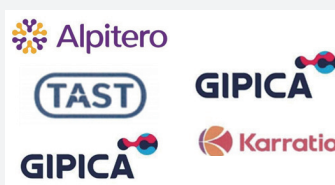
EU103 is an immune-oncology antibody targeting VSIG4, immune modulator. It is a novel concept of immune-oncology treatment that differs in mechanism of action from conventional immune-oncology therapies that improves the cancer microenvironment through that regulate immune cells. We have received IND approval from MFDS in 1Q 2023 and is currently in preparation for clinical trials.

Differentiation and Innovation

- Eutilex's "T-cell therapy platform technology (4-1BB-based isolation and mass expansion of antigen-specific CD8+ T cell)" is a method that can produce various antigen-specific T cells by simply replacing antigen-specific peptides. It is a technology capable of producing T-cell therapies for all types of cancer.
- Eutilex possesses innovative platform technologies, specialized researchers, production facilities, and a multitude of patents related to the development of immunotherapies in South Korea. These assets can lead to the development of novel drugs in the field of immune therapies.



Anti-VSIG4 mAb(Clinical Drug Product)



Registered and applied trademark



Eutilex's GMP Facility

Core IP & Awarded Status



Key intellectual property rights and award status

2019.10	(US9862774B2) Monoclonal antibody which specifically recognizes B cell lymphoma and use thereof
2020.02	(US11395836B1) Cancer Antigen-Specific Cytotoxic T Cells
2022.04	(US10927183B2) Anti-Human Vsig4 Antibodies And Uses Thereof

Certification & award status

2022.06	'KBEA 2022' Bioprocessing Excellence in Cell Therapy Manufacturing
2022.06	'KBEA 2022' Bioprocessing Lifetime Achievement Award

Innovo Therapeutics Inc.

<https://innovothera.com/en>

With the new drug development,
• Improve the quality of human life
• Continue to grow and help others

To become a leading biotech company in Korea.

Innovo Therapeutics prioritizes investing in R&D activities to drive growth. Innovo allocates resources towards expanding its research capabilities, exploring new therapeutic areas, and developing a pipeline of innovative drug candidates. This can involve collaboration with academic institutions, research organizations, and other industry partners. Strategic partnerships including licensing agreements enable Innovo to leverage complementary strengths and accelerate product development.

Sales Amount				
Sales Amount	Domestic		Major clients	① KCRN
	2021	2022		② Celerion
	N/A	N/A		③ Wuxi
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		
Investment attraction history				
Date	Investor		Stage	Amount (\$)
2021.12	Atinum Investment, etc.		Series B	22,700,000 \$
2019.12	Atinum Investment, etc.		Series A	7,600,000 \$



Company profiles

Established date	2019.03.18
CEO	HeeDong Park
Employee No.	28
Business Category	Research and development services
Technology Field	AI based New drug development platform
Main Item	Small-molecule drug discovery
Main Team members	HeeDong Park CEO Ph.D. of Life science in KAIST Director, LG Chem
	DongChul Lim CTO Ph.D. of calculationchemistry in Yale Univ. Director, LG Chem
	JongKeun Jeong CSO M.S. of Biochemistry in Yonsei Univ. General Manager, LG Chem
Address	Head Office 507, 38 Mapo-daero, Mapo-gu, Seoul, 04174, Korea Overseas Branch C-313, 17 Techno 4-ro, Yuseong-gu, Daejeon, 34013, Korea

Technology



Innovo Therapeutics develops first-in-class small molecule drugs to address high unmet medical needs

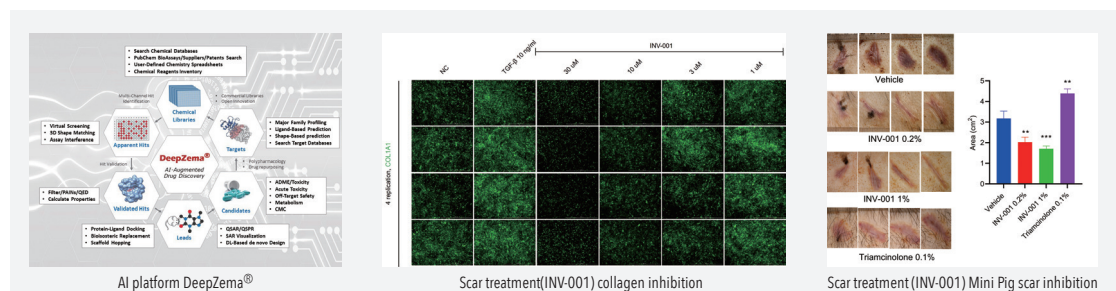
The key areas of focus for Innovo Therapeutics is the development of small-molecule therapies for fibrosis, inflammation & immune disease. Innovo is actively involved in the research and development of innovative treatments for conditions such as inflammatory bowel disease. By leveraging its expertise in small molecule development, Innovo has developed DeepZema®, an AI-augmented drug development platform to accelerated the drug discovery process.

Total 8 assets are being developed. INV-001 is on phase II clinical trial in Korea. INV-101 is on phase I clinical trial in US

Innovo Therapeutics is finding solution for fibrosis, immunology and inflammatory diseases. INV-001 is a scar treatment candidate. Preclinical efficacy of INV-001 has been demonstrated both in burn-induced scar in mini pig model and incisional-induced scar in SD rat model. phase 2 clinical trial is on-going in Korea. INV-101 is a new drug development project of oral small-molecule for ulcerative colitis (UC) that has completed the preclinical study and started the phase 1 trial in the US in 2022. The other assets are being on discovery.

Our approach integrated expertise and AI platform into the small-molecule drug discovery

Innovo Therapeutics adopted a practical approach by augmenting artificial intelligence to existing computational drug discovery technologies forming a proprietary computational platform called DeepZema®. DeepZema® has been developed with philosophies of (1) simplicity (2) democratism and (3) practicality. Thus DeepZema® has a simple web interface for easy access by experts and non-experts alike and returns the results in real time. In this way, Innovo is able to innovatively accelerate small-molecule drug discovery with DeepZema®



Core IP & Awarded Status



Key intellectual property rights and award status

2022.07	Heteroarylamidopyridinol derivatives and pharmaceutical composition for use in preventing or treating autoimmune diseases containing the same as an active ingredient
2022.06	Novel isoindolinone derivative compounds as caspase inhibitors
2022.05	Benzofuran hydroxyphenyl methanone oxime derivative and the use thereof

Certification & award status

N/A N/A

Hope for Patients, Dreams for All

ImmunAbs is a biotech company which specializes in antibody therapeutics.

ImmunAbs will fulfill the unmet medical needs in severe autoimmune diseases with strong feasibility and expand into previously untreatable disease areas with its best-in-class C5 monoclonal antibody. In addition to this, ImmunAbs aims to grow into a global biotech company by developing transformative antibody therapeutics for obesity and diabetic retinopathy.

Sales Amount

Sales Amount	Domestic		Major clients	① Samsung Biologics
	2021	2022		② AIMS Bioscience
	N/A	N/A		③ Labcorp
	Overseas			④ Syneos Health
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2019.12	DS asset management etc	Pre-Series A	5,000,000 \$
2021.09	Mirae-asset Venture etc	Series A	9,000,000 \$
2022.10	Magna Investment etc	Series B	10,000,000 \$



Company profiles

Established date	2017.11.27
CEO	DongJo Kim
Employee No.	18
Business Category	Bio / R&D
Technology Field	Antibody Therapeutics
Main Item	Anti-complement C5 antibody
Main Team members	<p>Dr. DongJo Kim CEO Senior manager of Global Technology Operation Unit at Celltrion</p> <p>Dr. Kisu Kim R&D Head Team Leader of Antibody Engineering Team at Mogam Institute</p> <p>Dr. Hwangkeun Jun Nonclinical director Team Leader of nonclinical study team at Celltrion</p>
Address	B-1008, Beobwon-ro 11-gil 11, Songpa-gu, Seoul, Republic of Korea

Technology



ImmunAbs distinguished technology and pipelines

ImmunAbs has 20 years of experience in developing monoclonal antibodies using technologies such as phage display and single B cell cloning to obtain humanized antibodies from immunized animal species. ImmunAbs is developing IM-101, a humanized antibody inhibiting human C5 for the treatment of severe autoimmune diseases, IM-201 for the treatment of diabetic retinopathy, and IM-401 for the treatment of obesity.

Progress of ImmunAbs pipelines

ImmunAbs lead pipeline, IM-101, is a humanized antibody inhibiting human C5, which is currently undergoing phase 1 clinical study in the US. IM-101 is poised to become the best treatment option for patients suffering from severe autoimmune diseases.

Revolutionizing Autoimmune Disease Treatment by ImmunAbs Novel Anti-C5 Mab

The unmet medical needs in complement therapeutics is insufficient inhibition of current standard of care such as Soliris and Ultomiris. Therefore, there is a need for complement therapeutics that can completely inhibit the complement pathway. IM-101, developed by ImmunAbs, inhibits the complement pathway completely, which has the potential to provide benefits to patients who receive the current standard of care. ImmunAbs expects to obtain phase 1 clinical data by the end of this year.



Corporate MOU with Aims Bioscience



Ceremony for Phase 1 approval from US FDA

Core IP & Awarded Status



Key intellectual property rights and award status

2016.07	Korea patent granted for C5 antibody
2019.07	US patent granted for C5 antibody
2019.11	Japan patent granted for C5 antibody

Certification & award status

2021.09	Grant awarded by Korea Drug Development Fund
2022.05	Grant Awarded by KISED
2022.05	Selected as one of Core 100 companies by Invest Seoul

We transform scientific imagination into reality

The global leader in exosome therapeutics.

- Business model: (1) transferring platform technology through licensing-out to global partners capable of conducting late-stage clinical trials and implementing global marketing strategies. (2) transferring the developed and effective exosome-based candidates to partner companies.
- Key areas: Inflammatory Disease, Oncology, and CNS Disease. (cf. ILB-202 is undergoing P1 clinical trials in Australia.)
- Growth strategies: the discovery of new exosome platform technologies, the expansion of its portfolio of effective exosome-based therapeutics.

Sales Amount

Sales Amount	Domestic		Major clients	① N/A
	2021	2022		② N/A
	N/A	21,994 \$		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2017.12	Retail investor	angel investment	2,768,000 \$
2018.06	Daedeok Venture Patners. etc	Series A	13,893,000 \$
2020.09	Daedeok Venture Patners. etc	Series B	18,161,000 \$
2020.05	Retail investor	Series C	11,350,000 \$
2022.08	Intervest. etc	Series C	1,891,000 \$

Company profiles

Established date	2015.11.02
CEO	Chulhee Choi, TaeJin Ham
Employee No.	77
Business Category	Medical &, Research development
Technology Field	Therapeutic Exosomes
Main Item	Research & Therapeutic Exosomes
Main Team members	Chulhee Choi Co-CEO Work Experience Professor at KAIST
	TaeJin Ham Co-CEO Work Experience Leader at Celgene., Korea / Taiwan
	Cheolhyoung pakr Chief Development Officer Work Experience Chief Researcher at SK Biopharmaceuticals
Address	Head Office 40-20, Techno 6-ro, Yuseong-gu, Daejeon, Republic of Korea Overseas Branch 7880 Wren Ave. Suite D-D-138 Gilroy, CA 95020 USA

Technology



Platform technology for free-form cargo loading

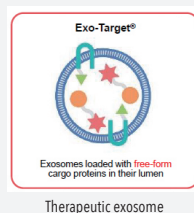
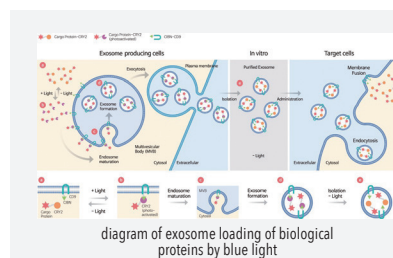
- EXPLOR®: Enables the intracellular delivery of large-sized protein therapeutics such as antibodies by integrating a Reversible protein-protein interaction module controlled by blue light.
- Exo-Target®: Enables increased tissue targeting and cargo delivery efficiency using ILIAS exosomes surface engineering technology.
- Pure-Exo®: Platform technology for high-purity exosome manufacturing on a commercial scale.

Production of Therapeutic exosomes

- ILIAS has successfully established scalable manufacturing processes using ILIAS's bioreactor technology for suspension cell culture to which ILIAS's EXPLOR® technology can be applied.
- Receives HREC Approval to Initiate First-in-Human Clinical Trial Evaluating Exosome Therapeutics ILB-202, the Treatment for CSA-AKI.

Exosomes as Biocompatibility Nano-particles

- Exosomes have advantages as an ideal carrier for drug delivery over other drug delivery systems as follows stability, intracellular delivery, biocompatibility and penetration.
- EXPLOR® provides highly efficient intracellular delivery of the functionally active cargo proteins including signaling proteins, intracellular antibodies (intrabodies), organelle-specific proteins, and / or gene-editing proteins.



Core IP & Awarded Status



Key intellectual property rights and award status

2017.05	(KR) (No. 10-1733971) Compositions containing protein loaded exosome and methods for preparing and delivering the same
2020.07	(US) (No. 10702581) Compositions containing protein loaded exosome and methods for preparing and delivering the same
2020.04	(KR) (No. 10-2100420) Method for producing an exosome that transfers a substance specifically to target and exosome produced by the same method

Certification & award status

2020.05	The Korea Industry Award 2020
2020.10	Cytiva Korea CEO Award* at the 2020 BioChallenge

"Recovery, Regeneration and Rejuvenation" based on iPSC

iPSC R&D company that provides GMP-grade iPSC cell line in Korea.

Using our precise iPSC technology, we provide profound and effective treatment to patients and generate cell lines from both healthy people and the patients. Also, we commit an open innovation strategy, collaborating with various business partners.

Sales Amount				
Sales Amount	Domestic		Major clients	① Daewoong Pharmaceutical company
	2021	2022		② CuroCell
	85,000 \$	95,000 \$		③ Ajou University Medical Center
	Overseas			④ Xcell therapeutics
	2021	2022		
	N/A	N/A		
Investment attraction history				
Date	Investor		Stage	Amount (\$)
2022.12	InterVest... etc		Bridge Funding	13,800,000 \$
2021.06	InterVest... etc		Series A	9,200,000 \$
2020.09	Daewoong Pharmaceutical Co.,LTD.		Pre- Series A	1,530,000 \$

Company profiles

Established date	2017.02.15
CEO	JiHyeon Ju
Employee No.	42
Business Category	
Technology Field	Regeneration medicine
Main Item	MIUChon, Injectable OA cell therapy
Main Team members	<p>JiHyeon Ju CEO Professor, Department of Rheumatology, Seoul St. Mary's Hospital</p> <p>JaeHyeong Jo Director Professor, Department of Endocrinology, Seoul St. Mary's Hospital</p> <p>Yoojun Nam Vice President Research Professor, iPSCs Research Institute, Catholic University of Korea</p>
Address	B2, Omnibus Park, Banpo-dearo 222, Seocho-gu, Seoul, Korea

Technology



Core technology of the product

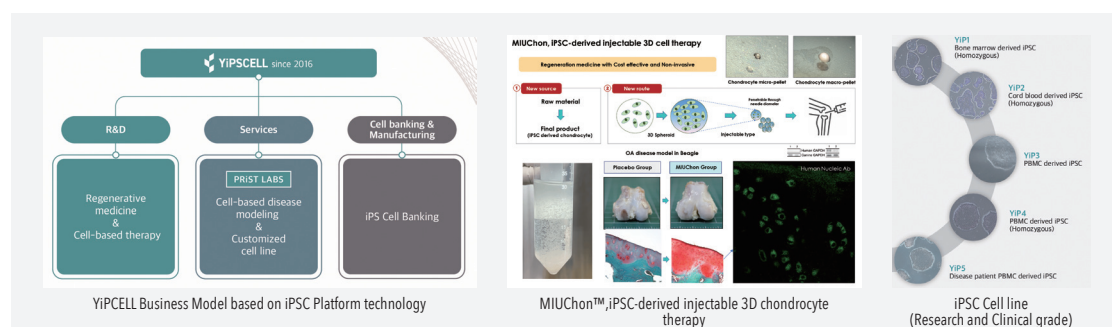
- Cell Therapy - MIUChon™: iPSC-derived injectable 3D chondrocyte therapy for osteoarthritis (30% improvement by one injection in pig OA model). Additional pipelines are being studied using iPSC derived NK, CAR-NK, iMSC, exosome, mitochondrial therapy.
- Provide Clinical and Research grade iPSC
- Analysis and Production Service: iPSC cell line service Drug screening service (in vivo / in vitro) Genomic Service Personal iPSC banking(Pre-launch phase)

Technology development progress

MIUChon has demonstrated a 30% improvement in cartilage through a single intra-articular injection in preclinical large animal study, and is scheduled for Investigational New Drug (IND) submission to the Korean Ministry of Food and Drug Safety in 2023.

Differentiation and innovation

YiPSCell, is the sole provider of GMP-grade induced pluripotent stem cells (iPSCs) in South Korea. We have established partnerships with numerous pharmaceutical companies, research institutes, and university hospitals in the country. Additionally, we are actively working on the development of a UNIVERSAL iPSC line with no immune rejection and an immortalized cell line capable of infinite proliferation.



Core IP & Awarded Status



Key intellectual property rights and award status

2023.04	[PCT] (No. WO 2023/05222 A1) Composition Comprising Components Derived From Induced Pluripotent Stem Cell Culture Medium And Uses Thereof
---------	---

Certification & award status

N/A	N/A
-----	-----

Actualize your dreams

Interferon-beta mutein based immunocytokine development platform technology.

Genopharm has a patent of interferon-beta mutein that can be fused with various antibodies. We aim to generate revenue through licensing deal of candidates developed in-house, or the rights to develop new candidate using the platform technology. Our goal is growing into a company with core technologies in the field of immunocytokine.

Sales Amount

Sales Amount	Domestic		Major clients	① Daewoong therapeutics
	2021	2022		
	52,000 \$	32,000 \$		
	Overseas			
	2021	2022		
	N/A	N/A		
			② N/A	
			③ N/A	
			④ N/A	

Investment attraction history

Date	Investor	Stage	Amount (\$)
2019.04	SNU Holdings	Seed	378,000 \$
2020.12	SNU Holdings JW asset SNU	Pre-Series A	227,000 \$
2021.07	SNU Holdings, JW asset Ignite innovators, Infobank	Pre-Series A	1,512,000 \$



Company profiles

Established date	2017.01.12
CEO	HaeMin Jeong
Employee No.	8
Business Category	Pharmaceutical R&D
Technology Field	Immuno-oncology new drug R&D
Main Item	Interferon-beta immunocytokine
Main Team members	HaeMin Jeong CEO SNU, College of Pharmacy, Ph.D. Logone BCRF, Senior researcher
	ChanGyu Lee CTO SNU, College of Pharmacy, Ph.D. Hanmi Research Center, Senior researcher
	NaWon Park Development Team Leader SCD Pharm, Bioresearch center, PD manager MFDS Biological products, Examiner
Address	604ho, 242, Digital-ro, Guro-gu, Seoul, Republic of Korea

Technology



Development of anti-cancer immunocytokine based on inberferon-beta mutein

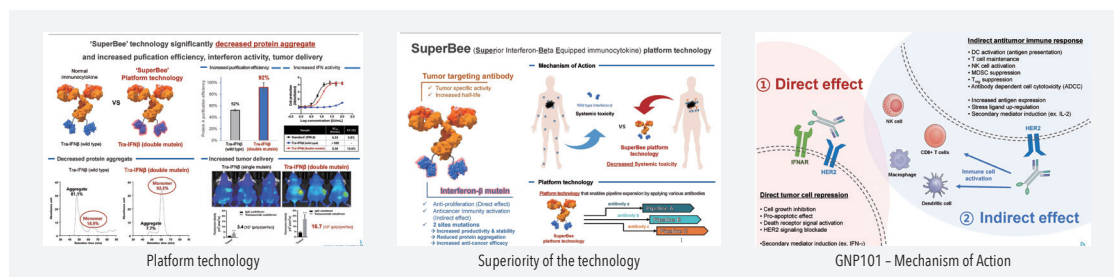
Interferon-beta has strong anti-tumor effect, but it has been difficult to develop due to low productivity and unstable properties. We developed an interferon-beta mutein immunocytokine to solve the problems of short half-life and systemic toxicity. It also has the advantage that can diversify the pipeline by applying various antibodies.

Validate expendability of interferon-beta mutein immunocytokine platform technology

We are developing GNP101 based on the platform technology, for treatment of HER2 positive cancer. We plan to enter the preclinical development stage in 2024. On the one hand, by verifying the expendability of our platform technology, we aim to strengthen licensing out business model. We are conducting research on various antibodies and antibody fragments.

Interferon-beta mutein with distinct mechanisms of action

Different from other cytokines, interferon-beta not only has direct cancer cell proliferation inhibitory effects, but also can activate a wide range of immune cells including macrophages and dendritic cells. But interferon-beta has limitations in terms of drug development, and we overcome the limitations by developing interferon-beta mutein.



Core IP & Awarded Status



Key intellectual property rights and award status

2020.10	[US](US10,806,799) Human interferon-beta variant conjugated immunocytokine and method for preparing same (KR, EU, JP, CN, IN)
2020.08	[PCT](PCT/KR2020/011030) Use of immunocytokine comprising interferon-beta or variant thereof for treating human epidermal growth factor receptor 2 positive cancer
2021.04	[PCT](PCT/KR2021/005407) Recombinant protein having fused Interferon-beta mutein and antibody, and pharmaceutical composition comprising same

Certification & award status

N/A N/A

ZTI | ZERO To 1(one) | Standardized Radiopharmaceuticals

Standardizing Radiopharmaceuticals with the TERACARRIER Platform.

ZTI's business model and strategy starts with the tech validation through the US FDA RA process. With the tech validated, we will progress with L/O of pipelines and attraction Pharma clients for our platform. With profit generation and expansion of scale we will launch a new TERACARRIER based Radiopharmaceutical CDMO Business. ZTI BIOSCIENCES US Branch has been established in Indianapolis 2023 January, and we are currently at the stage of establishing our manufacturing and RA in the US through CMO, CRO, and consultancy.

Sales Amount				
Sales Amount	Domestic		Major clients	① N/A
	2021	2022		② N/A
	N/A	N/A		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2023.05	KIWOOM INVESTMENT STIC VENTURES	Series A	1,900,000 \$
2023.04	DAEDUCK Co.,Ltd.	Series A	380,000 \$
2023.03	SHINHUNG Co.,Ltd. etc.	Series A	1,860,000 \$
2022.12	ASCENDO VENTURES etc.	Series A	1,290,000 \$
2021.09	STIC VENTURES etc.	Series A	4,160,000 \$

Company profiles

Established date	2020.02.19
CEO	HyungSeok Chang
Employee No.	26
Business Category	Pharmaceutical R&D and manufacturing
Technology Field	Nano-Drug Delivery System
Main Item	Radiopharmaceuticals
Main Team members	HyungSeok Chang CEO & President & Founder Work Experience SAMSUNG DISPLAY, Senior Researcher
	YongSun Park CTO & Vice President & co-Founder Work Experience NEO-NANOMEDICS, Senior Researcher
	HyungSeok Lee COO & Vice President Work Experience Pfizer Korea, Department Director
Address	Head Office 121, 125, Gwahak-ro, Yuseong-gu, Daejeon, Republic of Korea Overseas Branch 9550 Zionsville Road, Indianapolis, IN 46268, United States

Technology



Standardization of Radiopharmaceuticals for theragnostic oncology - TERACARRIER™

The TERACARRIER™ functions as an all-integrative radiopharmaceutical platform for any existing radioligands & isotopes. It is the first & only technology in the world that can fully bind-lock the radioisotopes, with the targeting ligands, within the iron-oxide nano-particle based core. Unlike conventional chelators/linkers, ZTI's carrier physically locks the radioisotopes within, TERACARRIER™ based drugs are immune to chemical leeching of radioisotopes within the body.

The initiaion of GMP manufacturing and non-clinical study for global clinical trial

- Based on the original patent technology, the basic technology of the radioactive nano-drug delivery platform was established, reproducibility of material production was secured, and the safety and effectiveness of the drug were verified through its own non-clinical study.
- Currently, a production site has been secured by a cGMP certified CDMO company in the U.S. to enter a global clinical trial, and production of materials for non-clinical study is underway after test production.

World's first radioactive nano-drug delivery platform technology

- Radioisotopes safely locked within the nano-carrier's iron-lattice inorganic carrier prevents enzyme from accessing/detaching the radioisotopes from the drug, maximizing safety and therapeutic efficiency.
- Most radioactive isotopes used in treatment and diagnosis is applicable, making them highly scalable.
- It can be applied to various cancers through customized target ligand binding technology (Ovarian/liver/lung/prostate cancers, TNBC, etc.).



Core IP & Awarded Status



Key intellectual property rights and award status

2020.04	[KR] (NO. 10-2175448) Heavy atom-Halogen Compound Doped Iron oxide Magnetic Nanoparticles
2020.04	[KR] (NO. 10-2175449) Iron Oxide/Heavy atom-Halogen Compound Core/Shell Magnetic Nanoparticles
2023.01	[EP] (NO. 3895734) Iron Oxide Magnetic Particles

Certification & award status

2021.12	U-CONNECT 2021 FINAL Awarded the Grand Prize
2022.04	K-Camp Final Round Gold Award

GeneMedicine Co., Ltd.

http://www.gene-medicine.com

Surpassing Limitations, Exceeding Expectations

Systemic Delivery Platform for Any Oncolytic Virus.

GeneMedicine is promoting an IP portfolio construction strategy based on original technology and core technology. These strategies enable us to anticipate becoming the first and only company with unique technology and extend our pipeline using our technology.

Sales Amount					
Sales Amount	Domestic		Major clients	① N/A	
	2021	2022		② N/A	
	N/A	N/A		③ N/A	
	Overseas			④ N/A	
	2021	2022			
	N/A	N/A			
Investment attraction history					
Date	Investor			Stage	Amount (\$)
2019.05	Atinum Investment... etc			Series A	13,280,000 \$
2021.07	Atinum Investment... etc			Series B	27,280,000 \$



Company profiles

Established date	2014. 11. 27
CEO	ChaeOk Yun
Employee No.	34
Business Category	Medical and Pharmaceutical R&D
Technology Field	Anti-cancer Adenovirus Treatment
Main Item	
Main Team members	ChaeOk Yun, Ph.D. CEO & CTO 30 years
	Jason Bae, Ph.D. Senior Managing Director, Head of Business Division 22 years
	HyoMin Ahn, Ph.D. Senior Director, Head of Gene & Cell Therapy Research Center 10 years
Address	707, 7F Fusion Technology Center (FTC), 222 Wangsimni-ro, Seongdong-gu, Seoul

Technology



A best-in-class oncolytic adenoviral platform with flexibility to deliver bespoke oncolytic virus therapies for various solid tumor indications

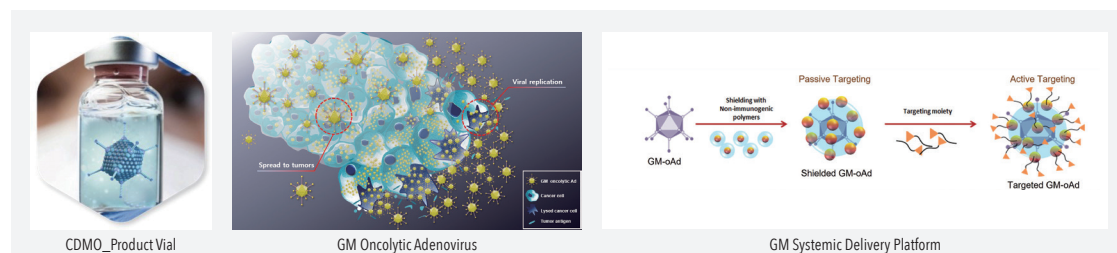
GeneMedicine(GM) is a clinical stage biopharmaceutical company focused on developing next-generation viral immunotherapies, aiming to transform the therapeutic outcomes for cancer patients. Using our proprietary adenovirus platform, we are developing several pipeline products that can be intratumorally and intravenously administered to selectively attack and eradicate tumor cells as well as potentially stimulating multiple arms of antitumor immune response.

GeneMedicine is currently developing four oncolytic adenovirus products, combining its core platform with unique selections of therapeutic transgenes, exploring different anti-cancer mechanisms.

GeneMedicine has 4 potent anti-cancer drugs in our pipelines (GM101, 102, 103, 104). GM101 has completed Phase 1 clinical trials and is undergoing follow-up clinical developments with the aim of getting approval as a new drug. GM103 has been completed IND submission ND submissions to the MFDS and FDA. GM102 and GM104 are undergoing preclinical developments to enter clinical trials.

GM-oAd has the various key differentiation points that enable superior performance over the existing OVs

Development and construction of potent and cancer-specific oncolytic viruses, targeting of multiple cancer signaling pathways through the insertion of therapeutic genes and development of systemically administrable oncolytic viruses in conjunction with our nanobiotechnology platform.



Core IP & Awarded Status



Key intellectual property rights and award status

2007.08.	Gene Delivery System Containing Relaxin Gene And Pharmaceutical Composition Using Relaxin
2018.09.	Antitumor Immunity Enhancing Composition Containing Adenovirus Simultaneously Expressing IL-12 And Shvegf
2020.04.	Adenovirus Complex for Gene Transfer and Gene Therapy

Certification & award status

2020.12.	Commendation Award of Ministry of Health and Welfare, Commercialization of health care technology
2020.11.	Commendation Award of Ministry of Science and ICT, LMO Safety management
2020.07.	Grand Award of Excellent Patent of KOREA

Global innovative company leading the world with happy members

Quratis specializes in developing vaccines for Tuberculosis, mRNA COVID-19, and other infectious diseases.

- The global phase 2b / 3 IND for QTP101 (novel tuberculosis vaccine for adolescents and adults) was approved in July 2022. We are promoting vaccine projects with the plan of entering overseas markets.
- The phase 1 IND for QTP104 (Next-generation mRNA COVID-19 vaccine) was approved in July 2021 in South Korea. Currently, the phase 1 trials are being progressed to the end after the completion of injecting vaccines for test subjects in 2022.

Sales Amount				
Sales Amount	Domestic		Major clients	① ABION
	2021	2022		② Gbiologics
	1,203,514 \$	6,369,007 \$		③ ProAbTech
	Overseas			④ Peggene
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount(\$)
2021	A0000	Pre-IPO	32,170,000 \$
2020	E0000	Series D	17,930,000 \$
2019	M0000	Series C	3,760,000 \$
2018	S0000	Series B	15,080,000 \$
2017	H0000	Series A	6,020,000 \$



Company profiles

Established date	2016.07.15
CEO	KwanGoo Cho
Employee No.	105
Business Category	Biotechnology
Technology Field	Vaccine, immune booster, DNA, RNA, peptide
Main Item	TB vaccine and mRNA COVID-19 vaccine
Main Team members	<p>KwanGoo Cho Chairman / Chief Executive Officer [present] Adjunct Professor of the Dongguk University College of Pharmacy</p> <p>YuHwa Choi Expert Advisor / president Clinical General Manager, 21 years of experience</p> <p>Hyunil Kim Expert Advisor / president Production General Manager, 26 years of experience</p>
Address	<p>Head Office 13, 306, Teheran-ro 64-gil, Gangnam-gu, Seoul, Republic of Korea</p> <p>Overseas Branch 143, Uiryodanji-gil, Osong-eup, Heungdeok-gu, Cheongju-si, Chungcheongbuk-do, South Korea (28161)</p>

Technology



World's first Tuberculosis prevention vaccine QTP101 for adolescents and adults & Korea's first Next-generation mRNA COVID-19 vaccine

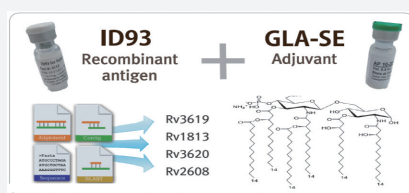
- QTP101 (TB vaccine for adolescents and adults), developed to boost immunity by combining antigens (ID93) and adjuvants (GLA-SE). ID93 contains three virulent tuberculosis antigens and one latent antigen.
- QTP104 (Next-generation mRNA vaccine), self-replicating mRNA vaccine that encodes the spike(S) protein in SARS-CoV-2.
- CMO/CDMO business, having cutting-edge GMP-level facilities and can produce 50 million vials per year for liquid injections / lyophilization.

Target to commercialize Tuberculosis vaccine in 2025, securing sovereignty for vaccine

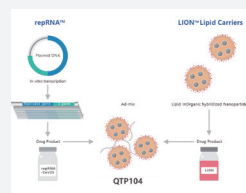
- QTP101: Approved phase 2b / 3 IND for the Tuberculosis vaccine (Adolescents and Adults) by Ministry of Food and Drug Safety in July 2022.
- QTP104: Approved phase 1 IND for the mRNA COVID-19 vaccine by Ministry of Food and Drug Safety in July 2021.
- Acquired KGMP certificate at Osong Bio Plant in January 2022.

Differentiated mechanism of action

- QTP101: Boosting organic immune reaction formed by BCG and preventing from Tuberculosis infection through only three inoculations.
- QTP104: RNA encoding spike protein delivered to immune cells through LNP technology (LION). Like the simple mRNA vaccine, QTP104 induces the antigen, which leads to the formation of antibodies. repRNA has the advantage of more antigenic production than simple mRNAs by replicase.



QTP101 Technical Schematic Diagram



Mechanism of QTP104



Osong Bio plant / CMO & CDMO Services

Core IP & Awarded Status



Key intellectual property rights and award status

2022.05	Biomarker for predicting the treatment response of inflammation by nontuberculous mycobacteria (10-2400827)
2021.03	Recombinant vectors expressing proteins for COVID-19 vaccine in plants and methods of preparing vaccine composition using them(10-2021-0028331)
2017.02	Vaccine composition for preventing tuberculosis containing MTBK_20640 protein (1705769)

Certification & award status

2020.12	Minister's Award by Ministry of Health and Welfare, Contribution to commercialization of health and medical technology
2021.11	Minister's Award by Ministry of Food and Drug Safety, Contribution to pharmaceutical industry development
2021.11	Minister's Award by Ministry of Employment and Labor, Good Job

First move with our own technology

Cancer therapy with Albumin-FLICTM conjugates targeting malignant tumors.

Sales Amount				
Sales Amount	Domestic		Major clients	① N/A
	2021	2022		② N/A
	N/A	N/A		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		
Investment attraction history				
Date	Investor		Stage	Amount (\$)
2022.07	KITE Foundation		angel	100,000 \$



Company profiles

Established date	2020.02.04
CEO	KwanMook Kim
Employee No.	8
Business Category	Fine Chemistry
Technology Field	Cancer targeting drug
Main Item	albumin-FLICTM Conjugates
Main Team members	<p>KwanMook Kim CEO 1989-2024 Researcher at KIST 2024-present Professor at EWU</p> <p>Yangkee Kim Director Researcher at LG Ph.D. at Missouri State University</p> <p>Juyoung Yoon Co-founder Ph.D. at Ohio State University 2002-present Professor at EWU</p>
Address	124b, Ewhayeodae-52-gil, Seodaemun-gu, Seoul, Republic of Korea

Technology



Core technology of the product

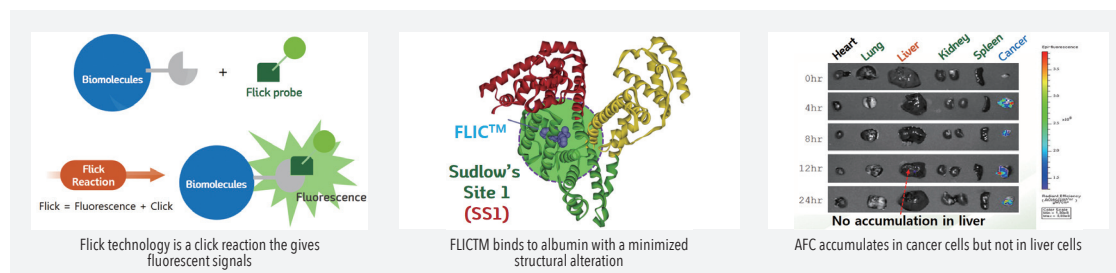
- New drug development using albumin-FLICTM-conjugate (AFC) as an anti-cancer drug delivery system.
- Photodynamic therapy with AFC.
- Cancer imaging with AFC.

Technology development progress

- The experiment with MDA-MB-231 tumor implanted mouse model showed that AFC effectively accumulates in tumor but not in liver.
- Photodynamic therapy on MDA-MB-231 implanted mouse showed effective therapy.
- The synthesis and efficacy tests on anticancer drug conjugates of AFC are underway.

Differentiation and innovation

- FLICTM binds human serum albumin via covalent bond in SS1 site, which minimize the alteration of albumin 3-dimensional structures.
- AFC accumulates in cancer cells but not in liver cells, unlike other cancer targeting carriers.
- AFC gives fluorescent signals, which can be used in photodynamic cancer therapy and cancer imaging.



Core IP & Awarded Status



Key intellectual property rights and award status

2023.02	Cancer cell targeting, imaging and therapy using AFC
2022.09	POC detection of bio-albumins
2020.05	Photodynamic therapy using mitochondria targeting photosensitizers

Certification & award status

2022.07	2022 MSMLG Czanik Award, Prof Juyoung Yoon
2021.09	Outstanding company at 2022 KIBO camp
2020.09	KYUNGAM academic award, Prof Juyoung Yoon

True Innovation for Ultimate Health of Mankind

A biopharmaceutical company dedicated to the discovery and development of innovative, life-changing small molecule and biologic medicines focusing on rare diseases.

Sales Amount				
Sales Amount	Domestic		Major clients	① Hansoh Pharma
	2021	2022		② Daewon Pharm
	43,000 \$	835,000 \$		③ Oncodesign
	Overseas			④ IQVIA
	2021	2022		
	N/A	6,200,000 \$		

Investment attraction history



Company profiles

Established date	2016.12.06
CEO	HunTaek Kim
Employee No.	56
Business Category	R&D
Technology Field	New drug development
Main Item	Rare disease drugs, immunotherapy

HunTaek Kim | CEO
VP, Innovation R&D center, SK
Chemicals
MS / BS, Dept. Seoul Nat'l Univ., Korea
Ph.D., Texas A&M University, US
(molecular pathophysiology)

Main Team members **Hyunsil Koh | Managing Director**
Director, Samil PwC

BS, Dept. of Business Administration,
Seoul Nat'l Univ., Korea

Inyoung Song | Managing Director

Life sciences center, SK Chemicals
MS in Life Science at Pohang Univ. of
Science and Technology

Address

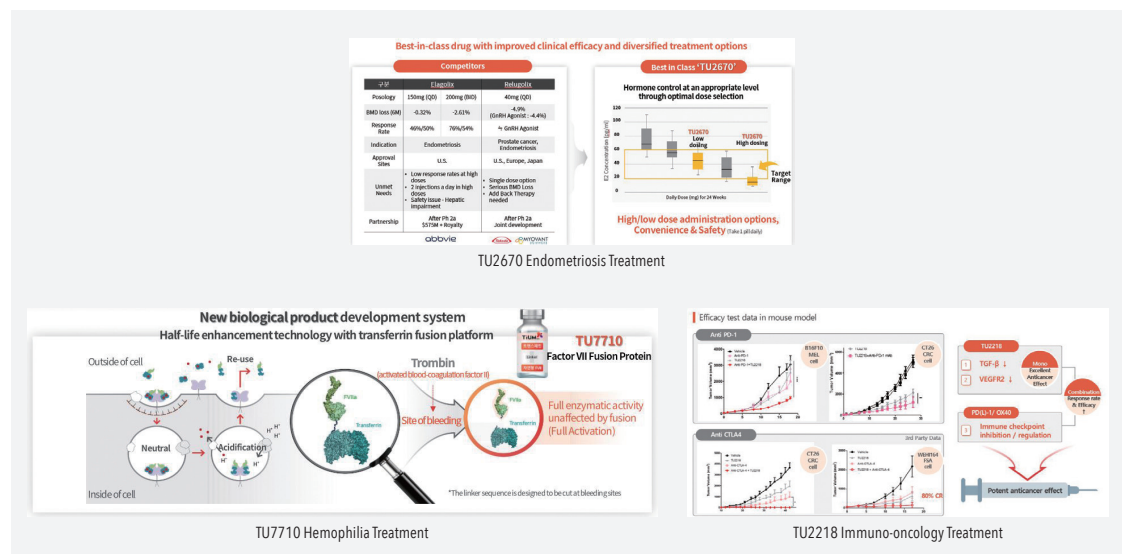
49, Daewangpangyo-ro 644beon-gil,
Bundang-gu, Seongnam-si, Gyeonggi-
do, Republic of Korea

Technology



Clinical Stage Pipeline

- TU2670 Endometriosis treatment: Oral GnRH Antagonist / Fast onset of action / Stable E2 hormone regulation above the menopausal level / Quick recovery of normal hormonal cycle after discontinuation (Phase 2a in Europe).
- TU2218 Immuno-oncology: Dual kinase inhibitor / TGF-beta & VEGFR2 target / Synergistic effect with immune checkpoint inhibitors (Anti PD-1, Anti CTLA4) / Ongoing Phase 1(monotherapy) & Phase 1b(combination therapy with Keytruda).
- TU7710 Hemophilia bypassing agent: Improved bleeding control and safety & 6x longer half-life than competitors / Phase 1 initiation.



Core IP & Awarded Status



Key intellectual property rights and award status

2019.01	[PCT] 2-Pyridyl Substituted Imidazoles As Alk5 And/Or Alk4 Inhibitors
2019.04	[PCT] Salts And Crystalline Form Of Europyrimidine Compound, And Pharmaceutical Composition Comprising Same
2019.12	[PCT] Pharmaceutical Composition Having Improved Stability Comprising A Fusion Protein Of Factor Vii

Certification & award status

2020.07 ~ 2022.12	Selected for BIG3 program by the Ministry of SMEs and Startups
2020.02	17 th IB Excellent Award
2022.11	Selected for KDDF's new drug clinical trial program

We contribute to the common prosperity of humanity by supplying biosimilars at reasonable prices

We continuously innovate our technologies to develop and produce biosimilars efficiently.

PepGene possesses the HYPER technology as a non-exclusive platform technology for technology transfer to multiple pharmaceutical and biotech companies. While exclusive technology transfer often involves granting exclusive rights or transferring patent rights, platform technology enables non-exclusive technology transfer to multiple companies interested in developing biopharmaceuticals. Through the establishment of patent licensing agreements, PepGene can recover royalties for the use of the technology from various companies aiming to develop biopharmaceuticals.

Sales Amount

Sales Amount	Domestic		Major clients
	2021	2022	
	61,810 \$	245,718 \$	
	Overseas		
	2021	2022	
	N/A	N/A	
			① Korea Centers for Disease Control and Prevention (KCDC)
			② Osong Advanced Medical Industry Promotion Foundation
			③ Bioplus
			④ Daewoong Pharmaceutical

Investment attraction history

Date	Investor	Stage	Amount (\$)
2021.01	Etron	pre- Series A	1,153,696 \$
2021.07	Angel investment	pre- Series A	769,130 \$
2021.12	Venture capital	pre- Series A	76,913 \$

Company profiles

Established date	2019.10.01
CEO	Changseok Noh
Employee No.	9
Business Category	Medical and Pharmaceutical Research and Development Industry
Technology Field	Genetically Recombinant Pharmaceuticals

Main Item

Main Team members	Changseok Noh CEO Work Experience Previous career as CEO of T&K Bioinnovation
	SeongGun Kim CTO Work Experience Professor, Department of Biomedical Medicine, Yuwon University

Address	Chungcheongbuk-do, Cheongju-si, Heungdeok-gu, Pungnyeong-ro 198beon-gil 63, B185
----------------	--

Technology



Core technology of the product

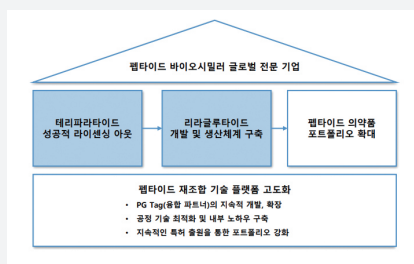
(Liraglutide biosimilar): It has been validated that the Liraglutide biosimilar, approved by the U.S. FDA, European Medicines Agency (EMA), and the Korean Ministry of Food and Drug Safety (MFDS), is the only approved treatment for obesity. Its effectiveness in reducing blood pressure, blood glucose levels, and visceral fat through appetite suppression has been verified. It requires only once-daily subcutaneous injections.

Technology development progress

(Liraglutide biosimilar): The development of the recombinant production process for the Liraglutide biosimilar has been completed. Currently, PepGene is in the process of negotiating contracts for non-exclusive technology transfer and joint development with domestic biotech companies for the purpose of commercialization.

Differentiation and innovation

The HYPER (High Yield Peptide Expression and Refolding) technology is PepGene's proprietary technology suitable for large-scale production. It minimizes the production process of peptide drugs, enabling the production of high-yield medications at a lower cost. This technology allows for efficient production of pharmaceuticals with high yields by optimizing the production process.



Detailed plans for commercialization at home and abroad



Teriparatide Biosimilar projected draft



Teriparatide Biosimilar projected draft

Core IP & Awarded Status



Key intellectual property rights and award status

2021.12	[PCT] (No. 10-2345013) Method for producing glucagon-like peptide-2 or analogues thereof using GroES fusion
2021.12	[PCT] (No. 10-2345012) Production method of human parathyroid hormone 1-34 using GroES fusion
2022.03	[PCT] (No. 11,267,863): N-Terminal Fusion Partner For Producing Recombinant Polypeptide, And Method For Producing Recombinant Polypeptide Using Same

Certification & award status

2019.12	Korea Patent Award
---------	--------------------

FOR HEALTHY AND HAPPY LIFE AWAY FROM DISEASE TO BETTER LIFE TO BECOME LIGHT AND HOPE

Developing a premium vaccine based on highly immunogenic virus-like particles (VLPs) and providing solutions to the technical challenges of existing vaccines.

1. Business Progress

- 9-valent HPV vaccine (PV-001): Phase 1 clinical trials underway in Korea and looking for technology transfer or cooperation partners.
- Alzheimer's Disease vaccine (PV-002): translational research and preclinical toxicity study.
- Immune anticancer vaccine (PV-006): HIT screening and Lead optimization study.

2. Growth Strategies: Developing personalized therapeutic vaccines through Plug & Play technology.

Sales Amount				
Sales Amount	Domestic		Major clients	① N/A
	2021	2022		② N/A
	N/A	N/A		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2019.03	AF Investment	Series A	500,000 \$
2019.05	Aju IB, Kiwoom, HB Investment	Series A	4,500,000 \$
2020.12	Aju IB, Kiwoom, Dt& Investment, Maple Partners, KDB Capital	Series B	8,500,000 \$
2021.01	HB, BeHigh Investment	Series B	4,500,000 \$
2021.02	LSK Investment, Hana Financial Investment	Series B	3,000,000 \$



Company profiles

Established date	2018.06.15
CEO	HongJin Kim
Employee No.	26
Business Category	Biopharmaceutical and Vaccine
Technology Field	Virus-like particles (VLP) Platform Tech.
Main Item	9-valent HPV vaccine
Main Team members	HongJin Kim CEO Chung-Ang University, College of Pharmacy, Professor
	SungHong Kim CTO AMC, Director of Cancer T2B Center SK Biopharmaceuticals, Senior Researcher
	HyungJin Kim Director Chung-Ang University, College of Pharmacy, Research Professor
Address	B-1308, 401 Yangcheon-ro, Gangseo-gu, Seoul, Republic of Korea

Technology



Core technology of the product

POSVAX is a premium vaccine developer based on virus-like particles (VLPs) platform technology, focusing on developing vaccines to prevent and treat disease throughout the life cycle. We focus on developing 9-valent HPV vaccine, Alzheimer's disease and immune anticancer therapeutic vaccine using VLP-based technology.

Technology development progress

- 9-valent HPV vaccine is under conducting Phase 1 clinical trials in Korea.
- VLP-based Alzheimer's disease vaccine and immune anti-cancer vaccine is developing at non-clinical study.

Differentiation and innovation

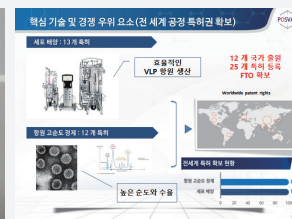
- Patented platform technology to manufacture highly immunogenic virus-like particle (VLP)
- Peptide drug conjugated on VLP for early Alzheimer's disease patient or the medical unmet needs of the immuno anticancer therapy



Drug Substance of 9-valent HPV vaccine for clinical study



Drug Product of 9-valent HPV vaccine for clinical study



Patent Rights

Core IP & Awarded Status



Key intellectual property rights and award status

2014.10	Methods of enhancing HPV L1 protein production yield [KOR 10-1458270]
2015.10	Methods of enhancing HPV VLP purification [KOR 10-1559622]
2010.05	Methods of HPV VLP production and purification [KOR 10-0959145]

Certification & award status

2022.10	Director General Award of VITAL-Korea
---------	---------------------------------------

Click Chemistry for Better Biological Drugs

Specializing in the development of next-generation bioconjugate drugs.

ProAbTech's RIPCO (Research Intensive Pharmaceutical Company) business model uses its SelecAll® platform technology to develop new pipelines, with the objective to license-out pipelines and its platform technology. ProAbTech is open to In-house development and co-development of new candidate drugs or to previously clinically failed drugs by using its technology.

Sales Amount				
Sales Amount	Domestic		Major clients	① Seoul 00 Hospital
	2021	2022		② Busan 00 Hospital
	N/A	N/A		③ 00 Electronic Co., Ltd.
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		
Investment attraction history				
Date	Investor		Stage	Amount (\$)
2021.10	Hana Securities plus 3 other companies		Series A-1	4,000,000 \$
2020.08	Hanwha Investment & Securities plus 2 other companies		Series A	4,000,000 \$



Company profiles

Established date	2017.09.25
CEO	Jeonghaeng Cho
Employee No.	16
Business Category	Biopharmaceuticals / Service
Technology Field	Bioconjugate drugs
Main Item	PAT101 for tophaceous gout
Main Team members	<p>Jeonghaeng Cho CEO Hankook Korus Pharm Jeonnam Bioindustry Foundation</p> <p>Inchan Kwon CTO Professor at Gwangju Institute of Science and Technology</p> <p>Kyunghee Lee Head of R&D Prestige BioPharma Ltd. DUKE-NUS graduate medical school</p>
Address	117-1, Cheomdangwagi-ro 123 A(S8), Buk-gu, Gwangju (61005)

Technology



PAT101, Candidate drug for the treatment of refractory tophaceous gout

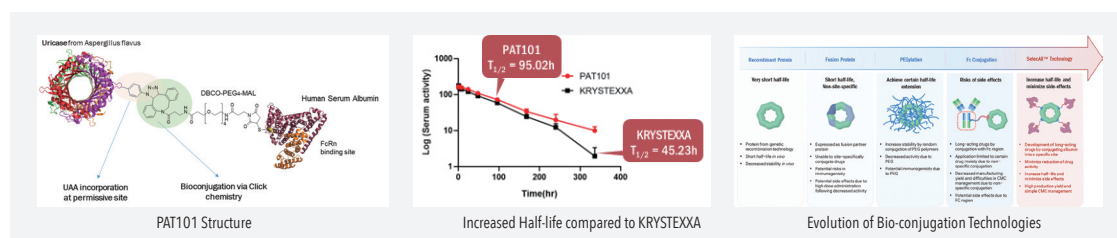
PAT101 (Alburicase) is a bio-conjugate candidate for refractory tophaceous gout, a disease where uric acid crystal (tophi) is deposited between joints leading to inflammatory disease. PAT101 is a uniquely designed UOX protein conjugated to four (4) rhHSA protein molecules, generating a significantly enhanced PK profile with reduced immunogenicity. Pre-Clinical data confirms the extended PK profile and reduced immunogenicity leading to both improved safety and efficacy when compared to commercially available drugs to treat chronic refractory gout.

Non-clinical trials to be completed by end of 2023, Phase I clinical trials to begin by 2024

PAT101 is currently in the last stages of the non-clinical trials, performed by Charles River. 4-week repeated dose administration in rat and monkey is estimated to finish by 2023. No serious adverse effects or deaths have been observed during these studies. ProAbtech Co., Ltd. plans to submit an Investigational New Drug (IND) application for Phase 1 clinical trials and carry out the production of clinical trial samples in the first half of 2024. PAT101 is scheduled to recruit patients and conduct Phase 1 clinical studies trials on the second half of 2024.

Site-specific albumin conjugation to increase the stability and half-life of drugs

The novel platform SelecAll™ incorporates an unnatural amino acid into the desired molecule after screening for a specific site that does not affect its activity or structure. Through a click chemistry reaction known as IEDDA, the various therapeutic proteins / peptides / scFVs can be conjugated site-specifically to albumin using a TCO linker with an IEDDA reactive functional group. This makes it possible to overcome the limitations of current therapeutics, such as poor drug properties, toxicity, and safety issues.



Core IP & Awarded Status



Key intellectual property rights and award status

2023.02	[Reg](10-2501387) Uric acid oxidase-albumin conjugate, manufacturing method and use thereof
2023.02	Reg](10-2496720) Tyrosyl-tRNA synthetase mutant and protein production method using the same
2016.06	[Reg](10-1638010) Site-specific albumin conjugated urate oxidase and the method for site-specifically conjugating albumin to protein

Certification & award status

2021.04	'1st K-Camp' Grand Prize from Korea Securities Depository
2018.05	Venture Company Certificate from the Korean Government

Present patients with sustainable hope

We independently built the next-generation ADC platform PINOT-ADC™.

We have payload and linker-oriented PINOT-ADC platform technology, and its main business model is to generate revenue through the use of platform technology and the joint development / technology transfer of ADC candidate materials derived from platform technology.

Sales Amount				
Sales Amount	Domestic		Major clients	① Celltrion Co., Ltd
	2021	2022		② Southern Research Institute
	N/A	703,846 \$		③ Symeres
	Overseas			④ Wuxi Biologics
	2021	2022		
	279,282 \$	5,000 \$		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2023.3~4	Lotte Biologics, Anguk Pharmaceutical Co., Ltd. etc	Strategic investment	1,600,000 \$
2023.3~4	IMM Investment, BNH Investment, Union Investment Partners, Quad Asset Management	Pre-IPO Second Round	5,384,615 \$
2022.12	IMM Investment, KB Investment	Pre-IPO First Round	2,307,692 \$
2022.10	Celltrion Co., Ltd	Strategic investment	1,600,000 \$
2022.05	Mirae Asset Venture Investment, Dreamstone PE, Magna Investment	Series C extension	2,307,692 \$



Company profiles

Established date	2017.02.07
CEO	DooYoung Jung
Employee No.	33
Business Category	R&D, science and technology services
Technology Field	Anticancer drug, Glaucoma Treatment
Main Item	ADC Platform™
Main Team members	<p>DooYoung Jung CEO BD Head (KRICT)</p> <p>JinSoo Lee CTO Director of Donghwa Pharmaceutical Research Institute</p> <p>HyunYong Cho CSO Heraeus Global Technology Manager</p>
Address	<p>Head Office 8F, Gwanggyo Business Center, 156, Gwanggyo-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, Korea</p> <p>Overseas Branch 1019 S.Catalina St, Suite 210, Los Angeles, CA 90006</p>

Technology



PINOT-ADC™

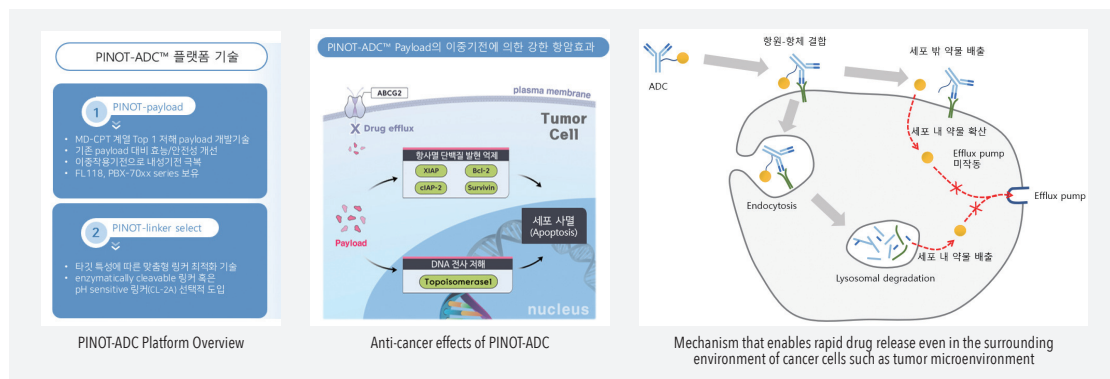
PINOT-ADC™ is a new ADC development platform that can overcome the limitations of existing ADCs. It uses a new MD-CPT-based Top 1 inhibitor as a payload (PINOT-payload) and selects the best combination among CL2A and Enzyme-cable link system as an antibody-linked linker.

Technology development status

PBX-001: Anti-cancer efficacy verification completed (target antigens: HER2, EGFR, and Trop2). Complete the non-GLP Tox study as the last step in the preclinical study. mic blood PK, micomor PK experiment in progress. CMO selection discussion for CMC development.

Differentiation and innovation

The PINOT-ADC platform has a wide therapeutic window due to its excellent efficacy and high safety. Despite showing strong efficacy (4 to 20 times cytotoxicity) compared to CPT-based payload used in third-generation ADCs, it has secured an equivalent level of safety with these CPT-based drugs.



Core IP & Awarded Status



Key intellectual property rights and award status

2021.05.11	A compound containing FL118 drug and immunoconjugates using the same (10-2349925)
------------	---

Certification & award status

2022.11	The Ministry of SMEs and Startups awarded a person of merit for the BIG3 project (Director's Award for Entrepreneurship Promotion Agency)
2022.12	2022 Korea Innovation Startup Award (Chairman of the National Science and Technology Research Association)
2023.03	Korea Credit Guarantee Fund's 'First Penguin' Company Selection

Opening a new era of dental care with HysensBio's technology

First-in-Class Dental Therapeutics.

Dentin hypersensitivity treatment has completed phase 2a clinical trials in Korea, and in November 2022, Orion Biologics, a joint venture (JV) with Orion Holdings, is seeking to enter markets in China, Russia and Southeast Asia. As of the end of May 2023, HysensBio has acquired a technology rating for special exemption listing on the KOSDAQ market.

Sales Amount				
Sales Amount	Domestic		Major clients	① Orion Biologics Co., Ltd.
	2021	2022		② N/A
	N/A	4,500,000 \$		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		
Investment attraction history				
Date	Investor		Stage	Amount (\$)
2023.05	Orion Holdings Corp.		SI	1,500,000 \$
2021.04	Korea Investment Partners, etc. (6 investors)		Series C	10,000,000 \$
2019.05	Korea Investment Partners, etc. (3 investors)		Series B	5,400,000 \$
2018.03	Korea Investment Partners		Series A	1,500,000 \$

Company profiles

Established date	2016.07.25
CEO	JooCheol Park
Employee No.	38
Business Category	Biotech
Technology Field	Dental therapeutics
Main Item	Selcopintide (Novel peptide drug)
Main Team members	<p>JooCheol Park CEO DDS, Ph.D. Professor, Seoul National University</p> <p>SukHyun Yi CBO Hancom Group. Microsoft Korea</p> <p>Jeongmin Park Head of R&D Dept. Kine Sciences Il-Yang Pharm.</p>
Address	10, Dwitgol-ro, Gwacheon-si, Gyeonggi-do, Republic of Korea

Technology



Development of First-in-Class Specialized Treatment for Intractable Dental Diseases (Dentopine)

Dentopine technology using Selcopintide, a CPNE7 protein-derived peptide developed by HysensBio is odontoblast and periodontal fibroblast activation technology, which is used to develop treatments for dental diseases such as dentin hypersensitivity, cavities, and periodontal disease.

Phase 2a of dentin hypersensitivity treatment completed

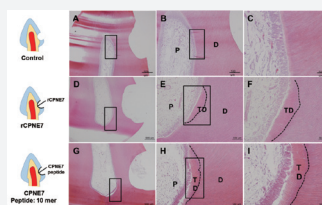
Phase 1/2a of the dentin hypersensitivity treatment KH-001 has been completed in Korea and is preparing for phase 2b domestic and U.S. clinical trials. Selcopintide has applied to the U.S. FDA for orphan drug designation (ODD) aimed at improving symptoms of a rare disease, amelogenesis imperfecta.

Satisfying unmet needs of existing treatment methods, high product scalability and easy development

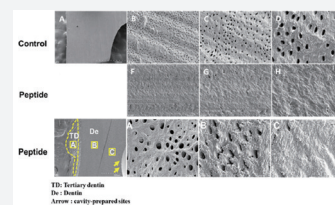
- Fundamental therapeutic effects compared to existing treatments as regenerates the physiological dentin and occludes dentinal tubules.
- Expandable to a wide range of products ranging from ETC to OTC and consumer products.
- Economic development is possible with lower clinical costs and a short clinical period compared to general new drug development.



Joint investment with Orion Holdings



Tertiary dentin regeneration effect of Selcopintide



Dentinal tubule occlusion effect of Selcopintide

Core IP & Awarded Status



Key intellectual property rights and award status

2017.08	Novel Peptide(related to Selcopintide): filed in 17 countries, granted in 13 countries
2019.03	Composition of Toothpaste, Mouthwash: filed in 17 countries, granted in 8 countries
2023.02	Periodontal disease prevention and treatment composition: fled in 17 countries

Certification & award status

2022.11	IR52 Jang Young-Shil Award (Ministry of Science and ICT)
2021.12	Healthcare Technology Commercialization Award (Ministry of Health and Welfare, KHIDI)
2019.11	New Technology of the Month Award (Ministry of Trade, Industry and Energy)

Intestinal imbalance control Biohealth Microbiome Food and Drug Material Technology R&DB

The development of biohealth functional substances and bio pharma-nutraceutical substance for human microbiome based on R&D competencies utilized for the microorganism driven by traditional fermented food recognized its efficacy and safety.

Sales Amount				
Sales Amount	Domestic		Major clients	① Seoul 00 Hospital
	2021	2022		② Busan 00 Hospital
	90,000 \$	500,000 \$		③ 00 Electronic Co., Ltd.
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		
Investment attraction history				
Date	Investor		Stage	Amount(\$)
2022.04	Korea Alternative Investment Asset Management Corp. / etc.		Series A	1,600,000 \$

Company profiles	
Established date	2019.01.23
CEO	MoonHee Sung
Employee No.	19
Business Category	R&BD
Technology Field	Biohealth Microbiome Food and Drug Material
Main Item	Biohealth Microbiome Food and Drug Material
Main Team members	MoonHee Sung CEO
Address	303, Cheonjam-ro, Wansan-gu, Jeonju-si, Jeollabuk-do, Republic of Korea

Technology



Discovery of Microbiome-based Functional Foods and Drug Candidate Materials: Fundamental Technologies

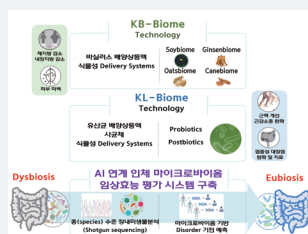
- Microbiome modulation material KL-biome platform technology.
- Microbiome modulation material KB-biome platform technology.
- Biomedical health functional material GMP manufacturing platform technology.
- AI-integrated microbiome analysis and biomarker derivation technology.

Global Market Expansion through Biomedical Health Functional Material KL-biome / KB-biome

The paradigm of gut health has evolved and expanded from the concept of simple probiotics to encompass all microorganisms and their genetic information that coexist within the human body, known as the microbiome. In line with this, gut microbiome has been recognized as a crucial factor in personalized precision medicine. Consequently, there is ongoing development of food and pharmaceutical material technologies aimed at controlling dysbiosis, an imbalance of gut microorganisms, to manage diseases and conditions.

Postbiotics Utilizing GRAS Fermented Food Microbial Culture Supernatants

We possess a postbiotics manufacturing technology that utilizes domestically produced soybean puffing powder as a plant-based freeze-drying excipient to effectively deliver fermented metabolites, which are beneficial components for gut microbiota, to the intestinal microbiota.



Discovery of Microbiome-based Functional Foods and Drug Candidate Materials



KOOKMINBIO POSTBIOTICS

Core IP & Awarded Status



Key intellectual property rights and award status

2020.11	[KR102176920B1] Novel halophile Bacillus polyfermenticus producing halostable gamma-glutamyl transpeptidase
2021.09	[PCT/KR2021/012927] Novel lactic acid bacteria isolated from aged meat, and use thereof
2022.10	[KR/10-2022-0134157] Antioxidant and Anti-obesity Effects of Fermented Metabolites from Halotolerant Bacillus Strains Isolated from Kimchi Fermented Foods

Certification & award status

2023.01	Minister's Award for Technology Commercialization in INNOPOLIS
2020.04	Presidential Science and Technology Medal for Advancement, Contribution to the Promotion of Science and Technology in South Korea
2019.11	IP R&D Excellence Award from the Commissioner of the Korean Intellectual Property Office

SEE the Difference, FEEL the Difference

RAFIQ Cosmetics is specialized in natural ingredients and unique skincare products.

RAFIQ is running ODM business as its main business based on research and development results. In the second half of 2022, we launched our own brand, Plentyplant, but most of the company's sales are still being raised through B2B business. The B2B method is proceeding in the form of B2B2B, not general B2B. This method is a B2B method in which only strengths are gathered at each business stage and collaborated with cosmetics ODM companies to establish a model of Rapique (cosmetics development)- other ODM companies (using sales networks).

Sales Amount				
Sales Amount	Domestic		Major clients	① Wando Country Office
	2021	2022		② SD BIOTECHNOLOGIES CO., LTD.
	573,511 \$	1,442,022 \$		③ KODI CO., LTD.
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2023.04	MYSC	Series A Bridge	151,354 \$
2022.05	Industrial Bank of Korea, etc.	Series A	3,027,092 \$
2020.12	Korea Credit Guarantee Fund, etc.	Pre-series A	1,172,998 \$

RAFIQ cosmetics	
Company profiles	
Established date	2017.01.24
CEO	Pomjoo Lee
Employee No.	15
Business Category	Cosmetic manufacturing
Technology Field	Plant materialization technology
Main Item	SofTech, Upcycling technology
Pomjoo Lee CEO Expert in skin-care cosmetics develop with over 19 years of experience in cosmetics	
Main Team members Jihoon Lee Manager 10 years of R&D experience in skin functional materials Chanho Park Manager 9 years of experience in cosmetics formulations	
Address	2nd Fl., Bldg 1, 12, Baekseonggongdan 3-gil, Seobuk-gu, Cheonan-si, Chungcheongnam-do, Republic of Korea

Technology



Plant Softening Technology (SofTech) and Food by-products Upcycling Technology

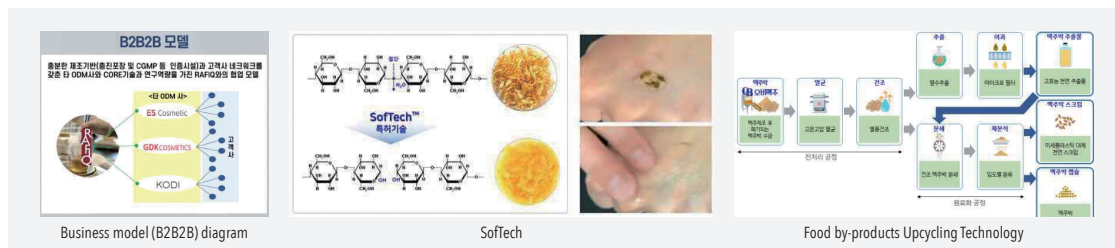
- "SofTech" is a plant softening technology that can softens the cellulose of plant structure. SofTech allows petals or leaves to melt gently on skin, while keeping the shape of the plants in the cosmetic containers.
- "Food by-products Upcycling Technology" is Zero-wasting upcycling platform the utilized by products generated after food manufacturing and processing to develop them into cosmetic raw materials.

Joint R&D and commercialization in progress with domestic and foreign companies

Based on the technology, we are conducting joint R&D by signing NDA with domestic and foreign companies. We launched B2B cosmetics applying softech technology and launched more than 3 million products in the market, and the cumulative sales amount reached 3 billion won. Also, we launched our own brand 'Plenty Plant' and launched B2C cosmetics, and the cumulative sales reached KRW 126 million.

Possession of unique cosmetic materialization technology

The technologies possessed by RAFIQ are technologies that have not been attempted in the cosmetics industry in the past due to the high difficulty of the process and lack of original technology. Unlike other cosmetic material companies, RAFIQ can quickly and exclusively commercialize the materials developed by unique cosmetic materialization technology.



Core IP & Awarded Status



Key intellectual property rights and award status

2021.11	[KOREA] Cosmetic composition providing whitening effect using brewer's gourd processed product and method for manufacturing the same (10-2021-0165221)
2020.05	[USA] Method for producing cosmetic composition comprising natural plant and cosmetic composition produced thereby (16/766966)
2019.11	[China] 含天然植物体的化妆品组合物的制作方法以及通过其制成的化妆品组合物 (201880028426.4)

Certification & award status

2022.12.	Seoul Open Innovation Excellence Award
2022.11	SBS Startup Survival Grand Award
2022.06	The 57th Invention Day, Commendation from the Ministry of Trade, Industry and Energy

Process of obtaining sustainable materials from nature

Mycelium-based alternative leather and alternative proteins.

MYCEL has created the world's sole smart pilot factory for automated mycelium leather production, utilizing cutting-edge tech and processes. This facility leads the industry in automation and efficiency, meeting the rising demand for eco-friendly leather alternatives and establishing MYCEL as a market leader.

Sales Amount				
Sales Amount	Domestic		Major clients	① Hyundai NGV
	2021	2022		② TEIA
	59,906 \$	33,056 \$		③ AMOREPACIFIC Group
	Overseas			④ DONGJIN IED CO.,LTD
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount(\$)
2022.08	KDB, HYUNDAI MOTOR SECURITIES CO., LTD., Stonebridge Ventures Inc., Mirae Asset Venture Investment Co., Ltd., We Ventures Limited Company, SpringCamp Inc., INDUSTRIAL BANK OF KOREA, GS Ventures Co., Ltd.	Pre-A	9,907,812 \$
2021.07	We Ventures Limited Company, Banks Foundation For Young Entrepreneurs, SpringCamp Inc.	Bridge	1,480,838 \$
2021.01	We Ventures Limited Company, SpringCamp Inc., L&S VentureCapital Corp.	Seed	723,980 \$
2020.08	HYUNDAI MOTOR CO, KIA CORPORATION	-	21,132 \$



MYCEL PROJECT

Company profiles

Established date	2020.03.09
CEO	SungJin Sah
Employee No.	26
Business Category	Manufacture / Manufacture of regenerated fibers
Technology Field	Eco-friendly materials

Main Item	Mycelium-based substitute leather and substitute meat
------------------	---

SungJin Sah | CEO
Hyundai Motor Biomaterial Development (10 years)

SungWon Kim | Vice President
Hyundai Motor's overseas sales, Spanish professional football CEO (13 years)

YungGon Park | Head of Development Division
Hyundai Motor Biomaterial Development (14 years)

Head Office | 125, Gomae-ro, Giheung-gu, Yongin-si, Gyeonggi-do, Republic of Korea
Seoul Branch | Room 1206, 145, Dosan-daero, Gangnam-gu, Seoul, Republic of Korea

Technology



Technology for control and materialization of mycelium culture conditions

MYCEL developed a technology to select optimal mycelium strains for leather production and established manufacturing conditions. Patents were obtained for pretreatment processes, and mycelium leather has minimal environmental impact due to its natural biological growth. Compared to cowhide and synthetic leather, it reduces methane gas/carbon dioxide by 74% and 59% respectively. Water usage is significantly reduced by about 99.8%. Additionally, MYCEL conducts research on cosmetic/pharmaceutical raw materials from mycelium culture by-products.

Construction of Pilot-scale R&D center and completion of mycelium leather PoC

A large-scale mycelium cultivation container design was completed, enabling optimal mycelium leather production through pretreatment research. domestic and overseas applications are carried out to secure intellectual property rights. Prototypes in automotive and fashion industries received positive evaluations from investors, Hyundai Motor, Kia Motors, and fashion companies. Mechanical property and harmful substance tests confirmed the quality of mycelium leather. We will supply mycelium leather to our client companies through a mass production plant for the fashion and automotive industries.

Smart manufacturing for mycelium leather manufacturing

For the first time in Korea, we have completed the construction of an IoT-based mycelium culture/logistics automation research facility for the production of mycelium leather.. It enhances efficiency and reduces costs by automating seed injection and container transfer. A culture container with smooth air circulation ensures reliable culture, while an AI Vision system improves quality. Unlike competitors, their liquid media approach improves culture quality and uniformity. They further enhance marketability by developing dyeing and coating technology for mycelium leather, meeting customer needs.



Mycelium leather-based prototypes (car seats, clothing)

Mycelium culture microbial / medium infusion system

Mycelium leather AI Vision Inspection System

Core IP & Awarded Status



Key intellectual property rights and award status

2022.10	[PCT] (KR2022/016330) Multifunctional microbial unit culture device
2022.11	[PCT] (KR2022/019190) Leatherization method of mycelium mat using pH-controlled tannic acid
2023.05	[PCT] (KR2023/006047) Leatherization method of mycelium using plant-derived polyphenol groups

Certification & award status

2023.01	Selected as 'A-Ventures of the Month' company by Korea Agricultural Technology Promotion Agency
2022.11	Selected as a core strategic technology for materials/parts/equipment by the Ministry of Trade, Industry and Energy
2022.09	Sponsored by Hyundai Motor Company, participated in and won the Korea-U.S. Start-up Summit

Functional (Medical/Eco-friendly) Material Innovative Medical/Eco-friendly Specialized Company

Development of functional materials that can create new industries such as regenerative medicine, tissue engineering, cosmetics and eco-friendly materials.

- Promote commercialization of customized standard functional medical / environmental materials based on secured patents.
- Discovery and construction of new business product models by establishing a platform for functional medical/environmental materials.
- The goal of commercialization by applying functional medical / environmental materials.

Sales Amount				
Sales Amount	Domestic		Major clients	① Pharmaceutical company
	2021	2022		② Regenerative medicine company
	N/A	N/A		③ Eco-friendly material company
	Overseas			④ N/A
	2021	2022		
N/A	N/A			
Investment attraction history				
Date	Investor		Stage	Amount (\$)
2020.02	Actner Lab		Seed	1,000,000 \$
2021.12	Technology guarantee fund		Pre-series	3,000,000 \$



Company profiles

Established date	2019. 02.01
CEO	MoonSuk Kim
Employee No.	4
Business Category	Manufacturing / bio raw material product platform
Technology Field	Medical / environmental materials
Main Item	Functional materials
Main Team members	MoonSuk Kim CEO Work Experience Professor, PURDUE univ. Adjunct Professor HaiBang Lee Chief Researcher Work Experience KRICET Vice President Kyoung Suk Kim Director Work Experience: Patent Management Manager, Technology Appraiser
Address	Head Office 274 Samsung-ro #401 Yeongtong-gu, Suwon-si, Republic of Korea

Technology



Functional medical and eco-friendly material

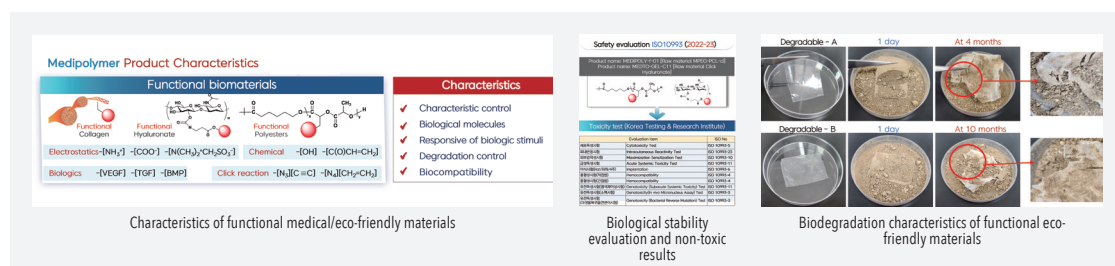
- Business model: Functional medical and eco-friendly material products containing bio / environmentally sensitive functional group.
- Business progress: Commercialization of customized standard functional medical / eco-friendly material raw materials based on 14 domestic patents registered for functional medical / eco-friendly materials and 3 patents registered overseas.

Medipolymer business status and progress

- Functional medical / eco-friendly materials: prototyping and sales in progress.
- Sustained-release injectable formulation for dementia disease for more than 2 months: Animal application validation completed, IND scheduled for future.

Functional medical / eco-friendly materials

- The development of ultra-high value-added next-generation functional medical materials by manufacturing technology of polyester-based materials containing physiologically active, electrostatic, and chemically reactive functional groups, hyaluronic acid, and collagen materials is highly likely to acquire exclusive rights related to medical materials in the future.
- Functional medical materials with highly functional groups introduced are high value-added materials that can create new industries such as regenerative medicine, tissue engineering, cosmetics and eco-friendly materials that are currently in the limelight as well as the existing medical biodegradable material market.



Core IP & Awarded Status



Key intellectual property rights and award status

2022.12	[US 9006349] Temperature-sensitive poly(ethylene glycol)/poly(ester) block copolymer in which bioactive functional group is introduced into side chain thereof
2022.12	[US10894895/EP3313944] Two-component bioink, 3D biomaterials comprising the same and method for preparing the same
2021.04	[KR10-2213196] Injectable composition for use as filler or drug delivery system through click chemical reaction and 13 other registered KR Patents

Certification & award status

N/A N/A

Next-generation biomaterials for the future

Developing the next generation of biomaterials based on human genes.

We are based on various bio technologies such as genetic recombination technology, microbial culture technology, and protein isolation & purification technology. We develop materials that are most similar to essential proteins constituting the body, and supply them to be used in various industries such as cosmetics, cosmeceuticals, functional foods, and medical care.

Sales Amount				
Sales Amount	Domestic		Major clients	① Hyundai bioland
	2021	2022		② Labtoday
	38,000 \$	137,000 \$		③ Natureintro
	Overseas			④ University institution
	2021	2022		
N/A	N/A			
Investment attraction history				
Date	Investor		Stage	Amount (\$)
2018.10	angel		Start up	7,558
2020.11	Enlight No. 6 CD Fund		SEED	151,330
2021.09	SBB3 Private Investment Association		SEED	75,740

Company profiles	
Established date	2018.09.20
CEO	WooYoung Seo
Employee No.	4
Business Category	Scientific Services
Technology Field	Bio
Main Item	materials(protein, antibody)
WooYoung Seo CEO Medicinal Bioconvergence Research Center	
YoungHoon Kim Technical Director Vtisro (2016~2019)	
SungSik Moon Finance Director Dayou Plus (2016~2019)	
Address	#707, 1-dong, 306 Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do

Technology



Bio-platform for developing human mimetic protein materials

- Developed using human-like collagen gene DNA that shows human skin efficacy. Stability similar to that of naturally derived collagen.
- Next-generation collagen that surpasses animal collagen.
- Less chance of resistance in the body and relatively free from problems with infectious agents.
- In order to facilitate the absorption of macromolecular collagen with high molecular weight, collagen peptides with minimized molecular weight.

Development of human-like collagen cosmetic materials

- Completed development of 4 types of human-like collagen cosmetic materials.
- Concluded contracts for the production of human-like collagen cosmetic materials (2 cases).
- Bio material production facility under construction.
- Human-like collagen cosmetic material 2 human application tests completed.

Differentiation and potential of the next-generation biomaterials market

The potential of recombinant protein technology in cosmetics, food, and medical fields is vast, and continuous research and development is expected to lead to further improvements and advancements in the future.

We believe that it will be possible to pioneer new markets by supplying raw materials for cosmetics and health functional foods that are most suitable for vegan, halal, and eco-friendly, which have recently become global keywords.



Core IP & Awarded Status



Key intellectual property rights and award status

2020.07	Registered a patent (peptide with collagen synthesis promoting activity and method using the same)
2022.03	Registered a patent (peptide with collagen synthesis promoting activity and method using the same)
2023.01	Patent application (collagen type 3 small-molecular-weight peptide having collagen synthesis promoting activity and method using the same)

Certification & award status

2019.04	Selected as a Start-up NEST company (korea credit guarantee fund)
---------	---

Materials For A Sustainable Future

ANPOLY develops natural-derived nano-bio source material (nano-cellulose) and utilization technologies that can replace various synthetic polymers, including plastics, by extracting Cellulose Nano-fiber (CNF) from previously discarded materials.

ANPOLY's Cellulose Nano-fiber (CNF), brand name Re:ancel™ is from a natural organic material which is cellulose, the main component of plants, fibrillated to a nano level. It is 5 times stronger than iron but 5 times lighter. In addition, it has excellent properties such as transparency, renewability, biodegradability, biocompatibility, thermal stability, viscosity control, and gas barrier, so it can be applied to various industries, which is highly expected as a functional eco-friendly new material for a sustainable future.

Sales Amount

Sales Amount	Domestic		Major clients	① Ulsan Institute of Science and Technology
	2021	2022		② Seoul National University
	86,000 \$	114,000 \$		③ Korea Institute of Science and Technology
	Overseas			④ Pohang University of Science and Technology
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2022.08	POSCO CAPITAL	Bridge	5,400,000 \$
2022.08	KB Securities	Bridge	1,540,000 \$
2022.08	Korea Development Bank	Bridge	770,000 \$
2022.08	LOTTE Ventures	Bridge	460,000 \$
2022.11	ID Capital	Bridge	110,000 \$

Company profiles

Established date	2017.01.20
CEO	Sangcheol Rho
Employee No.	24
Business Category	Research & Development, Manufacturing
Technology Field	Eco-friendly new material, Nanocellulose
Main Item	Nanocellulose
Main Team members	<p>SangCheol Rho Ph.D. CEO POSTECH Research Professor Institute for Basic Science (IBS) Researcher at KCL</p> <p>DongSoo Hwang Ph.D. CTO POSTECH Professor (Department of Environmental Engineering)</p> <p>TaeYeon Kim CFO Senior Administrative Officer at Institute for Basic Science (IBS)</p>
Address	<p>Head Office 37666, #1109, BOIC, Postech, 47, Jigok-ro, Nam-gu, Pohang-si, Gyeongsangbuk-do, Republic of Korea</p> <p>Overseas Branch 1600 Amphitheatre Parkway Mountain View, CA 94043 USA</p>

Technology



Core technology of the product

- Manufacture high-purity, high-quality nanocellulose and nanochitin, which are advanced new materials, from waste resources (rice hull, crab shell, coffee waste, etc.), nanoization technology.
- Surface modification technology.
- Diversification of physical properties, property improvement technology.
- Product diversification, customized material development, commercialization technology.
- Nanocellulose measurement and analysis technology.

Technology development progress

- (Completed) Development of Polycellu, a high-strength, lightweight composite material.
- (Completed) Development of Rhecellu, a viscosity-controlling cosmetic composition with high purity and transparency.
- (Completed) development of E-CNF applying biodegradable resin with high temperature stability.
- Developing CM-CNF manufacturing technology for food additives.
- Developing materials with hydrophobic and cationic properties.
- Development of materials applied to moisture and gas blocking functional films.
- Developing nanocellulose-based eco-friendly particles used in cleaning membranes.

Differentiation and innovation

- Resource recycling technology that recycles waste resources such as rice hulls and coffee waste.
- Production of high-purity, high-quality nanocellulose with a uniform diameter (1 to 10nm width).
- Surface modification control (Carboxylate Contents).
- Customized application development for each material.
- Apply self-developed smart process.



England Plastic Biome - ANPOLY MOU



Re:ancel™ T-CNF Hydrogel type 2wt%, Re:ancel™ T-CNF SD Powder



Year 2024 ANPOLY New Company (2,000Ton/Year)

Core IP & Awarded Status



Key intellectual property rights and award status

2021.12	Polysaccharide-based tissue adhesives and compositions functionalized with pyrogallol groups for hemostasis
2022.11	Nanocellulose for 3D bioprinting, manufacturing method of nanocellulose for 3D bioprinting and its application method
2023.02	Hemostatic dressing

Certification & award status

2022.04	Lina Foundation's "Lina50+ Awards" Grand Prize for Creative Innovation company
2022.06	Awarded Grand Prize at Future Food Asia 2022
2022.12	Commendation from the Minister of Merit for Marine Life Resources Business Commendation from the Governor of Gyeongsangbuk-do of merit for science and technology

Your dedicated partner for acceleration of drug discovery

Global leader of preclinical service with integrative platforms for immune diseases.

Preclina's integrated platform dedicated to drug development based on extensive experience and expertise in various animal model testing for immune diseases, such as rheumatoid arthritis, fibrosis, multiple sclerosis, lupus, atopic dermatitis, and psoriasis. Furthermore, we aim to supply a humanized mouse with CDX/PDX platforms in the global market, enabling successful growth and expansion in collaboration with drug development companies.

Sales Amount				
Sales Amount	Domestic		Major clients	① Pharmaceutical companies
	2021	2022		② Biotech companies
	400,000 \$	1,600,000 \$		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		
Investment attraction history				
Date	Investor		Stage	Amount(\$)
N/A	N/A		N/A	N/A

Company profiles	
Established date	2018. 11. 21
CEO	YoungMo Kang
Employee No.	18
Business Category	Pre-clinical Service
Technology Field	Efficacy Pharmacology for Immune Diseases ggdssystem
Main Item	Humanized mouse & PDX
Main Team members	<p>YoungMo Kang CEO Rheumatologist, Preclinical research specialist, MD.Ph.D.</p> <p>JinHee Kang Auditor Scientist for autoimmune disorders, Preclinical research specialist, Ph.D.</p> <p>YuJin Lee CDirector Scientist for immune disorders, Ph.D.</p>
Address	<p>Head Office S 3003-3, IT Center, 32 Songdogwahak-ro, Incheon, Republic of Korea</p> <p>Overseas Branch Switzerland Innovation Park, Basel Area AG</p>

Technology



Autoimmune specialists preclinical CRO for robust efficacy pharmacology

- We specialize in autoimmune and inflammatory diseases, offering a wide range of services based on therapeutic efficacy evaluation. Our goal is to support efficient drug development by minimizing time and costs through modular platforms.
- We are providing innovative platforms in immuno-oncology with standardized CDX / PDX models using humanized mice.

Advancing humanized mouse with CDX / PDX and rare autoimmune disorder studies

- Optimization of novel humanized mouse with CDX / PDX for immune cell subpopulation reinforced immunodeficient mouse for recapitulation of immune cell composition of human immune system.
- Development of new animal models of rare autoimmune disorders and transplantation immunology studies.

Global leading efficacy services only for autoimmune diseases and integrated Humanized mice&CDX / PDX supply platform

1. As the only specialized nonclinical CRO for autoimmune diseases in Korea, we are gaining global reputation and commercializing efficacy services by developing various immune disease models.
 2. Expansion of biomaterial supply chains for humanized mice and CDX / PDX models through the PROBUS (Preclina Obstetrician Umbilical Cord Blood Supply) and PROTIS (Preclina Oncology Tissue Supply) networks and collaboration network of immunodeficient mouse supplier.
- Approval from institutional ethics committees to collect umbilical cord blood, peripheral blood, lung cancer tissues, and colorectal cancer tissues. We continue to collect these samples to secure a solid research foundation.



Core IP & Awarded Status



Key intellectual property rights and award status

2018.12.18	Venture Enterprise Certification
2019.03.19	Corporate-affiliated Research Institute
2023.03.06	Professional research corporate

Certification & award status

N/A	N/A

HealthBiome Inc.

http://en.healthbiome.co.kr

Healthy and happy world made by microbiome

Healthbiome, Inc. have mass production technology of strict anaerobic microbes.

Healthbiome, Inc. obtained exclusive rights for the treatment of Alzheimer's disease, Parkinson's disease, muscle atrophy, cognitive impairment using some of strict anaerobic bacteria and also independent GRAS of the pasteurized Akkermansia strain HB05 isolated from mother's milk. Currently anti-cancer microbiome drug, HB03 is being developed by overseas CDMO company and pasteurized Akkermansia is under clinical trial for the development of functional ingredients.

Sales Amount				
Sales Amount	Domestic		Major clients	① CJ Bioscience, Inc.
	2021	2022		② NAASON SCIENCE, Inc.
	N/A	758,114.55 \$		③ Korea Research Institute of Bioscience and Biotechnology
	Overseas			④ JEONBUK NATIONAL UNIVERSITY HOSPITAL
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2022.11	L&S 10-ho Early Stage III Investment Association	Series B	757,306.73 \$
2022.11	L&S sobujang Innovative Enterprise Investment Association	Series B	757,306.73 \$
2022.11	KDBC-L&S Digital Innovation Investment Association	Series B	2,269,842.54 \$
2022.11	Solidus Smart Bio Investment Association	Series B	2,269,842.54 \$
2022.11	High-tech technology development commercialization fund 2-ho investment association	Series B	1,512,535.81 \$

HEALTH BIOME

Company profiles

Established date	2017.11.01
CEO	ByoungChan kim
Employee No.	16
Business Category	research and development / Service
Technology Field	Mass production of strict anaerobes
Main Item	Microbial Treatment
ByoungChan Kim CEO Senior Researcher of KRIBB(2018~)	
Ben Kim COO CEO Juvic Inc. / CFO Corentec Inc. & Cellumed Inc.	
S. Madeleine chung Managing Director R&D Director Vitamin House Inc. / CEO Megabiotech Inc.	
Head Office 125, Gwahak-ro, Yuseong-gu, Daejeon, Republic of Korea Overseas Branch LEVEL 14, 167 EAGLE STREET, BRISBANE QLD 4000 AUSTRALIA	

Technology



Technology of mass production for strict anaerobic microbiome resources

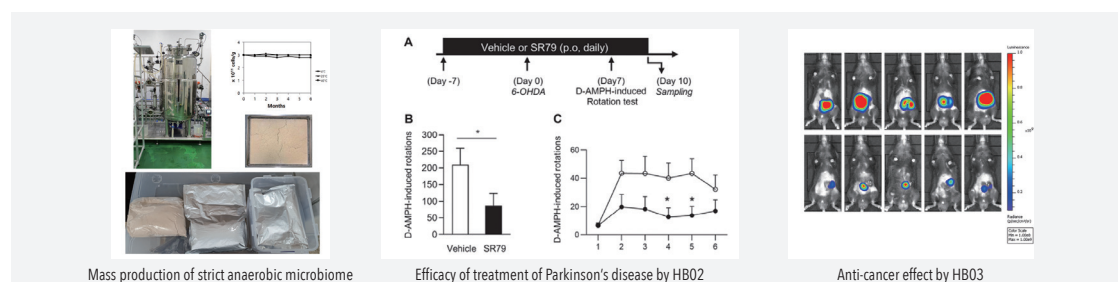
Healthbiome, Inc. has its own technology for the isolation of beneficial strict anaerobes for the development of microbiome drug and functional food ingredients and has lots of resources consisting of diverse strict anaerobic gut microbes. The specific Healthbiome's strict anaerobic bacteria have health promoting effect such as anti-cancer, CNS disease and rejuvenation. In addition, Healthbiome, Inc. has some exclusive rights for their commercialization.

Preparation for clinical trial with microbiome medicine and for marketing in domestic and U.S. with functional food

Healthbiome, Inc. got the permission of HB05 as Independent GRAS and able to commercialize HB05 as functional food in USA. Currently, HB05 is under clinically trial for proving their beneficial effect for the prevention of muscle atrophy and cognitive impairment and the human trial results will be reported in late 2023 or early 2024. For the anti-cancer LBP, HB03 is now being developed and cGMP product will be manufactured for clinical trial.

Exclusive right for isolation and production of company's own strict anaerobic microbiome

More than 99% human gut microbes belong to strict anaerobic microorganism in healthy adults' intestine. There is almost no Lactobacillus strain in the healthy adults gut. Therefore, the key player for the beneficial microbes and possible candidate LBP and next generation probiotics are most strict anaerobes. Healthbiome, Inc. has several unique strict anaerobes for development of LBP and functional ingredients and obtained the exclusive rights for their commercialization.



Core IP & Awarded Status



Key intellectual property rights and award status

2023.01	[US](No.11,542,468) Agathobaculum Sp. Strain Having Prophylactic Or Therapeutic Effects On Degenerative Brain Diseases And Use Thereof
2023.03	[US](No.11,607,433) Composition For Preventing, Improving, Or Treating Autism Spectrum Disorders Including Agathobaculum Sp. Strain As Active Ingredient
2023.04	[KOREA](No. 10-2520571) Obligate Anaerobic Human Intestinal Microbe For Cancer Treatment, And Use Thereof

Certification & award status

2017.12	Ministry of Health and Welfare / Health and Medical Technology Promotion Commendation
2020.12	Daejeon Center for Creative Economy & Innovation / Excellent Technology Contest Excellence Award
2021.12	The Ministry of SMEs and Startups / Commendation for entrepreneurship vitalization

Refresh Your Brain Regain Your Grin

NEUROGRIN BRINGS NEUROSCIENCE INTO THE REAL WORLD.

Development of medical devices for the treatment of cognitive impairment in dementia patients

- Cooperation with top-level clinical staff
- Preparation for KFDA approval
- Entry into national health insurance.

Sales Amount					
Sales Amount	Domestic		Major clients	① N/A	
	2021	2022		② N/A	
	N/A	N/A		③ N/A	
	Overseas			④ N/A	
	2021	2022			
	N/A	N/A			
Investment attraction history					
Date	Investor			Stage	Amount (\$)
2022.08	7 individuals			Angel	200,000 \$



Company profiles

Established date	2021.07.16
CEO	SunKwang Kim, Geehoon Chung
Employee No.	7
Business Category	Medicine, Bio technology, Neuroscience
Technology Field	Medical device
Main Item	Neurostimulation (Dementia, pain, depression, etc)
Main Team members	SunKwang Kim Co-CEO KMD, Ph.D. Professor (KHU, College of Korean Medicine)
	Geehoon Chung Co-CEO KMD, Ph.D. Professor (KHU, College of Korean Medicine)
	SangJeong Kim Advisor MD, Ph.D. Professor (SNU, College of Medicine)
	Address Seoul Biohub Business support building Rm 402, 117-3 Hoegi-ro, Dongdaemun-gu, Seoul, Korea

Technology



Core technology of the product

Electroceutical for the treatment of cognitive dysfunction.

- Promotion of cerebrospinal fluid circulation in the brain using non-invasive nerve stimulationTechnologies for analysis of brain signals.
- Objective diagnosis / measurement based on in-vivo imaging data, EEG signals, and brain images.

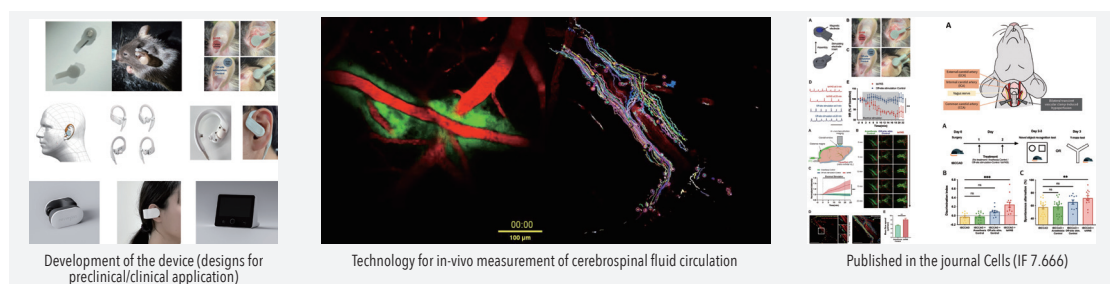
Technology development progress

Improvement of symptoms in vascular dementia patients through non-invasive nerve stimulation.

- Published in the journal Cells (IF 7.666).
- Prototype production for human patients application.
- Preparing for exploratory clinical trial (expected to start in 2024).

Differentiation and innovation

- Non-invasive simultaneous stimulation of vagus nerve branches in specific areas.
- Mounting on the target site through a pair of magnetic electrode.
- Use of specific stimulation parameters to exert a therapeutic effect.
- Development through In vivo two-photon brain imaging for measurement of cerebrospinal fluid circulation.



Core IP & Awarded Status



Key intellectual property rights and award status

2021.12	Registered patent: Pain evaluation method & device using deep learning analysis of brain signals
2022.09	Published paper: Transcutaneous Auricular Vagus Nerve Stimulation Enhances Cerebrospinal Fluid Circulation and Restores Cognitive Function in the Rodent Model of Vascular Cognitive Impairment
2023.06	Registered patent: Stimulation providing apparatus

Certification & award status

N/A	N/A

Defy your age while getting older

By geriatric medicine, we develop frailty assessment & intervention technology.

- AndanteFit: Electronic physical performance measurement system. Automate physical performance test process including short physical performance battery (SPPB), gait speed test, sit-to-stand test, timed up and go test, which are widely used in world-wide geriatric medicine field. Reduce operation costs in hospitals/clinics and realize objective measurement.
- SarcoFit: Digital therapeutics for Sarcopenia. Could be the first treatment solution for Sarcopenia, where no approved drugs exist so far.

Sales Amount

Sales Amount	Domestic		Major clients	① Major hospitals / clinics
	2021	2022		② N/A
	N/A	N/A		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2020.02	N/A	Seed	230,000 \$
2022.04	N/A	Seed-B	230,000 \$

Company profiles

Established date	2018.11.27
CEO	Seongjun Yoon
Employee No.	15
Business Category	Manufacturing, Software development
Technology Field	Medical device
Main Item	AndanteFit, SarcoFit

Seongjun Yoon | Chief Executive Officer
Ph.D. in Electronic Engineering, KAIST

Main Team members
Hyunchul Roh | Chief Technology Officer
Ph.D. in Robotics, KAIST

Jinwon Seo | Chief Business Development Officer
(Former) Co-founder of ThinkUser Ltd.

Address
Head Office | TipsTown C17, 99 Deahak-ro, Yuseong-gu, Daejeon
Overseas Branch | B-312, 11 Beobwon-ro 11-gil, Songpa-gu, Seoul

Technology



Core technology of the product

- AndanteFit: electronic physical performance tester.
- SarcoFit: Digital therapeutics for Sarcopenia.

Differentiation and innovation

- AndanteFit: Fully automated, fast and accurate data acquisition, maximize test-retest reliability, minimize human error.
- SarcoFit: Age-friendly UI/UX design. Validated in older population.



Core IP & Awarded Status



Key intellectual property rights and award status

N/A	N/A

Certification & award status

N/A	N/A

Dive Deeper into Data-Driven Medicine

Deep Bio utilizes AI to optimize patient outcomes and revolutionize cancer care.

Deep Bio strategically plans to penetrate key markets, such as the US, Europe and Africa, by employing both direct and indirect sales approaches, primarily targeting large hospitals and diagnostic laboratories. To facilitate this expansion, Deep Bio actively seeks collaborations with CLIA Labs in the US and strategic partnerships with leading PACS companies to gain access to their extensive hospital customer base. Furthermore, Deep Bio aims to showcase product excellence through collaborative research and development initiatives with renowned university hospitals.

Sales Amount					
Sales Amount	Domestic		Major clients	① GENCURIX	
	2021	2022		② Lumea	
	175,670.96 \$	24,212.31 \$		③ N/A	
	Overseas			④ N/A	
	2021	2022			
	47,918.14 \$	7,819.20 \$			
Investment attraction history					
Date	Investor			Stage	Amount(\$)
2017.04	Neoplux Co. Ltd. and others 1			Series A	1,664,629 \$
2018.01	Dt&Investment Co. Ltd. and others 4			Series A	3,736,257 \$
2020.06	Dt&Investment Co. Ltd. and others 9			Series B	11,647,319 \$

Company profiles

Established date	2015.10.08
CEO	SunWoo Kim
Employee No.	31
Business Category	Service/Software Development
Technology Field	AI-based cancer diagnostic software
Main Item	Prostate cancer
Main Team members	SunWoo Kim CEO - Pionion Industries, CTO - KT, Head of Strategic Planning / Overseas TaeYeong Kwak CTO - Netmarble, Head of AI Lab - Naver, Head of Natural Language Processing YongHyun Hwang CAO - Google, Software Engineer - Qualcomm
Address	609~613, 27 Digital-ro 33gil, Guro-gu, Seoul, Republic of Korea

Technology



Deep Bio is dedicated to integrating AI into current pathology workflows to increase accuracy and efficiency

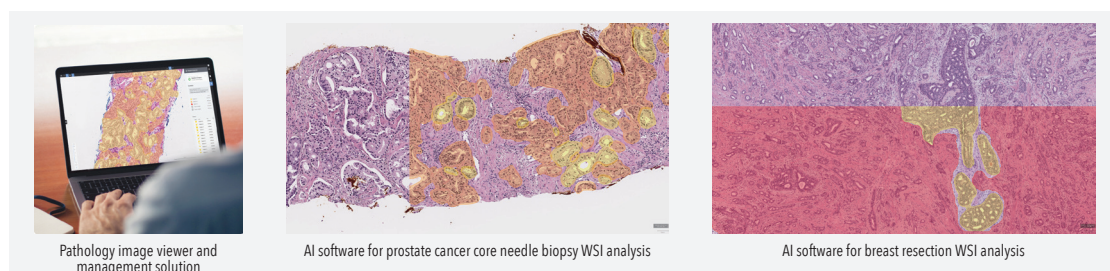
DeepDx Prostate, Deep Bio's AI-solution, empowers pathologists to become faster and more accurate when making critical diagnostic decisions for prostate cancer. DeepDx automatically analyzes digitized images of prostate needle core biopsies to detect areas of cancer and grade the severity of the cancer using the Gleason Scoring system. The software will also compute other critical values such as total tumor area of tissue and tumor length to help guide therapy.

Deep Bio is expanding its suite of AI solutions to provide a wider range of support to the pathologists and healthcare providers

- DeepDx-Prostate, a prostate cancer diagnostic software, was cleared by MFDS as a Class III device (2020.04).
- DeepDx-Prostate Pro, a product that is diagnosed with prostate cancer, was cleared by MFDS as a Class III device (2021.11).
- DeepDx Connect-Prostate European CE Certification for Prostate Cancer Diagnostic Products (2019.10).
- DeepDx Prostate European CE Certification for Prostate Cancer Diagnostic Products (2022.03).

Deep Bio is a world leader in applying deep learning technology to medical algorithms

- Deepbio conducted the first artificial intelligence diagnostic study on pathological images in Korea.
- DeepDx-Prostate Pro is the world's first digital pathology algorithm to receive regulatory approval for grading and quantifying prostate cancer. Although competitors have made strides in achieving similar functionality, they still require additional time to reach our level and meet the market's specifications.



Core IP & Awarded Status



Key intellectual property rights and award status

2019.01	(No.10-1944536) System And Method For Medical Diagnosis Using Neural Network
2020.09	(No.10-2162895) System And Method For Medical Diagnosis Supporting Dual Class
2020.10	(No.10-2174379) System And Method For Medical Diagnosis Using Neural Network Performing Segmentation

Certification & award status

2191.02	Camelyon17 Challenge Rank1
2021.04	Silver Designation at the Edison Awards 2021
2021.11	Innovation Prize at the Social D.N.A.

Bio-medical technology company specializing in therapeutic ultrasound

DeepsonBio, as a therapeutic ultrasound company, is developing innovative therapeutic ultrasound devices for the treatment of numerous patients with severe diseases and disabilities.

1. 2022~2023 exploratory clinical permission
- Dongtan Sacred Heart Hospital, Seoul National University Bundang Hospital, etc.
2. Prepare for BLS products 2023 US and European certification

Sales Amount

Sales Amount	Domestic		Major clients	① N/A
	2021	2022		② N/A
	N/A	N/A		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2021	Personal & Partnership	Series A	3,076,000 \$
2022.02	Venture Capital	Series A	769,000 \$
2023.01	Venture Capital	Series A	2,306,000 \$

Company profiles

Established date	2018.08.28
CEO	Donghuk Lee
Employee No.	11
Business Category	R&D / Bio-healthcare
Technology Field	Medical Equipment
Main Item	Therapeutic ultrasound
Main Team members	<p>Donghuk Lee CEO Director of Medical Convergence Center in Gachon University Gil Hospital</p> <p>SuYun Chae Director New business Opportunity Assessment & Development, Samsung Electronics</p> <p>Seonkyu Kim Principal Researcher Medical imaging AI center, Canon Medical Systems Korea</p>
Address	52, Chunghon-gil, Chuncheon-si, Gangwon-do, Republic of Korea

Technology



Core technology of the product

1. Deepson Bio is an ultrasound developed jointly with the Harvard Medical School team in the US in 2018.
- It is a company with stimulation technology and brain disease treatment mechanism.
2. Technology that accurately and safely transmits low-intensity therapeutic ultrasound to the human body.
- Treatment and prevention of Alzheimer's and cognitive disorders by promoting brain waste discharge.
- Treatment of biliary tract cancer, hair loss, and retina by promoting drug delivery.

Technology development progress

1. BLS: Treatment and prevention of Alzheimer's and cognitive disorders by accelerating the discharge of brain waste with a product exclusively for ultrasonic brain cleaning technology.
2. Sono DDS.
- Ultrasound-based drug delivery technology-only product for biliary tract cancer, hair loss, and retinal treatment by promoting drug delivery.
3. BLS prototype development.
- Sono DDS products are under development.

Differentiation and innovation

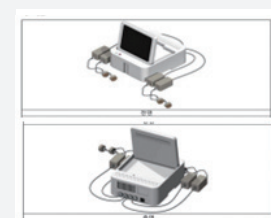
1. BLS (Ultrasonic Brain Washing Technology).
- Expected target (indication) is cognitive disorder, Alzheimer's disease and sleep disorder patients.
- While verifying the effect of discharging waste products such as accumulation and beta-amyloid or tau protein inside the brain, we intend to conduct clinical trials for Alzheimer's treatment.
- Possession of world-class technology related to ultrasonic stimulation.
2. Sono DDS (drug delivery technology by ultrasound).
- There is a great burden on patients around the world who have to take drugs with many toxic and side effects for a long time. We provide a solution that safely delivers drugs only at the target location using ultrasound-based membrane permeability.



How to fix the transducer on the head (clinical)



Equipment main body A



Equipment main body B-transducer connection

Core IP & Awarded Status

Key intellectual property rights and award status

2021.05	Ultrasound apparatus for promoting waste discharge from the brain lymphatic system
2021.09	A control method of an ultrasound device to promote waste discharge from the brain lymphatic system
2021.09	[KOREA] (No. 10-2520571) OBLIGATE ANAEROBIC HUMAN INTESTINAL Ultrasonic device for promoting waste discharge from the brain lymphatic system using headgear equipped with multiple transducers

Certification & award status

N/A	N/A
-----	-----

Think environment and people, and gives value to partners

Healthcare products based on bioactive substances made from essential minerals.

- Microneedle patch is an innovative product that delivers functional active ingredients. Brand Launching for B2B customer's reference.
- Expanded into lifting threads, clips, and prosthetic materials that are inserted into the body and completely disassembled.
- Expansion into drug delivery and bio-signal sensing fields in addition to skin diseases.
- Aim to attract more than KRW 10 billion in investment through copyright contracts with global healthcare companies.

Sales Amount				
Sales Amount	Domestic		Major clients	① Daewoong Pharm.
	2021	2022		② Costco
	807,973 \$	1,908,157 \$		③ Shiseido
	Overseas			④ Korea Ginseng Corporation
	2021	2022		
	92,606 \$	34,486 \$		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2018.01	Credit Guarantee Fund	Series A	764,584 \$
2019.05	IBK Capital	Series A	1,146,438 \$
2019.05	SL Investment	Series A	1,146,438 \$
2020.10	Korea SMEs and Startups Agency	Series A	1,528,584 \$
2021.07	KB Securities	Series A	382,146 \$

Company profiles

Established date	2016.01.11
CEO	ChoSung Youn
Employee No.	31
Business Category	Medical device/Manufacturing
Technology Field	Bio Healthcare
Main Item	Bioactive material healthcare products
Main Team members	ChoSung Youn CEO Korea University Ph.D. / MBA ISO/TC 150/194 member / 20+y experience
	ChooHyun Wook Co-Founder ISO/TC 150/194 member / 10+y experience Korea University Biomedical Engineering Doctorate Completion
	KimKyungseo CFO Korea University MBA Industrial engineering, Nuclear engineering, 15+years experience in medical device
	Head Office 46-121, Okjeong-ro, Yangju-si, Gyeonggi-do, Republic of Korea Overseas Branch 150-0001 WeWork, 12-18, 6, Jingumae, Shibuya-ku, Tokyo, Japan
Address	

Technology



Product development using bioactive substances

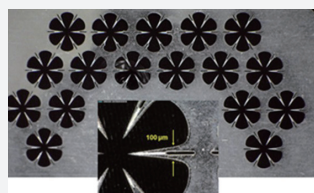
[Bioabsorbable metal implant material] The developed metal material can be applied to aesthetic (lifting thread, membrane botox, filler, etc.) metal implant products. [Microneedle Patch] Designing micro-patterning and flow paths, and developing manufacturing technology to enable ultra-precision processing. (Patent registration) [Development of a wearable digital medical device platform] Treatment of skin diseases, chronic diseases, and neurological diseases through biometric information sensing and microcurrent control with conductive microneedles.

Product development progress using bioactive substances

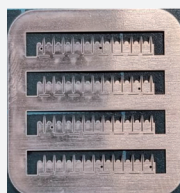
- [Bioabsorbable metal graft material] Lifting thread: Completed preclinical study (2023.01), clinical protocol.
- [Microneedle patch] Drug absorption inducing skin stimulator: MFDS approved (2021.06) / Acne treatment medical device.
- [Electrocatalysis] Headache, depression / Vaccine delivery.

Establishment of the world's first bioactive substance platform using only essential minerals for the human body

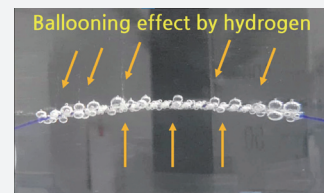
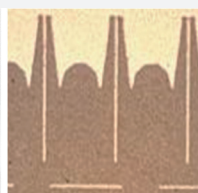
- The world's only high-strength, high-elongation, ultra-thin bioabsorbable metal (patent registration).
- Innovative material-based aesthetic implant material that replaces Botox and filler.
- Wearable digital medical device platform that can create new drug-level economic value.



Ultra-precision microprocessing of metal materials



Microchannel formation technology for microcurrent transmission



Ionization and Safe Disassembly of Implantable Implants

Core IP & Awarded Status



Key intellectual property rights and award status

2023.04	[Japanese patent] Bio-absorbable drug delivery capsule for subcutaneous insertion (Application number: 2021-520895)
2022.07	Pre-field patch (Application No. 10-2417441)
2022.07	Multi-type microneedle (Application No. 10-2417440)

Certification & award status

2022.06	Selected as a future unicorn company (MSIT)
2021.05	Selected as a baby unicorn company (MMS)
2017.04	Selected as First Penguin Startup Company (Credit Guarantee Fund)

Pioneer of liquid biopsy for early detection of cancer

Pioneering the early cancer diagnosis market and achieving social value through LepiDyne's blood diagnostic technology.

- Revenue Generation: Increase the market share by replacing the current HCC diagnostics. Create market of blood-based HCC diagnostics globally.
- Major clients Local: Patients registered as high risk group of HCC / Global: Patients who are wanting to test for HCC and high risk group of HCC Major channel: Set-up direct sales to the diagnostic companies and CLIA-certified lab, Major Hospitals.
- Key Activities: in vitro diagnostics development, clinical performance test, approval, local and global marketing .
- Overseas Expansion: Expansion to South-East market by developing LDT. Collaboration with national cancer centre Singapore, DxHub.

Sales Amount

Sales Amount	Domestic		Major clients	① N/A
	2021	2022		② N/A
	N/A	N/A		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2022.12	DSC Investment Inc.	Series B	1,530,000 \$
2022.12	Korea Development Bank	Series B	1,530,000 \$
2022.12	Kiwoom Securities, Individual Investor, Heungkuk Securities Co., Ltd.	Series B	763,000 \$



Company profiles

Established date	2019.07.10
CEO	YoungJoon Kim
Employee No.	14
Business Category	Biohealth
Technology Field	Service/MD R&D
Main Item	MethyLiverDx
Main Team members	<p>YoungJoon Kim CEO Professor at Yonsei University Stanford University, Ph.D.</p> <p>SeungTaek Lee CCTO Professor at Yonsei University University of WisconsinMadison, Ph.D.</p> <p>HyeokSung Kwon Research Director BMT R&D Team leader Korea University, Ph.D.</p>
Address	411, 508, 509, 26, Sangwon 1-gil, Seongdong-gu, Seoul, Republic of Korea

Technology



Introduction and key technologies of blood-based liver cancer diagnostic device 'MethyLiverDx'

The MehtyLiverDx is an in vitro diagnostic medical device for diagnosing liver cancer by analyzing the methylation of DNA in human blood with a high-resolution melting method. It consists of independently discovered and patented biomarkers, which are protected by patents. Through in-house research and development, three unique biomarkers have been discovered and secured, which are utilized for early diagnosis of liver cancer. This provides the MethyLiverDx with independent technological competitiveness.

Progress of technological development of 'MehtyLiverDx'

LepiDyne discovered Hepatocellular Carcinoma (HCC)-specific DNA methylation biomarkers from the tissue of the HCC patients. These biomarkers are validated from the blood samples. Based on the biomarker discovery, LepiDyne developed an assay using MS-HRM technology which utilizes the different melting temperatures of methylated and unmethylated sites. Through the development of this assay and commercialization as a Laboratory-Based Test would increase the detection of cancer patients.

Differentiation and innovation of 'MethyLiverDx'

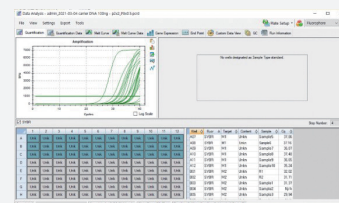
MehtyLiverDx, when used independently, shows higher sensitivity and specificity compared to the AFP (alpha-fetoprotein). When used together with AFP, it shows higher sensitivity (~80%) than any other technology. Furthermore, it is suitable for regular screenings with fast results within 8 hours, easy PCR-based testing, and cost-effective, The sensitivity and specificity of MethyLiverDx are 82% and 98%, respectively, which are comparable to the currently commercialized Oncoguardliver by Exact Sciences (sensitivity 82%, specificity 87%), but at a more affordable cost.



MethyLiverDx external components



MethyLiverDx internal components



AUMC value conversion software program (LepiMeasure)

Core IP & Awarded Status



Key intellectual property rights and award status

2020.09	(No. 10-2019-0124552) Method for determining whether biological sample has originated from liver cancer tissue
2020.04	(No. 10-2019-0124549) Method for determining if origin of biological sample is from liver tissue
2020.01	(No. 10-2019-0024379) Dna methylation marker for predicting recurrence of liver cancer, and use thereof

Certification & award status

N/A N/A

A New Standard of Comfort

Leading the way in innovative technologies for rapid precision temperature control.

RecensMedical is a medical-technology company built upon an unprecedented precision tissue cooling technology, which provides novel treatments in the fields of ophthalmology, dermatology for a safer and more pleasant patient experience. RecensMedical's portfolio of clinical program includes ocular anesthesia, eczema, rosacea, and atopic dermatitis.

Sales Amount				
Sales Amount	Domestic		Major clients	①
	2021	2022		IMDAD Medical Business Co.Ltd.
	40,000,000 ₩	214,209,000 ₩		②
	Overseas			Royal Clinic
	2021	2022		COSMEDITECH
0 \$	2,950,736\$			
Investment attraction history				
Date	Investor	Stage	Amount (\$	
2022.02	LBIInvestment	Series C	5,384,615\$	
2022.02	BNK-KN	Series C	2,307,692\$	
2022.02	Wonik-Intops	Series C	769,230\$	
2022.02	Hyundai-Surim Championship	Series C	1,538,461\$	
2022.02	KB-Genen medical	Series C	6,538,461\$	

Company profiles	
Established date	2016.10.31
CEO	GunHo KIM
Employee No.	41
Business Category	the manufacturing industry
Technology Field	Rapid cooling precision temperature control technology
Main Item	dermatology cooling treatment device
Main Team members	GunHo KIM CEO RecensMedical / CEO, the head of R&D Div. UNIST / Associate Professor
	JongHwan BAEK COO SAMSUNG Electronics / Medical device Div. GE Healthcare / Assistant manager
	SeWang KIM CFO Jetema / the finance&accounting team Labgenomics / the finance&accounting team
Address	Head Office 50, UNIST-gil, Eonyang-eup, Ulsan Overseas Branch 501 Pedernales Street 1A, Austin, TX 78702

Technology



OcuCool, an innovative technology, enhances treatment efficiency and patient satisfaction

OcuCool is used in intravenous injection therapy (IVT) for the treatment of retinal diseases such as macular degeneration. With FDA approval, significant demand is expected, which could penetrate the market. The device is expected to significantly reduce treatment time and increase treatment efficiency and patient satisfaction. We plan to build a relationship with ophthalmic operations through our U.S. subsidiary to collaborate with public and private insurers. It is also planning to enter the European market for CE certification, and is currently discussing potential clinical studies with key opinion leaders (KOLs) in certain European countries.

Additional development of contact detection function through temperature change

OCU-COOL, which is being developed by adding a contact detection function through temperature changes, is currently undergoing a fourth clinical trial in the United States, and has completed the application to obtain FDA De Novo. Currently, administrative procedures such as submission of supplementary data are in progress, and final acquisition is expected around December this year. Further research and development is being conducted to make the temperature sensor as close as possible, and to minimize the size of the sensor head. In particular, an algorithm is developed based on data on temperature change and noise.

OcuCool, with its rapid precision temperature control technology, reduces procedure time and minimizes side effects

LicenseMedical has developed OcuCool, an innovative contact-based ocular cooling anesthesia device. By leveraging rapid precision cooling technology, OcuCool reduces procedure time from 15 minutes to 1 minute and 30 seconds. It minimizes side effects and enhances satisfaction for doctors and patients by mitigating issues like conjunctival congestion and corneal abrasion caused by chemical anesthetics. Ongoing clinical trials aim to provide safe and effective treatments for various conditions, including atopic dermatitis, acne, rosacea, and seborrheic dermatitis.



Core IP & Awarded Status



Key intellectual property rights and award status

2021.07	method of safely using controlled cooling systems and devices
2022.02	medical cooling device
2022.07	medical cooling device and method

Certification & award status

2022.12	Winner of the 2022 Korea Innovation Startup Award
2023.03	Minister of Science and ICT Commendation
2023.06	2023 Red dot design award

We will be your oral health partner throughout your lifespan

We will be your orthodontic partner in creating a warm society with a bright smile.

Our's business model is "clear aligner (Inner:D)" and "AI Orthodontic System (ALIGNCHECK)," offer transparent orthodontic devices that are easy to use. In the future, we aim to expand our business scope by utilizing AI technology to encompass orthodontic consultations and diagnoses in the dental field.

Sales Amount				
Sales Amount	Domestic		Major clients	① Domestic 250 Dental clinic
	2021	2022		② Overseas 30 dental clinic
	161,538 \$	213,846 \$		③ N/A
	Overseas			④ N/A
	2021	2022		
	200 \$	5,000 \$		
Investment attraction history				
Date	Investor		Stage	Amount (\$)
2022. 07	William Kim		angel	77,000 \$



Company profiles

Established date	2019.01.07
CEO	JaeHyung Park
Employee No.	7
Business Category	Manufacturing
Technology Field	Clear aligner & Clear aligner system
Main Item	Clear aligner (Inner :D)
Main Team members	Jaehyung Park CEO Dental technician Production Team Manager at dental hospital Sangbae Kim COO the Strategy Team at SK Hynix William Kim CIO Newyork Univ. Dental Kings country hospital
Address	1304, gasandigital-1ro 205, Guemchun-gu, Seoul, Republic of Korea

Technology



next-generation orthodontic product that combines convenience and user-comfortable

Our's product is a medical device that plays a guiding role in inducing tooth movement, allowing consumers in need of orthodontic treatment to achieve their ideal smile. One of its key advantages is the nearly invisible transparent aesthetic element, which provides convenient oral hygiene management compared to traditional orthodontic methods.

Clinical data-based Orthodontic design

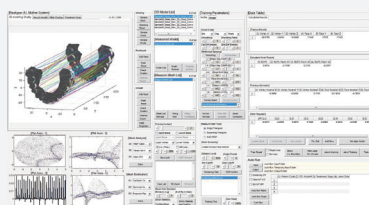
Since the successful commercialization of its mass production technology in 2019, we have been continuously improving the quality of its orthodontic design process through AI technology. and actively working on the development of AI-based orthodontic design technology, aiming to enhance the precision and efficiency of orthodontic treatments.

AI orthodontic design method that is based on the trajectory data of orthodontic treatments

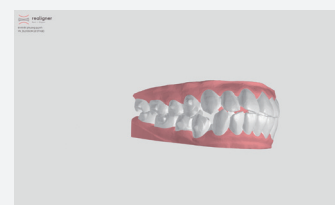
Realigner has established a differentiated orthodontic design process to achieve high-quality and precise teeth alignment. In the process of orthodontic treatment, we collect and analyzes the trajectory data of actual tooth movement while wearing the aligner.



participation in domestic and foreign exhibitions



AI-tooth movement analyze



AI-based orthodontic design technology

Core IP & Awarded Status



Key intellectual property rights and award status

2019.12	Transparent clear aligner device and manufacturing method of transparent clear aligner device
2020.12	An orthodontic device using artificial intelligence and a method of manufacturing an orthodontic device
2022.12	Personalized transparent calibration device using artificial intelligence modeling and 3D print

Certification & award status

2019.12	Excellent initial start-up package
2020.05	Seoul's Outstanding Non-face-to-face IR Business Award

Healthcare, Convenience, Affordability

Restoring People's Health & Life From Brain Disorders.

MINDHUB is a company that provides healthcare services based on D.N.A (Data, Network, AI) and solves social medical problems. MINDHUB is a company that plays the role of a hub for future medical services, creates healthy values, and contributes to social contribution through continuous growth.

Sales Amount				
Sales Amount	Domestic		Major clients	① Yonsei Madu Hospital
	2021	2022		② Seoul Southern Welfare Center for Disabled FDDDDDDisabled
	116,279 \$	198,622 \$		③ Avens Hospital
	Overseas			④ Gangdong Smile Hospital
	2021	2022		
	N/A	N/A		
Investment attraction history				
Date	Investor		Stage	Amount (\$)
N/A	N/A		N/A	N/A



Company profiles

Established date	2019.11.05
CEO	HaeSung Lee
Employee No.	7
Business Category	Software Development
Technology Field	Digital Therapeutics Services and Rehabilitation solutions
Main Item	ZENICOG
Main Team members	<p>HaeSung Lee CEO LS-ELECTRIC, B2B Global Sales EAT's Go, CTO</p> <p>SuJin Cho Product Manager RGP Korea, eBay Korea Web Planning</p> <p>Sunghoon Hong Development Leader ezCaretech, Development of Cloud HIS Development of AI Platform Services</p>
Address	11-41, Simin-daero 327beon-gil, Dongan-gu, Anyang-si, Gyeonggi-do, Republic of Korea

Technology



AI technology-based personalized cognitive rehabilitation solution

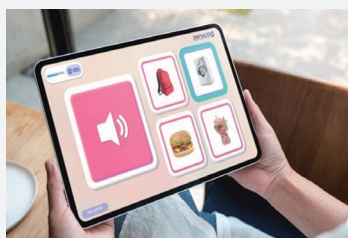
ZENICOG is Korea's first cloud computerized cognitive rehabilitation program. ZENICOG's cloud service is becoming the center of the digital rehabilitation hospital's expertise.

Effectiveness of services through clinical research

- Completed issuance of cyber security, SW V&V test report and usability report.
- Conducting empirical research at hospitals and local welfare institutions.

Korea's first data-based artificial intelligence customized neurocognitive rehabilitation solution

- Provide personalized rehabilitation solutions through the application of artificial intelligence technology based on basic test analysis data and performance data.
- Possession of core technology for setting intervention goals and classifying rehabilitation treatment contents based on the International Classification of Functioning, Disability and Health (ICF).



Core IP & Awarded Status



Key intellectual property rights and award status

2014.11	(No. 10-1459568) Method for recommending contents
2022.12	[PCT] (No. PCT/KR2022/020626) Cloud server-based content provision method for cognitive or language rehabilitation training
2023.01	(No. 10-2023-0002222) Patient-customized training content recommendation device and method

Certification & award status

2022.03	KOREA CUSTOMER SATISFACTION BRAND (Grand Prize of the health service)
2022.07	Korea Social Enterprise Promotion Agency (Grand prize)
2022.09	2022 New Gyeonggi Entrepreneurship Contest, Excellence Award (Grand prize)

Paradigm Shift from Sickcare to Healthcare

Digital Theranomics Platform based on AI-IoBT

- Wearable bladder monitoring device: improve the quality of life of patients with urinary disorders and their families
- Digital Voiding Diary: Digitalized voiding diary essential for diagnosis
- Digital Healthcare Platform: Cloud-based platform for managing inpatients in hospitals

Sales Amount				
Sales Amount	Domestic		Major clients	① N/A
	2021	2022		② N/A
	13,753 \$	219,670 \$		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
N/A	N/A	N/A	N/A

Company profiles

Established date	2020.10.26
CEO	Aram Kim
Employee No.	4
Business Category	Scientific research and development
Technology Field	
Main Item	

Main Team members	Aram Kim, MD/PhD CEO Doctor/Professor, Kunkuk Univ. Hospital Director of Neurogenic Bladder Clinic
	Sehwan Kim, PhD Technical Director Professor, Dankook Univ. School of Medicine Vice Director of BLI-Korea, Dankook Univ.
	Byeongil Kang, PhD Head of R&D Research Professor, BLI-Korea, Dankook Univ.

Address	5, Seongsuil-ro 8-gil, Seongdong-gu, Seoul, 04793, Republic of Korea
----------------	--

Technology



AI-IoBT (Artificial Intelligence - Internet of Biophotonic Thing)

1. Near-Infrared (NIR)-based diffuse light spectroscopic biophonics technology.
 - Technology to measure physiological changes in biological tissue non-invasive using near-infrared rays that are harmless to the human body.
2. Physiological information analysis and personalized artificial intelligence (AI) technology.
 - Patient-specific personalized AI learned with small amount of data and be used smoothly in Edge-Device.

Performance Validation

- Safety test through medical device testing institutions designated by the Minister of Food and Drug Safety.
- Performance validation using a proprietary tissue-equivalent bladder simulation phantom.

Personalized Wearable Bladder Monitoring System

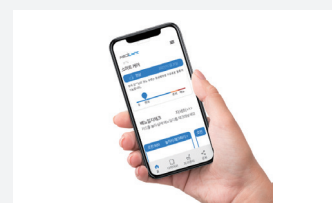
- Total of 288 channels based analysis overcoming differences in optical characteristics between patients (abdominal thickness, skin color, etc.).
- Accurate analysis for the motion artifact derived from the patient's movement or posture and signal changes according to skin temperature .
- Personalized AI trained by full information of all sensors obtained from each patient.



MEDiLight



Non-Invasive Bladder Monitoring



Mobile Application

Core IP & Awarded Status



Key intellectual property rights and award status

2021.08	Method for quantifying water and lipid content in turbid media using narrow-band diffuse reflectance spectroscopy
2022.06	Apparatus for bladder function monitoring based on physiological information
2022.06	Apparatus for bladder condition measurement based on near infrared

Certification & award status

N/A	N/A
-----	-----

High-quality knowledge and technology into medical devices, to help provide high-quality medical benefits to more people

Revolutionizing endoscopy with AI & tech.

MedInTech, overcoming high regulatory barriers, is KFDA-approved and pursuing FDA and CE MDR. We plan to reach training centers and university hospitals where doctors tend to stick to familiar endoscope brands. Using Korea's world-class endoscopy skills, we aim to train international professionals to help expand globally.

Sales Amount

Sales Amount	Domestic		Major clients	① Seoul National University Hospital
	2021	2022		② Internal medicine clinic
	N/A	N/A		③ Health Examination Center
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2020.12	FuturePlay, Nexttrans	Seed	N/A
2022.01	Atinum Investment, Smilegate Investment, FuturePlay	Series A	6M \$

MedInTech

Company profiles

Established date	2020.02.12
CEO	Chiwon Lee
Employee No.	20
Business Category	Manufacturing, other medical device
Technology Field	Medical device, Healthcare
Main Item	Medical flexible endoscope

Chiwon Lee | CEO
B.S. in Mechanical and Aerospace Engineering, Ph.D. in Biomedical Engineering from Seoul National SNU University

Myungjoon Kim | COO
B.S. in Electrical Engineering from Tsinghua University, Ph.D. in Biomedical Engineering from SNU

Sukgyu Koh | CTO
B.S. in Mechanical Engineering from Cornell University, M.S. in Biomedical Engineering from SNU

Head Office | 60 Daehak-ro, Jongno-gu, Seoul, Republic of Korea
Overseas Branch | 8609 Westwood Center Drive Suite 110 Tysons Corner, VA 22182

Technology



Electrification technology and artificial intelligence technology for smart flexible endoscope

- We've developed a safer, 50% lighter electric endoscope with 66% less operational force.
- By using LEDs instead of conventional lamps for light source, we've improved lifespan 20-fold.
- With the use of AI algorithms, lesions can be automatically detected, reducing the misdiagnosis rate from over 30% to within 3%.

Acquired KFDA after completing the 1st product development

- Development of the 1st product has been completed with KFDA manufacturing permission obtained.
- Preparing for KFDA, FDA, and CE MDR for the 2nd product.
- Working on getting permission for lesion detection software with applied AI algorithms.

Higher safety compared to existing flexible endoscopes, reduced fatigue of medical staff, and secured price competitiveness

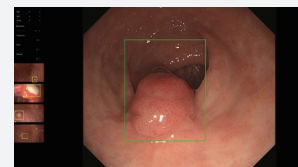
- We offer FHD images, surpassing HD quality of market-dominating Japanese firms.
- Our endoscope enhances patient safety, reduces doctors fatigue.
- With 20M+ yearly endoscopy operation in Korea and established fees, quick market entry is possible.
- Korean endoscopy excellence hints at global potential. At 100M won/set, we rival Olympus 170M won.



Preclinical trials for endoscope performance verification at Seoul National University Hospital and Seoul Asan Hospital



Smart flexible endoscope features



AI-based automatic lesion detection software

Core IP & Awarded Status



Key intellectual property rights and award status

2022.01	Hold exclusive / common practice rights to 11 patents including Automatic Endoscope System (KR, 10-2349307)
2022.04	26 domestic patent applications/registrations including Endoscope System (KR, 10-2390819)
2020.11	12 foreign patent applications including Electrically Driven Endoscope (PCT, PCT/KR2020/016772)

Certification & award status

2021.11	Grand Prize at New Gyeonggi Startup Competition (Gyeonggi Province Governor's Award)
2021.11	Excellence Award at the Challenge K Startup Competition (Minister of Education Award)
2022.02	Commendation as an excellent graduate company from the Youth Startup Officer School (Minister of SMEs and Startups Award)

Medicosbiotech Inc.

www.medicosbiotech.com

Beautiful and healthy life through biotechnology

We aim to develop a therapeutic material for treating intractable wounds using spider silk protein for the first time in the world. Through this, we hope to provide hope to patients suffering from wounds and enable them to lead a beautiful and healthy life.

- We will establish a business model by supplying the product to existing wound dressing distributors and developing OEM products for domestic pharmaceutical companies, highlighting efficacy and price competitiveness.
- Through FDA approval in the United States, we aim to collaborate with multinational pharmaceutical companies and specialized distribution companies in healthcare institutions to pursue indirect sales and license out.

Sales Amount

Sales Amount	Domestic		Major clients	① Malaysia Advanced Technology Solutions
	2021	2022		② US Jsky Solutions
	132,846 \$	215,384 \$		③ Japan Allure Inc
	Overseas			④ Korea MND Welfare Agency
	2021	2022		
	191,000 \$	N/A		

- ① Malaysia Advanced Technology Solutions
- ② US Jsky Solutions
- ③ Japan Allure Inc
- ④ Korea MND Welfare Agency

Investment attraction history

Date	Investor	Stage	Amount (\$)
2018. 06	Angel	Seed	484,615 \$
2020. 01	Blue Point Partners	Seed	153,486 \$
2021. 12	Ilhwa Co., Ltd	Seed	769,230 \$



Company profiles

Established date	2018.05.08
CEO	WonMin Yoo
Employee No.	12
Business Category	R&D
Technology Field	Medical device
Main Item	Spider silk protein
Main Team members	<p>WonMin Yoo CEO M.D., Ph.D. - Severance Hospital Yonsei University professor</p> <p>SangYup Lee Scientific Advisor KAIST Research Vice President</p> <p>Sooncheol Daniel Kim President New York University graduate (MBA)</p>
Address	<p>Head Office 2nd floor, 85-6 297beon-gil, Jukdong-ro, Daejeon</p> <p>Overseas Branch 501 West Manchester Rd. Syracuse NY 13219, USA</p>

Technology



Acceleration of wound healing through spider silk protein

Spider silk protein possesses excellent biocompatibility, biodegradability, antimicrobial properties, and superior mechanical properties compared to steel or Kevlar at the same mass. It is an outstanding biomaterial that can promote wound healing through active interactions with other proteins via hydrophobic interactions. Through the advancement of foam-type wound dressing products with excellent absorbency and the ability to create a moist environment, our goal is to develop products applicable to intractable wounds such as diabetic ulcers and radiation ulcers.

Upgrade of 2nd grade medical device to 3rd.

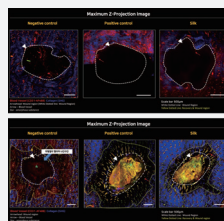
- Experience in developing products based on local hydrogel wound dressings classified as Class 2 medical devices.
- Currently undergoing the process for obtaining approval from the regulatory authority.
- Completed all aspects of product development, including formulation development, prototype production, and testing evaluation, internally.

Introduction of new product to the market

- It is possible to propose alternatives to therapeutic wound dressings that have shown limitations within a few years by focusing on the deformation of formulation and form rather than the main ingredient.
- Introducing a market-disruptive product with high efficacy in wound and scar treatment, showcasing innovative product technologies in the wound and scar treatment market.



Spider silk protein incorporated wound healing patch



In-vivo result of spider silk protein wound healing



Lyophilized spider silk protein

Core IP & Awarded Status



Key intellectual property rights and award status

2012.10	High Molecular Weight Recombinant Silk or Silk-like Proteins and Micro or Nano-spider Silk or Silk-like Fibres Manufactured by Using the Same
2018.11	Pharmaceutical Composition for Treatment of Wounds
2023.01	Recombinant Microorganism Having Improved Ability To Produce Recombinant Silk Protein And Method For Producing High-Molecular-Weight Recombinant Silk Protein By Using Same

Certification & award status

2021	IBK Changong
2021.09	KBIZ Promising Exporting Company
2022.01	KOTRA Global Startup 300

Make things valuable, spread them, and let's all be happy

A simple tumor-treating device like an endoscopy.

We are developing an electric perforated tumor treatment device with added drug injection function. Cartridges and electrodes are consumables that will benefit the company with steady sales. We are currently developing products that reflect the opinions of specialists. Through research meetings, we plan to sell research products and conduct clinical tests in large hospitals in Korea.

Sales Amount				
Sales Amount	Domestic		Major clients	① Kookmin University
	2021	2022		② Korea Carbon industry Promotion Agency
	N/A	310,000 \$		③ Hanlim Medical Equipment Co., Ltd.
	Overseas			④ Kangwon National University
	2021	2022		
	N/A	N/A		
Investment attraction history				
Date	Investor		Stage	Amount (\$)
2021.08~12	Angel Investors		Seed	84,000
2021.01	Korea Venture Investment Corp.		Seed	38,000
2021.08	ZeroToOne No.14 Investment Association		Seed	160,000
2022.01	Korea Venture Investment Corp.		Seed	320,000
2022.12	Angel Investors		Seed	183,000



Company profiles

Established date	2018.11.18
CEO	JinHee Moon
Employee No.	17
Business Category	Medical Device Industry
Technology Field	Biomedical engineering
Main Item	Targeted Electro-Chemotherapy Device
Main Team members	JinHee Moon CEO, Director of Research Responsible researcher, KBIO HEALTH Research Professor, Korea University
	Michael Kang Principal Researcher Director of Research, Tyco Safety Products Manager, Samsung Electronics Co., Ltd
	Piljoo Huh Principal Researcher Principal Researcher, Ericsson-LG Co., Ltd. Principal Researcher, Sehwa. Co., Ltd.
Address	Unit 408, 160, Techno 2-ro, Yuseong-gu, Daejeon, Republic of Korea

Technology



Development of instantaneous high voltage technology and fusion electrode

Reversible Electroporation (RE) technology that forms nanopores by delivering high voltage electricity to cells in a very short time and anti-cancer drug injection technology (minimum amount) are added to allow tumor cells to self-destruct by drug injection fusion electricity It is a perforated tumor treatment device.

Upgrade in progress based on non-clinical trials

Prototype development was completed, and as a result of biological safety evaluation (for research and development, non-GLP), it was evaluated as safe for the human body. Efficacy evaluation (animal experiment) was conducted in pancreatic cancer-induced animal models, and it was confirmed that there were no side effects and the death rate of tumor cells was higher through electroporation and anticancer drug injection.

Tumor treatment with minimal resection and short procedure time

Compared to other tumor treatment methods (resection, chemotherapy, etc.), it is a non-thermal treatment with a low incidence of side effects, high resolution, selective non-surgical treatment, and short treatment time. Electroporation and low drug use increase cancer tissue mortality and can be applied to various diseases.



A product containing a power supply in which two types of voltage



Cartridge type drug injector and electrode fixing connector



Electrodes with drug injection capabilities

Core IP & Awarded Status



Key intellectual property rights and award status

2021.02	(No. 10-2021-0020326)Medical Precision Drug Injection And Electroporation Fusion Electrode (No. 10-2021-0020326)
2021.10	Pin Up Best100 (Pin Up Design Awards)
2021.11	[Pct] (No. Kr2021/017431)Reversible Electroporation System With Middle Connector

Certification & award status

2022.11	(No. 10-2022-0165053)Fusion Electrode And Tumor Treatment Device
2022.12	[Pct] (No. Kr2022/019372)Electroporation Dispenser With Disposable Cartridge
2022.12	[Pct] (No. Kr2022/019380)Snare Type Electrode For Electroporation (Patent Number: Pct/Kr2022/019380)

Let's Bio

All-in one Intra-Operative 3D Bioprinting system.

- Bioink: Establishment of a tissue-customized bioink series based on the diversity of materials.
- Medical devices: Attempting to enter domestic and oversea medical device markets based on product planning for 2~4 grade medical devices by utilizing the characteristics of hydrogel-based products.

Sales Amount				
Sales Amount	Domestic		Major clients	① SOOKMYUNG WOMEN'S UNIVERSITY Research & Business Development Foundation ② YSBioScience Co. FfDDDDDisabled ③ Young Won Scientific Inc. ④ Biotech
	2021	2022		
	30,320 \$	239,704 \$		
	Overseas			
	2021	2022		
N/A	N/A			
Investment attraction history				
Date	Investor		Stage	Amount (\$)
2021.08	Individual investment		seed	68,052 \$



Company profiles

Established date	2020.03.17
CEO	Dong Nyoung Heo
Employee No.	6
Business Category	3D printer / manufacturing
Technology Field	3D printing, 3D bioprinting
Main Item	Hydrogel, Bioink
Main Team members	DongNyoung Heo CEO Kyunghee University School of Dentistry Academic Research Professor (2019~2023)
	MinHeo R&D Director Collagen-based medical device development chief researcher (2017~2021)
	Haram Nah Head Researcher Worked at Biofriends, Inc., 3 years of research experience
Address	Seoul Bio-Academic Cooperation Center, Kyung Hee University, 26, Kyung Hee University, Dongdaemun-gu, Seoul

Technology



Development of 3D bioprinting and medical devices based on hydrogel platform

- Create high added value with bioprinting system by utilizing the specificity of hydrogel material with excellent water, cell and active ingredient storage.
- Such hydrogel-based bioink can quickly and easily output desired shapes through photo-crosslinking or FDM-type 3D bioprinting.

Advanced tissue regeneration bioink and natural biomaterial medical device development

1. Bioink: Photo-crosslinked collagen bio-ink products for R&D are scheduled to be released.
 - Planning to launch various products according to the purpose of use and application area.
2. Medical device: Confirmation of items for licensing and setting of test items in progress.

Tissue-specific, highly functional 3D bioprinting composite bioink

- End-users can select a wide range of products by providing a bioink group using UV (ultra-violet) photo-crosslinking method or chemical crosslinking method.
- It is a functional material that can be used in various medical devices by imparting functionality such as loading cells and active ingredients.



Core IP & Awarded Status



Key intellectual property rights and award status

2023.04	[Domestic patent application] (No. 10-2023-0049225) Hydrogel Combined With Dopamine-Oxidized Alginate And Keratin
2022.12	[US patent application] (No. 18/010,805) Nozzle Device For Fdm-Type 3d Printer
2021.01	[Domestic patent registration] (No. 10-2007315) Nozzle Device For Fdm Type 3d Printer

Certification & award status

N/A	N/A

Tenchnology for Patient

Medical Skin Closure.

For surgical and laceration wounds, Skin Closure is a new concept in wound closure that eliminates the need for needles, thread, and staples. Previously, needles and threads were used for suturing, causing fear of scarring, pain, and risk of infection, but skin closure products are free from these disadvantages and can be sutured efficiently.

Sales Amount					
Sales Amount	Domestic		Major clients	① Jeil Pharma	
	2021	2022		② N/A	
	N/A	N/A		③ N/A	
	Overseas			④ N/A	
	2021	2022			
	N/A	N/A			
Investment attraction history					
Date	Investor			Stage	Amount(\$)
2020.04	Mirae			Seed	191,321 \$



Company profiles

Established date	2020.04.03
CEO	Sungguen Jun
Employee No.	9
Business Category	Scientific and technical activities
Technology Field	Medical Device
Main Item	Skin Closure
Main Team members	Sungguen Jun CEO Medical Sales 10years experience Jeongin Bag Director Medical Engineer 10years experience Daeheong Kim Assistant Manager Medical RA
Address	Head Office #533, 366, Gyeryong-ro, Seo-gu, Daejeon, Republic of Korea Overseas Branch #606, factory building 29, Simin-daero 109beon-gil, Dongan-gu, Anyang-si, Gyeonggi-do, Republic of Korea

Technology



Wound care medical device

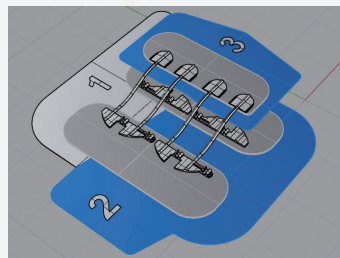
- Skin Closure is for non-invasive treatment of lacerations and cuts that occur in daily life, without the use of traditional sutures (needle and thread), minimizing patient scarring, reducing pain and risk of infection.

Prototyping and testing

- Participate in overseas medical device exhibitions to meet overseas buyers and conduct market research.
- Design and mechanical design 3. Testing and certification for prototype production - Development and production with the goal of improving aesthetics and making it easy for users to use in their daily lives.
- Describe each item of existing patents and derivative patents with current patent law firms to block latecomers.

Differences in Technology

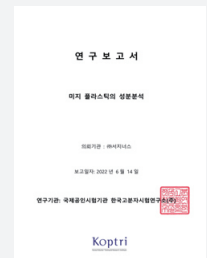
- Minimize scarring and infection.
- Easy difficulty level.
- Painless suturing.
- High satisfaction of patients using it For stitch removal, they can remove the sutures by themselves without going to the hospital.



Product rendering photos

KCL Test Report					
시험일자	2021.04.01	시험장소	한국과학기술원 (KAIST)	시험결과	합격
시험대상	의료기기	시험종류	기계적 시험	시험방법	ISO 10993-1
시험결과	합격	시험비율	100%	시험비율	100%
시험결과	합격	시험비율	100%	시험비율	100%
시험결과	합격	시험비율	100%	시험비율	100%

KCL Test Report



Performance testing of development products

Core IP & Awarded Status



Key intellectual property rights and award status

2021.04	Patent registration for "Band for closing surgical wounds"
2019.10	Patent registration for "Medical Skin Suturing Machine"
2020.10	Registered a design patent for "Surgical Skin Suture Retainer"

Certification & award status

2022.04	ISO 13485
2022.10	FDA Listing

First-in-class & Killer Application for conquering cancer

- In the diagnostics field, we are focusing on obtaining approvals and commercialization of devices using rare-cell precision separation technology. In the therapeutic field, preclinical research is underway after securing anti-cancer candidate substances.
- Our goal is to grow into a global company where diagnostics and therapeutics can synergize.

Sales Amount				
Sales Amount	Domestic		Major clients	① N/A
	2021	2022		② N/A
	N/A	94,320 \$		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount(\$)
2021.03	LSK, UTC, KB, SKBIO Enlight Ventures, CNU	Series A	3,560,000 \$
2022.03	INTERVEST, SKBIO, LSK Enlight Ventures, UTC, MIRAE ASSET	Series A Bridge	9,460,000 \$

Company profiles

Established date	2018.04.04
CEO	Minseok S. Kim, Jungmin Lee
Employee No.	27
Business Category	Professional, Scientific, Technical Services
Technology Field	Anticancer therapeutics, Liquid Biopsy
Main Item	Anticancer Drugs, IVD Diagnostics
Main Team members	<p>Minseok S. Kim CEO Work Experience Associate professor, NewBiology of DGIST</p> <p>Jungmin Lee CEO Work Experience Senior researcher, SAIT</p> <p>Seil Jang CTO Work Experience Team Leader, Y-BIOLOGICS</p>
Address	#409, 4F, 16 Technogongwon-ro, Hyeonpung-eup, Dalseong-gun, Daegu

Technology



CCM (Continuous Centrifugal Microfluidics) technology

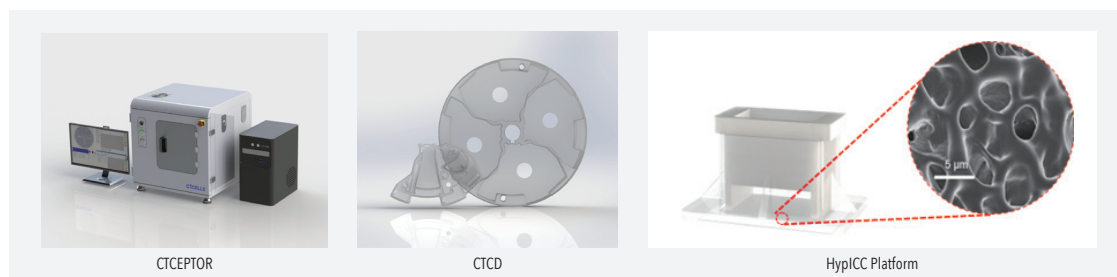
It enables continuous control without stopping centrifugation resulting in unbiased separation unlike conventional methods. CTCEPTOR, the automated cell separation device, using CCM, minimizes loss during rare cell isolation with CTCD. The separated cells can be analyzed by HypiCC, showing the cellular organelles' 3D structure without cell loss.

IVDMD (In Vitro Diagnostic Medical Device) License Registration

- Completed IVDMD development and licensing.
- CTCEPTOR: Class I MD, Product License No. 20-1718 / CTCD: Class I MD, Product License No. 22-1400.
- IEC 61010-1 and EMC tests are in progress to prove safety.
- Preparing application for New Medical Technology Evaluation and confirmation of health insurance coverage.

The World's First Non-biased Separation of Rare Cells with High-Efficiency and High-purity

- CCM shows unbiased isolation of rare cells with high efficiency and purity regardless of their size or antigen expression.
- With CTCEPTOR and HypiCC platform, researchers can save time & effort applying it to cancer diagnosis, cell-based therapies, and prenatal diagnosis.



Core IP & Awarded Status



Key intellectual property rights and award status

2021.03	(No. 10-2021-0042398) Split Disk Apparatus
2021.03	(No. 10-2021-0042399) Ultra-Thin Cell Fixation Device And Method Thereof
2022.06	(No. PCT-KR2022-008883) A Fusion Protein Comprising An Antigen Binding Domain And A Cytokine Trimer Domain

Certification & award status

2022.12	2022 University Laboratory Start-up Uni-Tec Demo Day, Ministerial Award
2023.01	2022 Innopolis Tech Commercialization Awards, Excellence Award of Contribution to Regional Innovation

Assemble the Future of Dentistry with Data, Cloud, and AI

As a web-based SaaS (Software as a Service) platform, we acquire medical images and offer dental alignment diagnostic support services, assisting with simulated treatments, procedures, and diagnostic information.

- Business Model: Revenue Generation: Key Customers: Dentists(Members), Potential Orthodontic Patients, Dental-related Businesses(Companies like Diorko, DNN, with MoU), Channels: In-house Platform and APP.
- Future Growth Strategies: Targeting dental students (prospective dentists) by collaborating with dental schools and digital dentistry departments nationwide. Establishing a mobile-based data transmission system for 3D dental scan data.

Sales Amount				
Sales Amount	Domestic		Major clients	① N/A
	2021	2022		② N/A
	9,917천원	27,218천원		③ N/A
	Overseas			④ N/A
	2021	2022		
	45,457\$	238,005\$		

Investment attraction history

Date	Investor	Stage	Amount (\$)
N/A	N/A	N/A	N/A

Company profiles

Established date	2019.10.08
CEO	Ye Hyun Kim
Employee No.	4
Business Category	Software Development and Supply Industry
Technology Field	A.I driven Orthodontic Analysis System
Main Item	WebCeph
Main Team members	<p>Ye Hyun Kim CEO Seoul Clear Orthodontic Clinic (2017.03~) AssembleCircle(2019.10~)</p> <p>Jang Hoon Kim Assistant manager AssembleCircle(2020.06~)</p>
Address	411Ho, 240, Pangyoyeok-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of

Technology

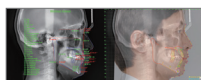


"Dental Imaging Analysis AI Technology and Cloud Web-based Dental Data Services"

- Holds patents for AI-based automatic detection technology of anatomical landmarks in dental radiographs (Registered in South Korea and the United States).
- Offers web-based services utilizing cloud storage, available to users worldwide with internet access. Operating cloud servers in 12 AWS (Amazon Web Services) regions globally, ensuring GDPR compliance and minimizing issues related to personal information and medical laws on a global platform.
- Applied for a patent for medical image de-identification technology (DIM-i: De-identification of Medical Image). Launched two platforms: WEBCEPH for remote and untact communication between medical professionals, and TOOSAPP, a platform for remote and untact communication between medical professionals and patients.

"Additional Technology Development Phase after Commercialization"

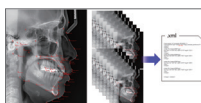
- "Current Status of Technology Development: Successfully developed AI-based anatomical landmark detection for cranial and facial radiographs and clinical photographs (frontal and profile views). Improvement tasks include: - Service Technology: Developing cloud storage and viewer functionality for 3D oral scan data, AI-based automatic diagnosis and analysis of dental clinical photographs for orthodontics, and an online-based 3D dental alignment device design program. - Service Operations: Completed CE certification and application, strengthened AWS WAF firewall security patch, launched paid consulting services for dentists, and planning the launch of an online platform for transparent orthodontic alignment based on 3D scan data, along with planning for online-based ordering, commissioning, and delivery services between dental clinics and dental laboratories.
- Commercialization: Currently being used by approximately 85,000 dentists worldwide in around 180 countries. KFDA, FDA approvals are completed, and CE certification is underway.



WebCeph analysis report



Anonymization and de-identification of medical images



Report

Core IP & Awarded Status



Key intellectual property rights and award status

2019.02	Method For Predicting Anatomical Landmarks And Device For Predicting Anatomical Landmarks Using The Same
2022.10	Method For Providing Information About Orthodontics And Device For Providing Information About Orthodontics Using Deep Learning Ai Algorithm
2022.12	Method And Apparatus For Simulating Clinical Image

Certification & award status

2019.12	Grand Prize at K-Global Start up
2020.06	Gyeonggi START Pangyo Accelerating Program 1st prize
2020.11	KDB Start up 2nd Prize

AccuGene, a precision medicine specialist company based on life science engineering platform materials

Possesses technologies necessary for genetic and infectious disease testing, such as specimen preservation, nucleic acid extraction and purification, and experimental data management.

Possesses the necessary technologies for genetic and infectious disease testing, including nucleic acid extraction and purification, specimen preservation, and data management. Through our sample collection kits, we enable stable preservation and extraction of DNA and RNA, and provide Next Generation Sequencing (NGS)-based analysis services in the field of microbiomes. Our growth strategy focuses on providing accurate analysis results compared to competitors and launching microbiome analysis services in the North American healthcare market to enhance customer satisfaction and expand market share.

Sales Amount

Sales Amount	Domestic		Major clients	① Genoplan
	2021	2022		② Medizencare
	6,507,000 \$	2,168,000 \$		③ Lab Genomics
	Overseas			④ N/A
	2021	2022		
	5,595,768 \$	309,162 \$		

Investment attraction history

Date	Investor	Stage	Amount(\$)
2017.12	CKD Start-up Venture Investment Association No.1	Series A	230,769 \$
2017.12	CKD Start-up Venture Investment Association No.2	Series A	1,153,846 \$

Company profiles

Established date	2014.10.27
CEO	SunJae Kwon
Employee No.	28
Business Category	Manufacturer, Service provider
Technology Field	Life Science
Main Item	Sample collection kits
Main Team members	SunJae Kwon CEO Ph.D. in Life Sciences / 11 years of relevant experience
	Hyeri Kim Director Master in Biotechnology / 11 years of relevant experience
	KwangMoon Cho Senior Researcher Ph.D. in Molecular Biology / 7 years of relevant experience
Address	Head Office 73, Gaetbeol-ro, Yeonsu-gu, Incheon, Republic of Korea Overseas Branch 5050 Murphy Canyon RD STE 150, San Diego, CA US

Technology



Sample collection kit & Microbiome analysis service

- The sample collection kit, which has been a key product for AccuGene's growth, shows equal or superior quality compared to competitor products while maintaining a high price competitiveness, thereby establishing AccuGene's position in the market.
- Through our NGS-based microbiome analysis technology, we can simultaneously analyze various types of microbes and functional genes present in the specimen. Additionally, by securing further analysis technology for microbial genomes and transcriptomes, and continuously updating our microbiome database and analysis pipeline, we are strengthening our competitiveness in microbiome analysis technology.

Technology development progress

- cfDNA Sample Collection Tube: Basic performance verification at laboratory scale
- Tissue DNA/RNA Dual Prep Kit: Reliability assessment and evaluation by potential users
- Gut Microbiome Analysis Service Launch in North American market: Fabrication and performance evaluation of confirmed materials / parts / systems for starting products.

Innovation of technology

- Sample Collection Kit: AccuGene's sample collection kit guarantees quality that is equivalent to or superior to existing competitive products, while boasting high price competitiveness. This result is achieved through our patented technology, thorough quality management, and efficient production process. Based on this competitiveness, we have secured a distinct position in the market, which is evidence of our technology and quality recognized by our customers.
- NGS-based Microbiome Analysis Technology: Based on machine learning analysis technology, we have developed and implemented a predictive model for disease-specific microbiome identification and disease prediction in our analysis service. Moreover, based on these technologies, we have developed an algorithm to recommend the optimal probiotics according to a customer's health status.



Core IP & Awarded Status



Key intellectual property rights and award status

2023.04	[PCT] (No. 10-2020036298) Nucleic acid extraction device
2018.09	[PCT] (No. 10-20210071362) Method for converting to a common data model of genomic information
2017.06	[PCT] (No. 10-1749419) Method for extracting DNA from paraffin-embedded samples

Certification & award status

2021.12	Export Tower Award at the 58th Trade Day
2021.11	World Class Product certificate from the Ministry of Trade, Industry and Energy
2019.07	A product of excellent quality by Incheon Metropolitan City

Healthy Future Value, Advanced AI Technology Services

AI Retinal Disease Diagnosis Solution.

- BP > Patients are affordable and can be tested quickly. Doctors can expand their profits by becoming insurance premiums. The national institution reduces treatment costs thanks to early diagnosis.
- GS> Generate additional profits by expanding the distribution network by securing partners.

Sales Amount				
Sales Amount	Domestic		Major clients	① KIM'S INTERNAL MEDICINE CLINIC
	2021	2022		② Maihub
	42,263 \$	52,074 \$		③ Lucas Medical Examination Center
	Overseas			④ UMIOPTICS
	2021	2022		
	N/A	N/A		
Investment attraction history				
Date	Investor		Stage	Amount (\$)
2019.12	POSCO Technology Investment		Seed	790,331.94
2020.12	POSCO Technology Investment, Krunventures, Limited		Pre-A	790,297.16
2020.12	TINVESTMENT		Pre-A	790,297.16

Company profiles

Established date	2018.11.16
CEO	HyeongHoi Kim
Employee No.	16
Business Category	Development of application sw, etc
Technology Field	application software, optical equipment
Main Item	AI Software and Optical Equipment
Main Team members	HyeongHoi Kim CEO Director of Pusan National University Hospital Biomedical Research Institute Director of Pusan National University Hospital Clinical Trial Center Director of Diagnostic Laboratory Medicine at Pusan National University Hospital
Address	URP3-14, 3F, Convergence Medical Research Building, 187, Gudeok-ro, Seo-gu, Busan, Republic of Korea

Technology



Confirmation of the disease of the eye is possible in a few minutes

It provides a solution to diagnose three major blindness diseases (Glaucoma, Age-related Macular Degeneration, and Diabetic Retinopathy) in just a few minutes with artificial intelligence. The image taken with the fundus camera is 'WISKY' and you can immediately check for disease.

AI eye disease diagnosis program 'WISKY' will continue

The AI reading SW 'WISKY' was developed and completed with the approval of the 3rd grade medical device after the clinical trial was completed. Additional diseases that can be seen through fundus photographs are being developed.

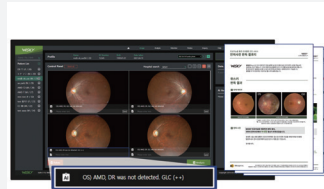
Creating a Business Triangle for Early Detection of Diseases

The business triangle can form a 'patient-doctor-state institution'.

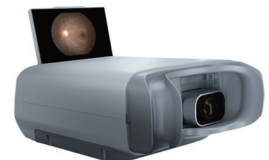
- Patients are affordable and can be tested quickly.
- Doctors can expand their profits by becoming insurance premiums.
- National institutions help reduce treatment costs by conducting early diagnosis and examination.



company news and promotional videos



Retinal blindness disease AI reading S/W 'WISKY'



Retinal imaging fundus camera "OPTINA Genesis"

Core IP & Awarded Status



Key intellectual property rights and award status

2021.07.21	Deep Learning Architecture System For Automatic Interpretation Of Fundus Image And Method For Automatic Interpretation Of Fundus Image Thereof
2022.02.07	Deep Learning Architecture System for Automatic Interpretation of Medical Images
2023.05.26	Deep Learning Architecture System For Real Time Quality Interpretation Of Fundus Image

Certification & award status

N/A	N/A

We listen to your glucose

We listen to your glucose.

- The blood glucose measurement accuracy of our products is comparable to invasive products using needles. Our products are needle-free and non-invasive, giving us a very strong competitive advantage.
- To date, there are no FDA-approved non-invasive blood glucose meters. We are working hard to make our product the first non-invasive blood glucose monitoring medical device approved by the FDA.

Sales Amount				
Sales Amount	Domestic		Major clients	① Easytem
	2021	2022		② Seoul ST. Mary's Hospital
	309,000 \$	644,000 \$		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		
Investment attraction history				
Date	Investor		Stage	Amount (\$)
2020.07	POSTECH Holdings		Seed	100,000 \$
2020.09	POSTECH Holdings		Seed	100,000 \$

Company profiles

Established date	2020.02.01
CEO	Yoonho Khang
Employee No.	10
Business Category	Healthcare
Technology Field	Photoacoustics, AI
Main Item	Non-invasive blood glucose meter
Main Team members	Yoonho Khang Co-Founder & CEO Semiconductor expert over 30 years Formerly at Samsung Electronics & Display
	Junho Mun CTO Expert in optics over 20 years Formerly at Samsung EM & LG CNS
	Hyunsuk Yoo CDO Expert in AI & data science over 30 years Formerly worked on AI for drug discovery
Address	Head Office #303 D3, 7-12 Daehak-ro 179beon-gil, Yuseong-gu, Daejeon, South Korea
	Overseas Branch 17291 Irvine Blvd STE 209, Tustin, CA 92780 USA

Technology



Non-invasive blood glucose meter with high accuracy

We are developing wearable and portable blood glucose measurement system that doesn't use a needle, and that is detachable at any time. It works because of our patented technology which uses highly sensitive photoacoustic sensors.

PoC completed

- Our product, GlucoSOUND won the innovation award at CES 2023.
- MARD which is an indicator of blood glucose measurement accuracy, was improved to 4.9% in animal experiments. And, preliminary studies in human have identified 7% of MARD. Its MARD value is equivalent to the accuracy of CGM with a needle.

Non-invasive blood glucose meter with the highest accuracy

The blood glucose measurement accuracy of our products is comparable to invasive products using needles. Our products are needle-free and non-invasive, giving us a very strong competitive advantage.



Wearable Non-invasive Glucose meter



Portable Non-invasive Glucose meter

Core IP & Awarded Status



Key intellectual property rights and award status

Present 5 registered and 1 pending domestic patents in Korea
2 international patent applications

Certification & award status

2023.01 CES 2023 Innovation Award

The evolution of implants evolves human-being

We manufacture and study dental implants.

Our Main product is Nano-Speed Implant. It is an implant made by combining high-strength titanium with highly bio-compatibility artificial bones. It is designed as an implant that can improve bio-compatibility and can be safe for people with systemic diseases such as diabetes and high blood pressure.

Sales Amount				
Sales Amount	Domestic		Major clients	① SinSung Dental clinic
	2021	2022		② Dentalload.Inc
	1,417,193 \$	875,302 \$		③ Seven Medical
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		
Investment attraction history				
Date	Investor		Stage	Amount (\$)
2022.12	TabBio Investment No.9		Series A	647,403 \$



Company profiles

Established date	2020.10.09
CEO	Johann Lee (SangYun Lee)
Employee No.	27
Business Category	Medical device manufacturing industry
Technology Field	Dental Implant
Main Item	Nano-Speed Implant

Johann Lee (SangYun Lee) | CEO of OSSTEO BIONICS
CEO of UFIT Implant
General Manager/Director of OSSTEM Implant Sales Division.

YongKeun Lee | CTO of OSSTEOBIONICS
Chief Research Officer at Osstem Implant
Professor/Ph.D. at Yonsei University Dental College

KyeongJun Son | Vice President
Head of Production Division at Osstem Implant

Head Office | #522 Instal, 204, Convensia-daero, Yeonsu-gu, Incheon, Republic of Korea
Factory | 76, Hwanggeum 2-ro, Yangchon-eup, Gimpo-si, Gyeonggi-do, Republic of Korea

Technology



Laser HA Melting

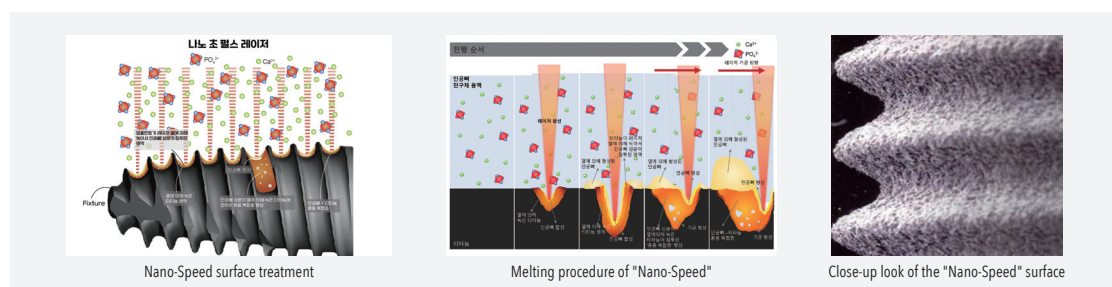
It is a highly functional implant that combines with the bones. It is especially beneficial for patients with poor bone quality such as the elderly and diabetics.

Development of Implants Applied to HAp-Ti Integrated Melting Technology

- Step 1: Development of HA-based integrated implant manufacturing technology (Completed)
- Step 2: Selection of optimized coatings for clinical evaluation (Completed)
- Step 3: Product licensing and merchandising (In progress)
- Process improvement to reduce merchandising process time and cost

What's the difference?

- Standard implants form a fine thin membrane between metal and ceramic layers, so the separation of ceramic layer and metals occurs when it is implanted.
- This technology does not have the membrane between different materials due to the fusion of laser-based metal and ceramic layers, which makes it easier for dentists to place the implant and reduce the failure rate.



Core IP & Awarded Status



Key intellectual property rights and award status

2023.05	(No. 10-2518424-0000) Implant abutment module with ball
2022.04	(No. 10-2322536-0000) apatite film forming method using laser

Certification & award status

2022.04	2021 Best Early Start-up Package Support Project
2022.05	1st Bio Start-up Competition Encouragement Award

1drop is a healthcare company that is rapidly growing through innovative solutions necessary for the prevention, improvement, and management of diseases

By using compact equipment and an app, we not only enhance user convenience but also implement a connected healthcare solution. Based on the advantages of data management, storage, and transmission, as well as the ability to proactively respond to infectious diseases, we aim to target primary healthcare institutions, clinics, and areas with poor medical infrastructure or limited medical accessibility. Ultimately, we strive to leap forward as a global mobile healthcare solution company by commercializing personalized total healthcare products.

Sales Amount				
Sales Amount	Domestic		Major clients	① UAE
	2021	2022		② ITALY
	N/A	N/A		③ Bulgaria
	Overseas			④ GREECE
	2021	2022		
	13,596,000\$	3,498,000\$		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2021.03~06	korea SMEs and startup agency, VC	Series B	5,000,000 \$
2020.04~05	VC	Series A	4,500,000 \$
2019.02~02	VC	Series A	2,600,000 \$



Company profiles

Established date	2017.09.25
CEO	Rhee joowon
Employee No.	48
Business Category	medical device manufacturing
Technology Field	reagent, algorithm, App, etc
Main Item	IVD
Main Team members	<p>JooWon Rhee CEO Work Experience 2006-2017 samsung electronics</p> <p>MinHo Song Director Work Experience 2014-2020 sbk partners</p> <p>WonJeong Kim Department head Work Experience 2017-2020 philomedics</p>
Address	A-203,1001,1002, Keumkang Penterium IT Tower, 215, Galmachi-ro, Jungwon-gu, Seongnam-si, Gyeonggi-do, 13217, Korea

Technology



Technical description schematic diagram for isothermal amplification technology specificity enhancement technology



Measurement Data Interworking Technical Description Schematic Diagram



a freeze-dried production facility

Core IP & Awarded Status



A field-based in vitro diagnostic solution capable of simultaneous molecular diagnostics and clinical chemistry measurements

The equipment consists of measurement devices, reagents, and an app. Firstly, regarding the measurement devices, we have combined the field-based molecular diagnostic measurement devices, which were previously divided into two business areas within our company, with measurement devices capable of measuring biomarkers for chronic disease management, into one device form. The device is compactly designed for portability, allowing it to be used anytime, anywhere. It is also equipped with Bluetooth connectivity to commercial smartphones, enabling operation through an app. Through this, users can easily manage their health and check for the presence or absence of infectious diseases on-site. The measured data is instantly synchronized with the server, facilitating data management, transmission, and utilization for implementing connected healthcare.

Development and commercialization completed in 2023

- Reagent: Clinical design is underway with the goal of launching in the second half of 2023 after completion of reagent development for COVID-19/Flu/RSV measurement.
- Measurement equipment: Performance is being upgraded after completing the first prototype development, and evaluation of measurement equipment is underway with the goal of completion in the second half of 23.
- App: It is being developed based on the development of an existing field-type molecular diagnosis solution app and is being developed with.

Differentiation and innovation

1. High Accuracy through 1drop's Own Technology.
 - 1drop has introduced its own primer design technology to improve specificity, addressing the limitation of isothermal amplification technology. This enhances specificity and improves accuracy.
2. Connected Healthcare Solution.
 - The device can be connected to a smartphone, enabling measurements through QR code recognition and allowing real-time data synchronization with the server. The results can be viewed through the app, enabling the implementation of a connected solution that utilizes various information such as measurement values and outcomes based on the collected data.
3. Enhanced User Convenience through Freeze-Drying.
 - Molecular diagnostic reagents are typically stored and used under refrigerated or frozen conditions, which can be inconvenient. However, 1drop applies freeze-drying technology to enhance the convenience of storage and usage.

Key intellectual property rights and award status

N/A	N/A

Certification & award status

2022.12	Top Export Awarded \$10M
2022.12	IP R&D AWARD
2020.09	2020 New Gyeonggi Startup Contest 2020 Grand Prize

to redesign healthcare to better people's lives through science and technology

We believe that software can do even more. We believe that software can treat the world.

- Following the approval by the Ministry of Food and Drug Safety in April 23, we strengthened our strategic cooperation with Handok for the commercialization of WELT-I. By combining WELT's excellent research capabilities with Handok's overall business capabilities, including licensing, payroll, marketing, and sales, we plan to create meaningful results in the new field of digital therapeutic devices.
- The partnership includes an equity investment and partnership in 2021, with Handok retaining domestic rights to WELT-I. WELT-I is currently the most prescribed digital therapeutic device in the world.

Sales Amount

Sales Amount	Domestic		Major clients
	2021	2022	
	560,716 \$	1,114,404 \$	
	Overseas		
	2021	2022	
15,618 \$	N/A		
			① Handok
			② Yonsei Severance Hospital
			③ SamSung Electronic Co., Ltd.
			④ Harvard Medical School

Investment attraction history

Date	Investor	Stage	Amount (\$)
2022.01	IMM Investment	Series B	3,902,502 \$
2021.03	Handok, Smilegate Investment, POSCO Investment	Series B	4,683,002 \$
2018.06	Smilegate Investment, Hanwha Investment, Enlight Ventures	Series A	1,873,200 \$
2016.07	Samsung Venture Investment Corporation.	Seed	468,300 \$



Company profiles

Established date	2016.07.07
CEO	SeongJi Kang
Employee No.	21
Business Category	Software Development / Service
Technology Field	SaMD(Software as a Medical Device)
Main Item	Digital Therapeutics
Main Team members	Seong Ji Kang CEO Health Development Group, Samsung Electronics Health Policy Division, Health Policy Bureau, Ministry of Health and Welfare
	Roh Hye Kang CFO(Co-founder) SW Engineer at Samsung Electronics Wireless Division
	Young Bok Youn CTO Samsung Electronics SW Center/ Wireless Sr. SW Engineer
Address	Head Office 311, Gangnam-daero, Seocho-gu, Seoul, Korea
	Overseas Branch 1 Broadway, Cambridge, MA 02142

Technology



Core technology of the product

- WELT-I is a prescription digital therapeutic software intended to be used independently by patients with insomnia.
- WELT-I delivers evidence-based digital treatments based on cognitive behavioral therapy for insomnia to address behaviors and thoughts that adversely affect sleep problems. The treatment program contained inPiLlowRx consists of 5 core therapeutic techniques: 1. Sleep Restriction, 2. Stimulus Control, 3. Sleep Hygiene Education, 4. Cognitive Therapy, 5. Relaxation Technique.

Technology development progress

WELT is currently developing and conducting clinical trials of digital therapeutic devices for insomnia, eating disorders (bulimia), and alcoholism. The insomnia digital treatment device was designated as an innovative medical device in December 22 and approved by the Ministry of Food and Drug Safety as the second digital treatment device in Korea in April 23. We are currently discussing the notification and temporary fee for new medical technology evaluation with NECA and the Health Insurance Review and Assessment Service, and expect to start conducting RWE research within 23 years.

Differentiation and innovation

- (Feature 1: User-friendly UI/UX) This product automatically collects sleep diary data by inputting smartphone sensor data and wearable-based sleep data, reducing user fatigue with repetitive tasks and increasing compliance.
- (Feature 2: Collect quantitative data from patients) Collecting data through sensors on wearable and mobile devices not only maximizes user convenience, but also ensures the objectivity of the data.
- (Feature 3: Accurate analysis and personalized feedback) By combining analysis algorithms that utilize a combination of sleep, biometric, lifestyle, and environmental data, it is possible to more accurately analyze a patient's insomnia.



Core IP & Awarded Status



Key intellectual property rights and award status

2022.03	[PCT] (KR2022/003881) Method for determining if origin of biological sample is from liver tissue
2020.12	(17/118,765) Method of diagnosis based on digital biomarker and apparatus for performing the method
2019.12	[KR](10-2053604) Sleep analysis methods and the devices that use them

Certification & award status

2023.04	Insomnia Digital Therapy Device (SaMD) License (KFDA)
2022.12.	Innovative Medical Device Designation (KFDA)
2022.12.	Certificate of IP Management Enterprise (Korean Intellectual Property Office)

Good idea, Good quality, and Good price

We would like to maximize the utilization of products in the operating room to benefit patients and contribute to the localization of medical devices.

- Product development is carried out at the headquarters and corporate research institute located in Chilgok Kyungpook National University Hospital, and after production at its own clean room factory in the Korea Medi Venture Center, it has secured clients and expanded its business.
- It holds GMP and CE, ISO 13485 certification for medical device manufacturing, and is currently in the FDA certification process. Our flagship products include the Trocar, Wound Protector, and Single Port family, and are set to launch pain control catheters and collaborative surgical robots.

Sales Amount				
Sales Amount	Domestic		Major clients	① Seoul National University Hospital
	2021	2022		② Korea University Hospital
	1,307,153 \$	1,742,734 \$		③ Kyungpook National University Hospital
	Overseas			④ Daegu Goohospital
	2021	2022		
	N/A	N/A		
Investment attraction history				
Date	Investor		Stage	Amount (\$)
2018	A private angel investor		-	380,000
2019	A private angel investor		-	400,000
2021	A private angel investor		-	591,000

Company profiles

Established date	2018.02.22
CEO	JunSeok Park
Employee No.	16
Business Category	Manufacturing / Other medical equipment manufacturing industries
Technology Field	surgical medical device
Main Item	Disposable endoscopic trocar, robot
JunSeok Park CEO	Chilgok Kyungpook National University Hospital Director of Colorectal Cancer Center, Professor for more than 20 years
Main Team members	HyeJin Jeon Director 14+ years of experience in large and public enterprises and startups
	JuKang Yoon Researcher Automotive and medical manufacturing for more than 20 years
Address	Head Office Room 303, Medical Life Science Museum No. 1, 90, Chilgok Jungang-daero 136-gil, Buk-gu, Daegu Overseas Branch 1121-3 Dongnae-dong, Dong-gu, Daegu

Technology



Development of a surgical-assisted cooperative robot platform optimized for single-puncture surgery

1. Development of a surgical-assisted cooperative robot platform optimized for single-puncture surgery.
 - Single-Puncture Surgery and Surgical Assistance Cooperative Robot: Collaboration of Innovative Items.
2. Features.
 - Thorax-free surgery reduces patient burden · An entry-level robot system that anyone can use · Intuitive human-robot interface · Leverage existing laparoscopic platforms.

Technology Development Progress (2023)

- Development of end effector hardware improvements.
- Improved user interface.
- User Guidelines by Disease and Severity.
- Height adjustment cart improvement.
- Robot-Single Ball Improvement Development.

Differentiation and innovation

Currently, a single surgical robot is provided by a global company, but the introduction cost is billions of won and the maintenance cost is hundreds of millions of won. In response, E-ROP Co., Ltd. is expected to create an innovative surgical culture through system fusion of a single open-air device set and laparoscopic-assisted cooperative robots for the ultimate goal of popularizing robot single-hole surgery.



Core IP & Awarded Status



Key intellectual property rights and award status

2019.06	[PCT] (No. KR2019/007502))minimally invasive surgical penetration needle
2021.06	Multi-joint robot control method and system
2022.02	Distributed control methods and systems for auxiliary cooperative robots with multiple joints

Certification & award status

2019.12	Brand Grand Prize that shone this year
2020.07	2020 Innovation Leader Awards
2021.12	Daegu-Gyeongbuk Free Economic Zone Authority Awarded Meritorious Companies

Treatment Becomes Enjoyment

Delivering happiness to all users with our technology.

Seizing the ADHD market with digital therapy devices via trials and approval. Providing devices, charts, and generating revenue through in-app purchases. Targeting a usage fee of around 70,000 KRW/month. Expanding into digital healthcare for general population. Developing ADHD screening, consortiums with communities, hospitals. Offering cognitive assessment for digital education.

Sales Amount				
Sales Amount	Domestic		Major clients	① Hyundai Motor Company
	2021	2022		② dREAM BUS
	900 \$	1,000,000 \$		③ Tick-tock Crocodile
	Overseas			④ POLED
	2021	2022		
	N/A	N/A		
Investment attraction history				
Date	Investor		Stage	Amount (\$)
2022.12	Genaxis		Pre-A	112,000 \$
2022.12	Daewoong Pharmaceutical		Pre-A	120,000 \$
2022.12	Gyeongnam Venture Investment		Pre-A	380,000 \$
2021.07	Infobank		Seed	150,000 \$
2021.07	Hyundai Motors		Seed	75,000 \$



Company profiles

Established date	2020.11.05
CEO	MinJung Sang
Employee No.	32
Business Category	Software
Technology Field	Software as a Medical Device
Main Item	DTx(digital therapeutics)
Main Team members	MinJung Sang CEO Hyundai Motor Company - Cognitive Modeling, Digital Twin, UI / UX LeeWon Jin SManaging Director Former CTO of Ozaak - iBHsoft SuhHo Jun Director Former CEO of Dungeon Delusion Studio
Address	3F, 11, Teheran-ro 92-gil, Gangnam-gu, Seoul, Republic of Korea

Technology



Starruckus_ADHD DTx

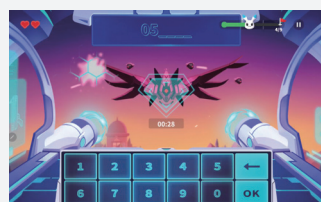
Starruckus_ADHD digital therapy device aims to prevent and treat ADHD through integrated analysis using real-world data and collaboration with healthcare professionals. It provides a comprehensive platform for analysis and management, utilizing data and biomarkers. The device measures cognitive functions using digital markers and biosensors. It also offers remote prescription therapy programs tailored to individual characteristics for effective ADHD prevention and treatment.

Advancements in ADHD Treatment: Integrated Digital Solutions and Biomarker Discoveries

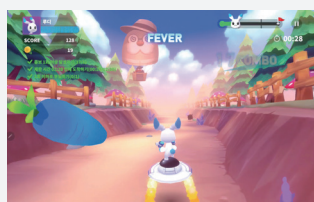
We are advancing ADHD treatment content, enhancing digital therapy device content with real-time personal assessment and adaptive algorithms. Refining therapy programs based on individual characteristics. Conducting clinical trials for the integrated digital service platform. Developed and released an app for ADHD screening and cognitive enhancement. Identified biomarkers for ADHD therapy devices. 90% progress in content and system development.

Cognitive Modeling DTx for ADHD

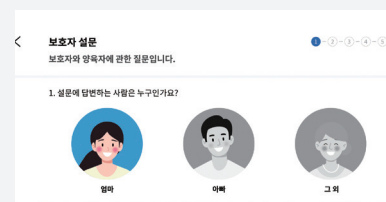
The digital therapy device (SaMD) for ADHD treatment offers a comprehensive solution through cognitive modeling, including 1) cognitive state assessment, 2) cognitive enhancement, and 3) tracking and monitoring. Developed by integrating content based on widely-used ADHD diagnostic tools like TOVA, CAT, ADS, and Wechsler's intelligence tests. Utilizing machine learning, the device analyzes and classifies data from both general and ADHD children to provide automated probabilistic algorithms.



in-house developed software



in-house developed software



Parents Survey

Core IP & Awarded Status



Key intellectual property rights and award status

2022.09	[PCT](No. KR2022/014483)Learning-Based User-Tailored Cognitive State Assessment System using Cognitive Model to Replace Cognitive Test Tasks
2022.10	Game-Based Training Content Service Device and Method of Operation for Cognitive Disorder Therapy
2022.10	Game-Based Cognitive Ability Assessment Device and Method of Operation Based on Customized Difficulty Levels

Certification & award status

2023.01	Innovation Award at CES
2022.10	Innovation Award at KES
2022.06	2nd place in ETS Entrepreneurship Idea Contest

A Healthy Future with AI

Enhancing medical benefit by high accuracy AI.

- We provide solutions tailored to the size and form of healthcare facilities, including models that integrate PACS and cloud-based models for medical image analysis. These solutions are accessible anytime, anywhere via web pages.
- Our AI solutions are considered "medical device" and require regulatory approval. After obtaining medical device manufacturing licenses, they are currently being used in over 250 hospitals both domestically and internationally.

Sales Amount				
Sales Amount	Domestic		Major clients	① University hospital A
	2021	2022		② University hospital C
	1,000,000 \$	1,000,000 \$		③ University hospital B
	Overseas			④ General hospital D
	2021	2022		
1,000,000 \$	1,000,000 \$			

Investment attraction history

Date	Investor	Stage	Amount(\$)
2021.**	TIPS-linked investment, an investment specializing in medical bio-healthcare	Series A	3,000,000 \$
2021.**	an individual investment association including medical professionals	Series A	9,000,000 \$



Company profiles

Established date	2017.01.05
CEO	JaeJoon Lee
Employee No.	13
Business Category	Artificial Intelligence Medical Software
Technology Field	AI
Main Item	AI medical image analysis software
Main Team members	<p>JaeJoon Lee CEO 30 years experiences of S/W development</p> <p>Seungwoo Shin Head of R&D 30 years experiences of S/W development</p> <p>Sin Ahn Researcher 5 years S/W R&D experiences with medical background</p>
Address	311, 230 Pangyoeyeok-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, South Korea

Technology



Patented AI technology specialized in musculoskeletal medical image analysis

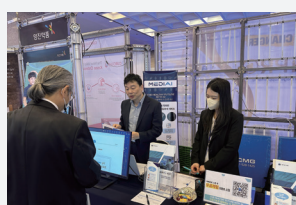
Our patented AI technology excels in musculoskeletal medical image analysis. Our hybrid Bone Age Analysis AI solution, MediAI-BA, surpasses existing methods in terms of accuracy and clinical validity. With the aim of enhancing medical benefits by providing timely and accurate analysis, we're currently developing AI solutions for ankylosing spondylitis severity and cerebrovascular disease detection, which we expect will drive market expansion.

Expansion of solution pipeline

Our MediAI-BA has been in the market for 3 years and is currently being used in over 250 hospitals. MediAI-FX, our solution for wrist fracture detection, has been in use since 2022. MediAI-OA, our solution for knee osteoarthritis analysis, is being used as a review solution for the Health Insurance Review & Assessment Service(HIRA). Additionally, We're developing solutions for ankylosing spondylitis, cerebral hemorrhage prognosis, and lower limb measurement.

AI technology which offers high performance and easy adaptation for indications expansion

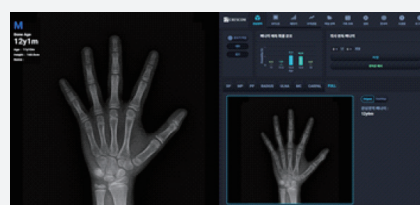
We have patent-based AI technology specializes in musculoskeletal medical image analysis surpassing other AI bone age analysis software in terms of accuracy. Furthermore, our patented AI technology enables adaptive indications expansion in medical image analysis through the utilization of training data and disease biomarker information.



Operating exhibition booths



Government held business event in Vietnam



MediAI-BA, an AI bone age analysis solution, significantly improves accuracy with patented AI technology, overcoming limitations of GP and TW3 methods

Core IP & Awarded Status



Key intellectual property rights and award status

2017.09	(KOR) System And Method For Evaluating Multifaceted Growth Based On Machine Learning
2019.05	(KOR, US, Japan) Apparatus, Method And Computer Program For Analyzing Image
2022.09	(KOR) Apparatus And Method For Precise Analysis Of Arthritis Severity

Certification & award status

2021.04	Selected as a promising startup by the Korea Credit Guarantee Fund 'First Penguin'
2022.12	Commendation from the Director of NIPA (National IT Industry Promotion Agency)
2023.06	Winner of the 'R&D Innovation Award' in the 'AI Medical Data Solution' category at the 9th Korea Leading Company Awards in 2023.

Todo Works Corp.

https://todo-works.com

Technology for all

Todo works is a tech-based social venture to resolve the various problems faced by wheelchair users.

- Accumulated sales: 5000 units of Todo Drive and 40 global partners in 24 countries.
- European market experience, including customer feedback and government subsidy systems by country.
- Improving the mobility of all wheelchair-using children between the ages of 6 and 18 in Korea by 2024.
- Entering the U.S market, which accounts for 50% of the global wheelchair market share in 2024.

Sales Amount

Sales Amount	Domestic		Major clients	① The Happiness Foundation
	2021	2022		② Gyeonggi Provincial Government
	1,008,631 \$	1,923,586 \$		③ Korea Employment Agency for Disabled
	Overseas			④ Allmobility Trading (Italy)
	2021	2022		
	251,610 \$	506,164 \$		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2017.08	The Happiness foundation	Seed	229,354 \$
2018.09	Crevisse Partners, Corp.	Series A	764,773 \$
2018.09	D3 Jubilee partners	Series A	764,773 \$
2021.03	SK Inc	Series B	1,529,253 \$
2021.06	Daesung Private Equity, Inc.	Series B	382,642 \$

[todo]
WORKS

Company profiles

Established date	2016.03.11
CEO	Jaeshin Sim
Employee No.	29
Business Category	Manufacturing
Technology Field	Medical Equipment / Able-tech
Main Item	Todo-Drive
Main Team members	<p>JaeShin Shim (James) CEO, CTO of Todo Works More than 20 years of experience in the device design field</p> <p>ShungHwan Jung (Sean) COO & Co-founder of Todo Works Former CEO of an IT company listed on the KOSDAQ</p> <p>KwanHee Yoon R&D Team Leader of Todo Works 13 years of experience in IoT development</p>
Address	176-10, Hohyeon-ro, Siheung-si, Gyeonggi-do, Republic of Korea

Technology



Todo-Drive, the world's lightest wheelchair power assist

Todo Drive is the world's lightest and smallest power wheelchair assist that transforms a manual wheelchair into a power wheelchair by adding only 5kg of weight. By adding Todo Drive to the manual wheelchair, it helps wheelchair users move more easily and comfortably.

Innovative technology beyond having a good heart for all wheelchair users in the world

Todo Works has reached a major milestone with the 5,000th Todo Drive for wheelchair users worldwide. The medical assistive device industry requires innovative technology that goes beyond having a good heart. Todo Works aims to capture 30% of the global wheelchair power assist device market and create an accessible world for all.

Just 5 kg | Too Easy | Fits all

- World's Lightest: feel comfortable and the convenience of a power wheelchair by adding this 5kg-device.
- World's Easiest: Just push the levers, it switches between manual and power mode.
- World's Most Universal: The universal design of Todo Drive fits most of the wheelchair in the world!



At the rehaccare exhibition in 2022 (Dusseldorf, Germany)



Todo-Drive on the manual wheelchair



Todo-Drive unit

Core IP & Awarded Status



Key intellectual property rights and award status

2017.07	(Patent) Attaching and detaching type driving device and wheelchair having the same (KR, USA, EU - 7 countries)
2017.08	(Trademark) Todo-Drive (KR)
2019.11	(Utility model patent) Attaching and detaching type driving device and wheelchair having the same (China)

Certification & award status

2020.09	1st place in SOVAC Social Value Contest
2021.03	President of Social Value Research Institute Award by SPC
2022.01	Impact Award in IMPACT COLLECTIVE

Trusted safeguard for Medical Industry

An innovative company that will be responsible for the healthy life of humankind.

1. Low temperature plasma sterilizer solution – STERLINK, STERMATE(STERLOAD, STERPACK)
 - In particular, as the first non-US company to obtain US FDA certification, it has grown rapidly in the global market, centering on the US market.
2. Medical implant plasma regenerative activator solution – ACTILINK
 - In 2021, Domestic sales began after signing product supply and technology licensing out contracts with domestic dental implant manufacturers.

Sales Amount				
Sales Amount	Domestic		Major clients	① MEGA'GEN IMPLANT CO.,LTD
	2021	2022		② Namsun Machinery Co., Ltd.
	2,012,289 \$	5,076,687 \$		③ vetOvation
	Overseas			④ AL-SAFA Group
	2021	2022		
	2,798,432 \$	3,809,275 \$		

Investment attraction history

Date	Investor	Stage	Amount(\$)
2023.01	Allotment to the third party (Dreamtech Co., Ltd)	-	2,300,000 \$
2023.01	Issuance of convertible bond (Kiwoom securities Corp., etc.)	-	9,230,000 \$
2022.10	Initial Public Offering	-	9,820,000 \$
2021.10	INTOPS	-	770,000 \$
2021.08	Korea Development Bank	-	6,160,000 \$

Company profiles

Established date	2015.03.31
CEO	YouBong Lim
Employee No.	163
Business Category	Medical device manufacturing
Technology Field	Bio-plasma solutions
Main Item	Plasma sterilizer, Plasma regenerative activator
YouBong Lim Co-CEO Ph.D., in Physics, KAIST	
SamJeong Yoon Co-CEO Former BCG Korea managing director	
JunYoung Kim Senior Managing Director Former Korea Institute of Fusion Energy(KFE) researcher	
Address	Head Office 125, Gwahak-ro, Yuseong-gu, Daejeon, Republic of Korea Overseas Branch Miami-Dade Location, 2332 Galiano street 2nd Floor Coral Gables, USA Plasmapp America Inc.

Technology



Introduction of business items


1. STERLINK: Sterilization solution essential for all medical operations. fast low-temperature plasma sterilization without damaging complex medical devices. 2. STERMATE(STERLOAD, STERLOAD lite, STERPACK): Safe disposable sterilant. (cassettes type and pouch type) 3. ACTILINK: Plasma Regenerative activation for implant surface.

Technology development progress


1. STERLINK: Successfully completed a comprehensive review of global medical device standards through market analysis. Currently mass-produced products are on sale. 2. STERMATE(STERLOAD, STERLOAD lite, STERPACK): The selective permeability pouch technology secured compatibility and usability. Currently mass-produced products are on sale. 3. ACTILINK: Successfully completed a comprehensive review of global medical device standards through market analysis. Currently mass-produced products are on sale.

Originality and innovation

1. STERLINK: The world's first direct injection pouch-type patented sterilization technology has been applied. SAL of 10-6 is validated to ensure sterilization stability of medical devices. 2. STERMATE (STERLOAD, STERLOAD lite, STERPACK): It can be safely employed as a disposable sterilant, offering a usage rate that is 10 time less than conventional methods. STERLOAD lite can be safely used up to 80 times. 3. ACTILINK: Contaminants of hydrocarbon are reduced from the surface of implant fixture by the vacuum plasma to attract more blood and enhance osseointegration efficacy.



Plasmapp main item - STERLINK (left) / ACTILINK (right)




STERLINK™
Low Temperature PLASMA STERILIZER

Biological Inactivation

7 min. @121°C (250°F)

Preventing Infection Accidents

Low temperature plasma sterilizer solution - STERLINK



ACTILINK
PLASMA Regenerative Activator for Implant

Regenerative Activation

1 min. @121°C (250°F)

Improving Osseointegration

Medical implant plasma regenerative activator solution - ACTILINK

Core IP & Awarded Status



Key intellectual property rights and award status

2023.06	Domestic patent(Registration number is 10-2541194)
2022.11	Domestic patent(Registration number is 10-2467406)
2022.08	EP patent(Registration number is EP3616729) in addition to 64 other registered patent and 76 patent applications.

Certification & award status

2022. 11	Minister of health and welfare commendation award
2022. 11	Minister of SMEs and Startups commendation award
2021. 11	Minister of Trade, industry and energy commendation award

Reshaping Surgery through Digital Innovation

Hutom is the first AI-surgical platform company in South Korea. We are developing a patient-specific AI-surgical platform by applying virtual surgical simulation and navigation based on CT images. We provide a better treatment and operation environment and reducing the cost of surgery.

- ViHUB has been set at major hospitals such as Severance Hospital and Kangbuk Samsung Hospital. Positioning as surgical data hub with continuous updates of AI functionality
- RUS is currently undergoing actual usage and billing cost at Severance Hospital.
- Evaluation of new medical technology targets and certification of innovative medical technology will be promoted / RUS international multi clinical research will be conducted.

Sales Amount

Sales Amount	Domestic		Major clients	① Sinchon Severance Hospital
	2021	2022		② kangbuk Samsung Hospital
	70,500 \$	69,000 \$		③ Gangnam Severance Hospital
	Overseas			④ Asan Medical Center
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2018.04	LSK Investment, DevSisters Ventures	Series A	3,050,000 \$
2020.07	MM Investment, KB Investment, Quantum Ventures Korea, Samsung, Venture Investment	Series A Prime	3,800,000 \$
2021.12	MM Investment, Quantum Ventures Korea / Nau IB Capital	Series B	6,850,000 \$
2022.01	KB Investment, Korea Investment & Securities / Samsung Venture Investment	Series B	6,090,000 \$

Company profiles

Established date	2017.05.15
CEO	HyungWoo Jin
Employee No.	87
Business Category	Surgical AI SW
Technology Field	AI, Big Data
Main Item	Navigation for UGI Surgery
Main Team members	HyungWoo Jin CEO Current: Chief of Gastrointestinal Surgery, Severance Hospital Former: - Director of Gastric Cancer Center, Severance Hospital - Director of Robot & MIS (Minimally Invasive Surgery) Center, Severance Hospital
	DeogMyung Lee Vice President Former: - CEO of Premise - Senior Researcher, System IC, Hyundai Electronics
	Doek Young Lee R&D Head Former: - Senior Researcher, Samsung Electronics - Technical Director, KoYoung Technology
	Address 279, Dokmak-ro, Mapo-Gu, Seoul South Korea

Technology



Core technology of the product

- ViHUB: AI-based Surgical Video Data Hub.
- RUS: Patient-Specific Surgical Planning and Assistance Navigation.
- SurgGram: AI-based Surgical Video Analysis Platform.

Technology development progress

- ViHUB: The AI functionality for the first-generation product has been developed and completed (Removal of unnecessary automatic recognition and surgical scenes).
- RUS: Customized Surgical Planning and Surgical Assistance Navigation. The first-generation module for gastric cancer has been released, and the development of a renal cancer module is currently underway. The second-generation RUS is being developed, which aims to synchronize real-time surgical footage with navigation screens using video recognition AI technology.
- SurgGram: AI-based Surgical Video Analysis Platform. The technology for surgical step recognition in gastric cancer surgery has been developed and completed. The ongoing development is focused on the recognition of major events associated with postoperative outcomes.

Differentiation and innovation

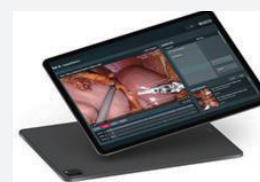
- Realistic Surgical Environment Implementation through Patient-Specific Clothing Prediction Model, not just simple CT-based 3D models.
- Surgical Simulation and Customized Surgical Planning through Virtual Guidewires, Cameras, and Surgical Instruments.
- Advanced Surgical Video Recognition and Analysis based on Exceptional Surgical Video Data and AI Technology.



IGCC Luncheon Symposium (Japan)



RUS Stomach



Surggram

Core IP & Awarded Status



Key intellectual property rights and award status

2023.04	Total of 45 domestic patent registrations.
2023.05	Total of 2 American patent registrations (11660142/11636940)
2023.06	21 domestic patent applications in progress. 9 individual foreign patent applications in progress. 9 PCT (Patent Cooperation Treaty) applications in progress.

Certification & award status

2020.06	First place at CVPR2020_EPIC-Kitchens Dataset Challenges
2021.10	First place at MICCAI 2021 Endovision HeiSurF Challenge
2021.12	NeuriPS Oral presentation in spotlight session

A world where Finance making people healthier

Care of health becomes financial benefit

- GradeHealthChain is running a platform LOG to link individual's health status to reasonable financial product.
- We have product & underwriting solution and also giving healthcare services to the customers.
- We are making an eco-system where finance take care of customer's financial status and health status at once.

Sales Amount

Sales Amount	Domestic		Major clients	① Samsung Life
	2021	2022		② Hana Insurance
	89,500 \$	168,000 \$		③ DB Insurance
	Overseas			④ ABL life
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2022.01	DS Asset	Series A	1,200,000 \$
2022.01	QUAD Ventures	Series A	800,000 \$
2022.03	Samsung Ventures	Series A	800,000 \$



Company profiles

Established date	2019.05.23
CEO	HyungJoo Lee
Employee No.	23
Business Category	Software development and supply
Technology Field	Healthcare, Fintech, Insurtech
Main Item	HealthGrade based financial solution
Main Team members	HyungJoo Lee CEO SCOR Korea product development Alliantz life Korea product development
	Minyong Kang CSO & Co-Founder SCOR Korea product development Alliantz life Korea product development
	JiSung Kim CFO & Co-Founder SCOR Korea product development Alliantz life Korea product development
Address	5F, 64 keunumul-ro, Mapo-gu, Seoul, Republic of Korea

Technology



HealthGrade, an indicator for aligning finance and healthcare

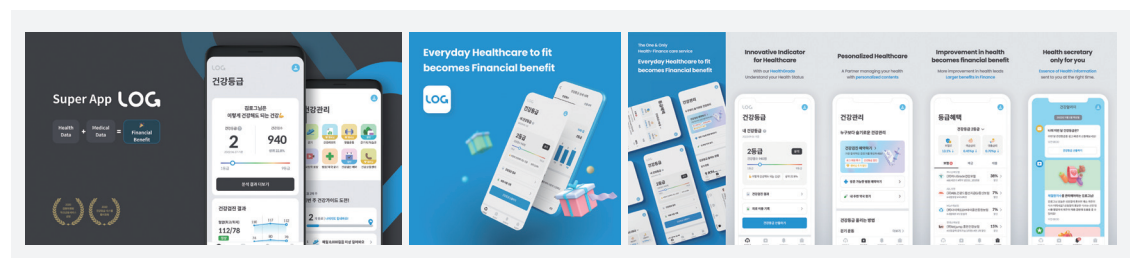
- HealthGrade works as an indicator to classify risk and link with insurance premium.
- With HealthGrade insurance will now have deeper understanding about their customers and help them live a healthier life.

Widening innovation to the insurance market

- 14 insurance companies are our partners working with Healthgrade based product & underwriting solutions.
- GradeHealthChain is designated as a supplier of innovative financial service from FSC.
- Gained reliability in insurance market by getting risk rate approval from FSS.

Transform existing methodologies to create a reasonable ecosystem

- GradeHealthChain make insurance premium applied reasonably by understanding individual's health status.
- By making 1 more dimension into the product methodology, improvement of health will be lead to low premium.
- All process will be done at once with the customers consent using digital information through the process.



Core IP & Awarded Status



Key intellectual property rights and award status

2020.09	[Patent 10-2152827] Health Grade evaluation system
2020.12	Designation of Innovative financial service ※ Health Grading service offering premiums discount system

Certification & award status

2021.12	Fintech prize - Ministry of Science and ICT commendation
2022.07	2022 Maekyung Fintech Awards Grand Prize

Deep-learning Based Future Aerobic Exercise

We provide a healthy and systematic aerobic exercise solution using AI technology.

Neumafit has invented the first high-precision aerobic exercise coaching system to enhance the endurance training. The professional sports market we are targeting is actively adopting data-driven training methods. And the global jogging market is estimated to be close to 200 million, indicating significant market potential. Therefore, we plan to first secure the reliability of our product by proactively entering the professional sports market (B2B), and then expand into the general enthusiast market (B2C).

Sales Amount				
Sales Amount	Domestic		Major clients	① N/A
	2021	2022		② N/A
	N/A	N/A		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		
Investment attraction history				
Date	Investor		Stage	Amount (\$)
2021.08	IPS ventures		Seed	100,000 \$
2023.05	Chungbuk Creative Ecnomy Innovation Center		Seed	100,000 \$

Company profiles

Established date	2021.07.26
CEO	Jinmo Kim
Employee No.	6
Business Category	Manufacturing
Technology Field	Healthcare(AI analysis)
Main Item	Wearable Device
Main Team members	JinMo Kim CEO - Published 5 SCI papers, filed 9 patents
	JaeHoon Kim Director - NAVER LABS Robotics HRI Product Development
	JaeYoon Choi Director - Published 2 SCI papers, filed 3 patents
Address	1, Gwanak-ro, Gwanak-gu, Seoul, Republic of Korea

Technology



Core technology of the product

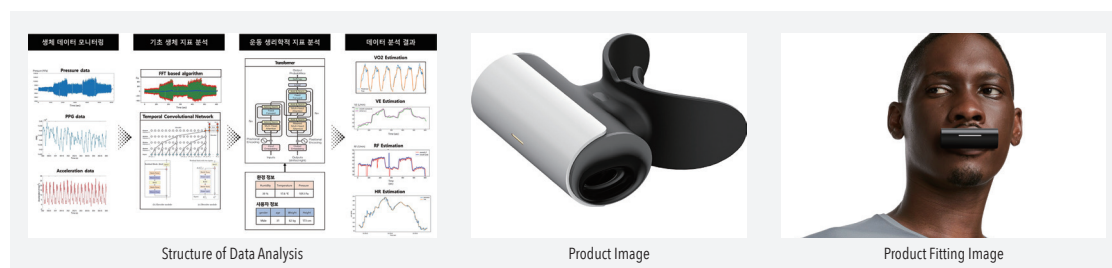
First, We developed hardware that can accurately collect biometric, environmental, and exercise information in a variety of environments and exercise states. Next, we developed an advanced deep learning algorithm to estimate exercise physiological metrics using the collected biometric data. Finally, by incorporating exercise physiology metrics into the guidelines provided by the American College of Sports Medicine (ACSM), we can provide optimal workout solutions in real-time.

Technology development progress

Currently, we have completed prototyping and are in the process of testing the device in a real-world training environment. In collaboration with the Kolon Marathon team, we are checking the durability of the hardware and the accuracy of the data analysis algorithms (heart rate analysis, VO2 analysis, posture analysis) and planning the optimal workout solution based on this.

Differentiation and innovation

Our core innovation lies in simplifying complex sensor systems with data estimation methods using deep learning to devise the first high-accuracy exercise coaching system. Ultimately, we can provide a advanced workout experience through real-time coaching programs and wearable device that can be conveniently worn during daily workouts.



Core IP & Awarded Status



Key intellectual property rights and award status

2021.09	[Patent] Breathing Assist Devices
2022.04	[Patent] Breath Analysis Devices and Methods
2023.03	[Patent] An electronic device for analyzing athletic performance, a method of operating such electronic device, and an athletic analysis system comprising the electronic device

Certification & award status

2022.11	[Award] 2022 Digital Innovation Grand Prize

Online veterinary consultation service based on medical records

Not sure if your pet is okay? Consult our vets online to take your next steps.

Dr.Tail operates a service where pet owners can receive online consultations to determine if their pets require veterinary care when they show unusual symptoms. This service aims to minimize unnecessary visits to vet clinics and provide a cost-effective alternative for pet owners.

Sales Amount				
Sales Amount	Domestic		Major clients	① N/A
	2021	2022		② N/A
	N/A	N/A		③ N/A
	Overseas			④ N/A
	2021	2022		
N/A	N/A			
Investment attraction history				
Date	Investor		Stage	Amount(\$)
2021.12	Bluepoint Partners		Seed	N/A



Dr.Tail

Company profiles

Established date	2020.05.01
CEO	Daehwa Rayer Lee
Employee No.	10
Business Category	Software
Technology Field	Cloud / AI
Main Item	Online veterinary consultation service
Main Team members	<p>Daehwa Rayer Lee CEO Ph.D. candidate in Technology Management Masters in Computer Engineering</p> <p>Esmond Cho Developer Experienced developer with 6 years of expertise in companies like Class 101, ably</p> <p>Jade Kim Marketer Experienced marketer with 3 years of experience in companies like wenedict</p>
Address	<p>Head Office 4F, 51, Hoam-ro, Buk-gu, Daegu</p> <p>Overseas Branch 1730 MINOR AVE STE 1050, SEATTLE, WA</p>

Technology



Teledvice

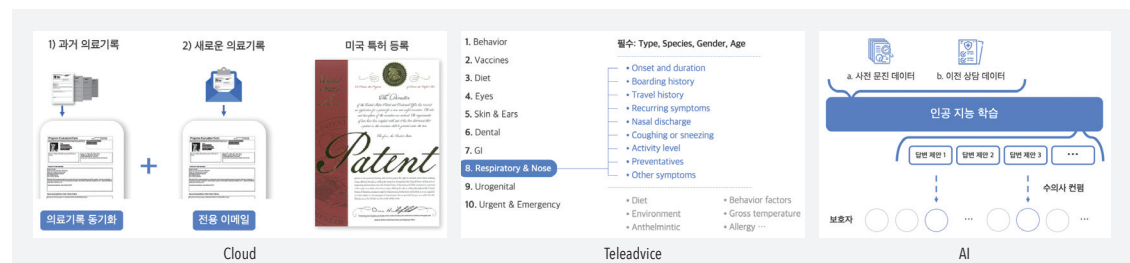
Pet owners can receive teledvice from online vets when their pets exhibit unusual symptoms, helping them determine if a visit to the vet clinic is necessary. This service allows them to reduce unnecessary clinic visits and save time and money.

Cloud

When pet owners seek advice from online vets, they can provide not only messages and photos but also access to their previous pet medical records. This enables faster and more accurate consultations, as vet have comprehensive information to base their advice on.

AI

- Since the launch of our service, with a cumulative user base of 260,000, we have analyzed the recurring and frequently asked types of questions.
- Leveraging this knowledge, we have developed an AI-powered virtual vet trained on previous consultation data through machine learning.
- As a result, this virtual vet handles approximately 30% of all consultations, providing efficient and accurate responses to questions.



Core IP & Awarded Status



Key intellectual property rights and award status

N/A	N/A

Certification & award status

N/A	N/A

EYELIKE, the world without avoidable blindness

LabSD, Inc. is a social enterprise with a mission for a world without barriers to quality healthcare services.

EYELIKE Platform provides screening services to the people in the marginalized areas while collecting their demographic and health information along with fundus images. The customers in the first phase are eye hospitals in resource limited conditions, international organizations, INGOs, or corporations for their CSR. The sales digital ophthalmoscope and monthly subscription of the platform will be the main source of revenue at this stage through collaborative activities with partner organizations, but auto-analysis of images through the AI-based CDSS will be added to the previous business model in the second phase of the business. LabSD, Inc. is targeting to provide at least 1 platform in 50,000 population, which is a number of vision centers recommended by the experts at WHO and IAPB in order to tame the tide of blindness model. The final stage of the business model will be about the big data for pharmaceutical companies, insurance companies, or academia.

Sales Amount

Sales Amount	Domestic		Major clients	① Samsung Electronics
	2021	2022		② Yonsei University Health System
	25,000 \$	300 \$		③ Good People International
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount(\$)
2017.06	SOPPOONG Ventures	Seed	18,000 \$

Company profiles

Established date	2017.04.20
CEO	Holden YoonSeung Kim
Employee No.	9
Business Category	Medical Device/Database
Technology Field	Bio/Health
Main Item	EYELIKE Platform

Holden YoonSeung Kim | CEO
Co-Founder & CSO @ Project BOM
affiliated with Yonsei University College of Medicine

Sangchul Yoon | Medical Advisor
Professor at Yonsei University College of Medicine
Ophthalmologist

Jaewon Kim | Team Leader (R&D Department)
Research Professor at Seoul National University Graduate School of Public Health

Address
Head Office | Nakseongdaero 2, #302, Kwanak-gu, Seoul, Republic of Korea
Overseas Branch | India/Vietnam

Technology



EYELIKE Platform

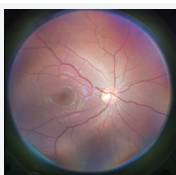
The EYELIKE Platform is an eco-system composed with: i) a portable, easy to use, digital ophthalmoscope attached to upcycled smartphone for the screening of retina, used by already existing health professionals in the community; ii) Artificial Intelligence based Clinical Decision Supporting System (CDSS); iii) Application along with a web-based dashboard for the collection, analysis, and visualization of patient information; and iv) Online Donation Module that attracts global donors by demonstrating the statistics of eye health hospitals in resource limited conditions for the patients' continuum of care. Once the righteous cycle is established, the platform can finally connect patient, service providers, and the donors together.

Development Process

- Digital Ophthalmoscope: Completed in 2019.
- Teleophthalmology System: Completed in 2021 & updated in 2023.
- AI-based CDSS: Will be conducting 2nd round of Machine Learning at the end of 2023 with 100,000 images.
- Online Donation Module: Will be completed in 2023 and piloted in 2024.
- KIOSK Type EYELIKE: Will be completed in 2025.

Competitive Aspects

LabSD's EYELIKE Digital ophthalmoscope is 1/50 price of the conventional fundus camera being used at the ophthalmology department of tertiary hospitals, and 1/20 to 1/10 price of other handheld devices. Moreover, it is the first platform that provides comprehensive system that is composed with hardware, AI-CDSS, health information system and donation module. It functions as an eco-system of organizations that are concerned with global eye health.



EYELIKE Sample Image



EYELIKE Digital Ophthalmoscope in use



KIOSK Type EYELIKE

Core IP & Awarded Status



Key intellectual property rights and award status

2020.12	Patent (ROK) / Portable Digital Ophthalmoscope/10-2020-0001738
2020.12	PCT / EYELIKE Digital Ophthalmoscope / KR2020 / 018092
2020.12	Trademark / EYELIKE / 4016554830000

Certification & award status

2023.06	World Vision Partnership Program Grand Award
2022.08	Vietnam Startup Wheel 2022 Top 5
2021.12	Global Corporation/Startup Collabo Program of Ministry of SMEs & Startups Grand Award

Maumlab which leads the innovation of mental care with healthy and professional services created with mental health professionals

We operates offline psychological counseling centers and provides solutions in 25 psychiatry clinics. We are planning to increase the number of offline psychological counseling centers to 10 within the next two years, and plans to establish an ERP that can make reservations, manage internal operations.

Sales Amount				
Sales Amount	Domestic		Major clients	① Naver
	2021	2022		② DB-hitek
	545,540 \$	613,529 \$		③ MBC
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		
Investment attraction history				
Date	Investor		Stage	Amount(\$)
N/A	N/A		N/A	N/A

Company profiles

Established date	2017.08.08
CEO	Yongwon Choi
Employee No.	8
Business Category	Counseling
Technology Field	Digital Healthcare
Main Item	metri
Yongwon Choi CEO	
-	
Main Team members	Kwangmin Lee Director psychiatrist
	Jungseok Lee Director psychiatrist
Address	802, Jongro 3-gil 34, Jongro-gu, Seoul, Republic of Korea

Technology



Patient Survey Management and EMR Interworking System

When the patient visits the psychiatrist, QR check-in automatically sends the test to be performed on the same day. If QR check-in is cumbersome, you can also send the examination directly from the desk to the patient. When the patient completes the examination, the results are calculated and immediately checked by the medical staff, which is entered in conjunction with the EMR.

Commercialization completed and EMR linkage completed within August

Currently, it is commercialized and is using the metri service in 25 hospitals, and EMR linkage with UbiCare's doctor will be completed within August. The reservation management system opened in July, allowing users to make reservations directly to the hospital, and the hospital can check the booked patients and check them in conjunction with the hospital schedule. In the fourth quarter of this year, we will develop a solution for the psychological counseling center and expand the service to a linked solution between the psychiatric hospital and the psychological counseling center.

Breaking down barriers to entry into mental care and promoting linkage between specialized institutions

There is no solution to measure a user's mental health status and give a guide to whether to visit a mental health medical department or a psychological counseling center. If a service that identifies this and connects it to a suitable expert is developed, it will reduce the entry barrier to mental care and innovatively reduce the time it takes to get professional help.

Core IP & Awarded Status



Key intellectual property rights and award status

2022.01	[PCT] ICT-based telemedicine service delivery methods, devices, and systems

Certification & award status

2021.12	Big-Start Solution Platform Bio-health Contest Grand award

Better Life with Smart Things

Improve the quality of life for anyone to actively manage health "Anytime, Anywhere" in 10 sec.

- With the multispectral imaging analysis system that links/integrates online and offline, we are launching beauty, pet, medical and home healthcare system in order according to BM from 2023, while expanding domestic device sales to a solution platform service provider.
- As a new growth engine, we are modularizing spectral imaging technology and preparing urinary disorder monitoring system.

Sales Amount				
Sales Amount	Domestic		Major clients	① J medical
	2021	2022		② Sema medical
	187,604 \$	273,071 \$		③ SPL Co., Ltd.
	Overseas			④ Wechair medical
	2021	2022		
	N/A	200,000 \$		
Investment attraction history				
Date	Investor		Stage	Amount (\$)
2020.04	Chungbuk Creative Economy Innovation Center		Seed	100,000 \$
2021.06	K-bio solution		Seed	50,000 \$



Company profiles

Established date	2016.11.03
CEO	Bosun kwon, Junwhan Lee
Employee No.	10
Business Category	Manufacturing / Medical Devices
Technology Field	Smart healthcare system
Main Item	Multispectral Imaging analysis system
Main Team members	<p>Bosun Kwon CEO WINNOVA Co., Ltd, Wooridull Huebrain Ltd. (the head of a research institute), Dankook University (Convergence Systems Engineering adjunct professor)</p> <p>Changsu Lee Director Seorin Medicare Co., Ltd., WINNOVA Co. Ltd. (Director of Quality Management)</p> <p>Junseok Park Researcher LoiBiz Co. Ltd. (Researcher)</p>
Address	#416, Gasan digital 2-ro 70, Geumcheon-gu, Seoul, Republic of Korea

Technology



Imaging sensor- and AI-based healthcare platform services

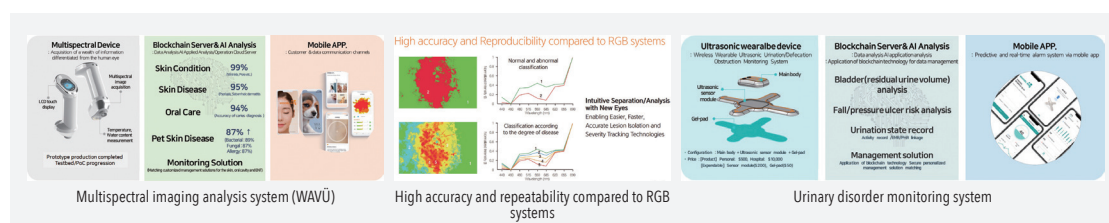
- Multispectral imaging analysis system (WAVU): Provides customized solutions centered on diagnosis and management of internal/external tissue in the integrated system combined with the device, mobile application and the cloud servers with analytical AI.
- Ultrasonic sensor-based wearable system for urinary disorder monitoring: provides alarms for real-time urination timing, bedsores and falls.

Test bed / POC in progress for the B2B markets & Entry into the Japanese market

- WAVU launching to pet and beauty healthcare system in B2B market through POC with various companies, while conducting clinical trials for monitoring severity and DTX of atopy, and preparing the solutions for home healthcare system with reliable contents for skin, oral and ENT.
- Urinary disorder monitoring system: Preparing simultaneous entry into domestic and foreign markets in 2024 with CB test and clinical trials.

Imaging sensing and analysis source technologies that can see the invisible to the human eyes

- Differentiation of WAVU has high reproducibility and accuracy of images, compared to RGB system based on human eyes and similar image interpretation capability as the expensive existing spectral system, despite lowering its price to less than 1/50.
- Superiority of urinary disorder monitoring system: monitors and alarms real-time residual urine volume over a day in any posture change.



Core IP & Awarded Status



Key intellectual property rights and award status

2020.01	Image Acquisition Device(PCT/KR2020/003289)
2020.11	Apparatus For Diagnosing Skin
2018.12	Wearable ultrasound measurement devices and measurement methods for monitoring residual urination in the bladder

Certification & award status

2021.11	1000 national representatives of innovative companies
2021.11	2021 Global Innovator Festa (GIF) 2nd prize (Daegu City)
2020.11	2020 Animal Health Hackathon Competition Grand Prize (KKU, Seoul CEIC)

Doremipa(Doctor, Return to My Patient)

An integrated healthcare platform that enables information sharing and medical treatment linkage.

- Sales related to MD PACS.
- Fees for Issuing of medical documents and certificates.
- Advertisement and marketing commissions.

Sales Amount

Sales Amount	Domestic		Major clients	① Samsung Seoul Hospital
	2021	2022		② Hallym University Medical Center
	526,402 \$	507,142 \$		③ Chuncheon Seongsim Hospital
	Overseas			④ Jincheon National Athletes' Village
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2021.05	Credit Guarantee Fund (SAFE investment)	Series Pre A	383,675 \$

Company profiles

Established date 2019.10.01

CEO Kiho Park

Employee No. 22

Business Category Healthcare

Technology Field Digital Healthcare

Main Item PACS, PHR App, PAD

Kiho Park | CEO
Mirabellsoft

Main Team members **Daesu Ryu | CTO**
Former Samsung SDS

Gyeongho Jeon | Director
Former Samsung SDS

Address 5, Teheran-ro 69-gil, Gangnam-gu, Seoul, Republic of Korea

Technology



Core technology of the product

Integrated healthcare platform based on sharing medical information between hospitals and doctor and patient using hDACS and PHR app, "Care for Me".

- hDACS(a medical information-sharing platform for medical staff).
- PHR app "Care for Me" (patient-specific model layout).

Technology development progress

- hDACS: development completed, Release.
- PHR app: development completed, Release.

Differentiation and innovation

The current medical system wasn't sufficient enough in properly managing hypertension / diabetes patients in Korea.

The absence of a medical information delivery system between doctors and patients is the biggest obstacle.

Many digital healthcare services (personal health record apps & devices, EMR systems) can't share medical information between patients and doctors, and even between medical institutions.

Leveraging this knowledge, we have developed an AI-powered virtual vet trained on previous consultation data through machine learning. As a result, this virtual vet handles approximately 30% of all consultations, providing efficient and accurate responses to questions.



Spread through our seminars



MD PACS



Our PHR app-MD PACS linkage

Core IP & Awarded Status



Key intellectual property rights and award status

2022.02	[Electric vehicle prescription] Patent registration (No. 10-2360234)
2021.07	[AI, App] Patent application (No. 10-2021-0095950)
2021.12	[Medical information standard] Patent application (No. 10-2020-0169388)

Certification & award status

2021.12	Grand Prize of SMEs 'Dae-Star Solver Platform Task'
2022.11	Commendation from the Director for Merit for Commercialization of Health and Medical Technology

Bottom Up Data, AI Engineered

Leads innovation in healthcare services with bio-signal big data and AI Technology.

1. Expanding Bio-signal and Data Sources, and Diversifying AI Models to Expand Applications.
 - Completed development of a solution and a mobile app for bio-signal data collection and monitoring.
 - In the process of developing and obtaining an approval for a clinical decision support system (CDSS) for emergency rooms and intensive care units.
2. Expanding product distribution targeting large-scale hospitals and medical centers.

Sales Amount

Sales Amount	Domestic		Major clients	① SEVERANCE Hospital
	2021	2022		② Kangwon National University Hospital
	121,740\$	276,113\$		③ Ajou University Hospital
	Overseas			④ Korea University Guro Hospital
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount(\$)
2021.05	MINDS AND COMPANY	Seed	85,000\$

Company profiles

Established date	2018.11.20
CEO	DuKyong Yoon, SangHyun Jun
Employee No.	8
Business Category	Medical device
Technology Field	Medical information, SW development
Main Item	AI SaMD, Bio-signal data collecting

DuKyong Yoon | co-CEO

Assistant Professor, Biomedical Systems Informatics, Yonsei University College of Medicine diversity

Main Team members

SangHyun Jun | co-CEO

- 20 years Digital Innovation consulting
- CEO of MINDS AND COMPANY

DucBin Im | CTO

- Former Head of Development at MindsLab
- Head of enterprise software development

Address

2621, Nambusunhwan-ro, Gangnam-gu, Seoul, Republic of Korea

Technology



Main Service Item

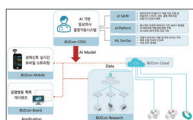
- BUD.on Research: Integrated collection and storage system for numeric and waveform bio-signal big data that traditional CDWs cannot provide.
- BUD.on Mobile: Mobile application for a remote monitoring of bio-signal data via real-time streaming technology.
- BUD.on CDSS: Analyze and predict clinical events such as respiratory failure or delirium for patients in ICU using bio-signal data and AI technologies.
- Automatic bed allocation solution (ABAS): Optimization of bed allocation through customization tailored to the current situation of each hospital.

Technological Development Progress

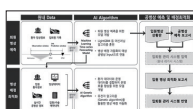
- BUD.on Research: Completed productization of data collection and analysis equipment, distributed to 7 university hospitals in over 700 beds.
- BUD.on Mobile: Completed productization of real-time monitoring mobile application.
- BUD.on CDSS: Completed development, in the process of pivotal clinical trial to obtain its marketing approval by regulatory authorities.
- Automatic bed allocation solution(ABAS): Completed distribution of the automatic bed allocating solution to Gangwon National University Hospital. in 2022

Distinctiveness and Innovation

- Biometric Big Data Unlocks New Possibilities in Medical AI.
- Comprehensive Solution for Biometric Data Collection, Monitoring, and Analysis..
- Optimal Team to Solve Hospital's Challenges with AI technology: Collaboration of Medical AI lab in Yonsei Univ., MNC as an AI solution holder for enterprises, and the researchers from hospitals using the BUD-ON products.



BUD-on AI Solution Summary



Automatic bed allocation solution(ABAS)

Core IP & Awarded Status



Key intellectual property rights and award status

2018.10	[Patent] (No. 10-1907580) Methods and Devices for Collecting Patient's Biosignal Data
2022.10	[Medical Software Copyright Registration] (No. C-2022-041799) BUD-ON Mobie.
2023.04	[Patent application] (10-2023-0022190) Automated bed allocation solution(ABAS)

Certification & award status

2021.12	MSS 'BIG3 Bio-healthcare sector' 1st place
2022.10	7th Annual 2022 Digital Health Hackathon AI Track, 1st place

Predict and Prevent Alzheimer's Disease

Alzheimer's Disease is one of the most prevalent neurodegenerative diseases causing insufferable pain to patients and their families. At BeauBrain Healthcare, we are revolutionizing the current treatment paradigm from "post-diagnosis treatment" to "pre-emptive intervention".

Dementia Care Centers, Health Examination Centers, medical professionals in clinics, and dementia patients are the target users for the BeauBrain Healthcare solution. By securing business partners, we plan to establish references to obtain US-FDA and CE certifications for the domestic market.

Sales Amount

Sales Amount	Domestic		Major clients	① Seoul Metropolitan Government
	2021	2022		② Seoul Metropolitan Center for Dementia
	N/A	N/A		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2022.07	InfoBank iAccel Corp.	Angel	N/A
2022.08	SAMSUNG LIFE PUBLIC WELFARE	Angel	N/A
2022.12	BeauBrainAngel Individual Investment Association	Angel	N/A
2022.12	SAMSUNG LIFE PUBLIC WELFARE	Angel	N/A
2023.04	N/A	Seed	



Company profiles

Established date	2022.02.17
CEO	SangWon Seo, JaeHak Kim
Employee No.	12
Business Category	Development and supply of applied software
Technology Field	AI-based medical Industry
Main Item	Digitalized Cognitive Test, Medical AI
Main Team members	SangWon Seo CEO Neurologist, Samsung Medical Center President's Commendation, The Alzheimer's Day 2021 Yonsei University
	JaeHak Kim CEO Head of Innovation Design Center, Asan Medical Center Deloitte Consulting MBA, MIT Sloan School Seoul National University
	DukRyul Na CMO Neurologist, Samsung Medical Center Prime Minister's Commendation Seoul National University
	Address 2F, 8, Seolleung-ro 125-gil, Gangnam-gu, Seoul, Republic of Korea

Technology



A solution to predict and prevent Alzheimer's disease

1. Digitalized Cognitive Test.
 - BeauBrain CST: A Digital Cognitive Test Solution that replaces traditional paper-based Cognitive Test.
2. AI-based Image Analysis Solution.
 - BeauBrain Morph 2D / PET: Solution predicts ATN biomarkers, prognosis, AD risk Score, and brain age, analyzing 2D Brain MRI and Amyloid PET-CT images.
3. Prevention and Treatment.
 - BeauBrain Trainer: Smartphone-based digital therapeutics for enhancing cognitive function.

Preparing for medical device approval from the Ministry of Food and Drug Safety

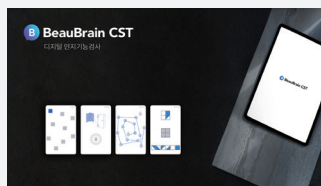
- BeauBrain CST: We have secured the most important reference standards and completed clinical utility validation. We are currently in the final stage of data construction to expand to the prediction of amyloid and tau positivity as well as prognosis prediction.
- BeauBrain Morph: Product development has been completed, and we are in the process of preparing for medical device approval from the Ministry of Food and Drug Safety.

Global competitiveness & Personal competencies

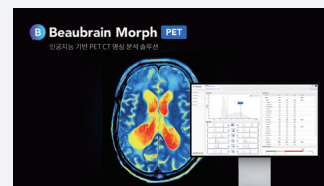
- Addressing clinical needs unmet by traditional competitors Empowering and enabling even general practitioners to diagnose.
- The global competitiveness of our solution comes from 'High Quality Data'.
- Strong leadership team with vast expertise in clinical neurology, business acumen and engineering capabilities.



Product Education



Digitalized Cognitive Test
BeauBrain CST



AI-based PET CT Image Analysis Solution
BeauBrain Morph PET

Core IP & Awarded Status



Key intellectual property rights and award status

2022.11	(KR 10-2466479) Tau protein accumulation prediction apparatus using machine learning and tau protein accumulation prediction method using the same
2022.06	(KR 10-2414974) Apparatus for diagnosis Alzheimer's disease using PET-CT image and method for operating the same
2020.02	(KR 10-2076091) The method and apparatus for Predicting positive rate of amyloid pet test of amnesic mild cognitive impairment patient

Certification & award status

2022.10	Korea Advanced Institute of Science and Technology (KAIST) '2nd Hongneung InnoPolis Campus GRaND-K Startup School Competition' Excellent Prize in the Early Startup Division
2022.06	Winner of the Biohealth Division at the MoneyToday 2022 4IR Awards

Eyes don't lie

AI based eye-tracking technology, no need extra eye trackers.

- Currently(2023), more than 100k monthly active users use SeeSo eye-tracking SDK. Most of big education companies in Korea are our clients and we also have clients from healthcare and UI / UX companies.
- VisualCamp, we provide eye-tracking software as a SDK by our website so that potential clients are easy to test and apply eye-tracking technology to their own services. We aim both B2B and B2C business, for B2B we focus on providing SDK to clients and for B2C we launched our new eye-tracking app service to expand our business.

Sales Amount				
Sales Amount	Domestic		Major clients	① Kyowon
	2021	2022		② iscream-edu
	220,000 \$	1,400,000 \$		③ Visang
	Overseas			④ Mille
	2021	2022		
	N/A	15,000 \$		
Investment attraction history				
Date	Investor		Stage	Amount (\$)
2021.10	CKD-BS Start-Up		Series A	N/A
2020	Korea Asset		Series A	N/A
2019	Shinhan		Series A	N/A
2018	Capstone		Series A	N/A



Company profiles

Established date	2014.11.19
CEO	YunChan Suk
Employee No.	22
Business Category	Software development
Technology Field	AI
Main Item	Eye-tracking software
Main Team members	YunChan Suk CEO Listed on KOSDAQ JaeSeung Park COO Listed on KOSDAQ Co-founder of VisualCamp SeungWoo Lee CMO Tsinghua Univ
Address	Head Office #401, 32, Maehun-ro 16, Seocho-gu, Seoul, Republic of Korea Overseas Branch 3003 N 1st St, Suite# 221, San Jose, CA 95134, USA

Technology



AI based eye-tracking software, SeeSo

SeeSo is an eye-tracking solution that provides deep insights into how users interact with apps and websites. Requiring no hardware, SeeSo allows users to scroll, click, and take control of their mobile devices and computers with just their eyes, providing new opportunities for the education and health industries. At the same time, businesses collect useful gaze data including where users are looking and overall user activity. SeeSo is a GLOMO Award Winner at MWC in Barcelona and won 23/22 CES innovative awards.

SeeSo SDK (Software Development Kit) for developers

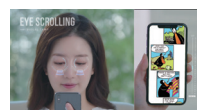
SeeSo is an AI-based eye tracking software development kit (SDK). Clients do not need to purchase expensive hardware to track user data, and data is provided in real-time. Since no hardware is required, eye tracking can be done in "natural" environments for the end users instead of lab settings. With VisualCamp's technology, SeeSo maintains the highest levels of accuracy that are being adopted for the digital therapeutics industry for autism, ADHD, dementia, infant's vision testing and Parkinson's disease.

Accessibility, Price, and Scalability

- [Accessibility] SeeSo innovates by making eye tracking more accessible, being mobile optimized, and providing eye tracking in "natural" environments. SeeSo is a game changer by being the first eye tracking software solution that can utilize the front facing camera of the widest variety of devices (ex. smartphones, tablets, computers) at the highest levels of accuracy without using extra hardware. Users can use SeeSo anywhere and anytime with their mobile or PC.
 - [Price] Traditionally, eye tracking requires users to purchase a hardware device to preform eye tracking. This hardware can cost upwards of \$250, not including the service/subscription fees. It is not affordable price for normal users and this is why the previous eye-tracking main users were researchers in University/UI/UX researchers. But now SeeSo provides SaaS based software license and users they don't have to purchase expensive eye trackers. With SeeSo, eye-tracking technology can be provided to everyone with reasonable price.
 - [Scalability] SeeSo can be easily integrated with any app or device as it is a software development kit (SDK) and performed comfortably on any device at any time. It supports not only mobile devices but also PC webcams.
- Most of other competitors, they just support few platforms but SeeSo supports iOS, Android, Web, Windows, and much more. Its use cases are also wide can be used to online education, UI/UX, and healthcare and those markets already has been proved in South Korea with commercialized use cases.



UI / UX analysis



Scrolling with eye-tracking



Eye-tracking data / Heatmap

Core IP & Awarded Status



Key intellectual property rights and award status

2023.04	(No. 11625754) Method For Providing Text-Reading Based Reward Advertisement Service And User Terminal For Executing The Same
2022.09	(No. 11436866) System And Method For Eye Tracking
2022.02	(No. 11250242) Eye Tracking Method And User Terminal Performing Same

Certification & award status

2023	CES Innovation Awards
2022	CES Innovation Awards
2021	MWC GLOMO Awards

Sevenpointone Inc.

https://sevenptone.com

Digital healthcare company for the beautiful second half of life of the elderly and their families in the aging era

Digital Healthcare company for aging world.

- Alzwin: B2B: Solutions to medical institutions, insurance companies, B2G: Solution to local government health institutions, B2C: Personal health care service.
- Sentents: B2B: Solutions to partners, B2G: Provision of services to local residents and delivery to health institutions, B2C: License operation.

Sales Amount

Sales Amount	Domestic		Major clients
	2021	2022	
	67,000 \$	300,000 \$	
	Overseas		
	2021	2022	
	N/A	N/A	
			① Lina Life Insurance
			② Comprehensive Support Center for the Elderly Living Alone
			③ Suseongjungdong Hospital
			④ Nowon-gu Dementia Relief Center

Investment attraction history

Date	Investor	Stage	Amount (\$)
2020.12	Naver Co., Ltd.	SEED	306,000 \$
2020.12	Gyeongnam Youth Impact Investment Fund	SEED	76,500 \$
2021.04	CNTech No. 5 Private Investment Association	SEED	76,500 \$
2021.04	IBK Changgong Bisang 1st Investment Association	SEED	84,000 \$



Company profiles

Established date	2017.08.09
CEO	Hyeonjun Lee
Employee No.	21
Business Category	Senior care service
Technology Field	AI, VR
Main Item	Alzwin, Sentents
Main Team members	<p>Hyeonjun Lee CEO Former Vice President of Global Finance at Memebox</p> <p>Juyoung Yoo CTO Worked at NHN Games, 17 years of development experience</p> <p>Insu Cho Development team leader Worked at Fronti Co., Ltd., 18 years of development experience</p>
Address	301, Seoul Bio Community Center, 18, Jongam-ro, Seongbuk-gu, Seoul, Republic of Korea

Technology



Introduction of services and items

- Alzwin: Dementia screening solution that can be used for dementia screening in a short time of about 2 minutes through the Internet or phone without installation.
- Sentents: A solution that stimulates long-term memory and provides cognitive improvement effects by showing the elderly people images of the past using VR devices.

Development progress and commercialization status

- Development status: Alzwin has been released based on Korean and in the process of commercialization, and the prototype of the English version has been completed.
- Future Plans: API, Web, and App development, Alzwin Center integrating Alzwin AI Call. Chinese prototype is under development. Sentents-exclusive VR contents and commercialization.

Differentiation and innovation of the solution

- Alzwin: Convenience: the way you speak, Rapidity: Test completed within 3 minutes, Reliability: Diagnosis method developed and tested at Seoul National University Hospital, Accuracy: Accuracy close to MMSE, Experts: Developed by the top authority on dementia
 - Sentents: A solution that the elderly can enjoy while using recall therapy through VR, Leveraging this knowledge, we have developed an AI-powered virtual vet trained on previous consultation data through machine learning.
- As a result, this virtual vet handles approximately 30% of all consultations, providing efficient and accurate responses to questions.



Core IP & Awarded Status



Key intellectual property rights and award status

2019.08	[Patent] (No. 1014375690000) Method for diagnosing dementia based on verbal fluency and apparatus therefor (Exclusive license for patent)
2022.03	[Patent] (No. 10-2370376) Dementia screening method and server based on voice question and answer using artificial intelligence call
2021.12	[Patent] (No. 10-2122021) Cognitive improvement device and method using virtual reality

Certification & award status

2022.11	CES 2023 Innovation Award
2022.10	2022 DFA Design for Asia Award
2020.12	AI Test Bed Korea Industrial Intelligence Contest Grand Prize

Stress solution

<https://stresssolution.io/company>

"My Sound Resembling Me: Healing Beat" A unique sound that exists only in the world "I will create a stress-free world with Healing Beat"

- Stress Solution Co., Ltd. is a company that develops sound based on heart rate and ECG waveforms. It has grown into the best sound marketing company in Korea based on safe and high-quality sound and space sound application technology.
- Through the development of customer-friendly sound, we provide solutions that increase customer brand value, from stress measurement to services that help relieve stress, improve sleep quality, and improve concentration.

Sales Amount

Sales Amount	Domestic		Major clients	① KT Corporation
	2021	2022		② Hanwha Life Insurance Co., Ltd
	N/A	137,059.72 \$		③ Samsung Electronics (Health)
	Overseas			④ Granthin Hospital (China)
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount(\$)
2023.05	N/A	Seed	153,168.53 \$



Company profiles

Established date	2022.01.20
CEO	IkRyeol Bae
Employee No.	17
Business Category	Information and Communication Technology (ICT) / Software Development and Supply Industry.
Technology Field	Biohealth
Main Item	Healing Beat
Main Team members	IkRyul Bae CEO · Director of Pharmaceutical Research, Korea Research Foundation · Specialist of the Institutional Bioethics
	JooChan Bae Director · Adjunct Professor of Mechanical Engineering, Yonsei University · Director of the Korea Huiba Research Center
	MoonSu Lee principal · YouTube 'Yellow Mix Tape' co-operated (300,000 people) · Development and Management of Sanho INT Security S/W · Researcher in the field of medicine at the Korea Research Foundation
	Headquarters 904, 119 Jungang-ro, Jung-gu, Daejeon, South Korea (Sunhwa-dong, Daejeon Techno Park Distation)
Address	

Technology



Healing Beat Overview

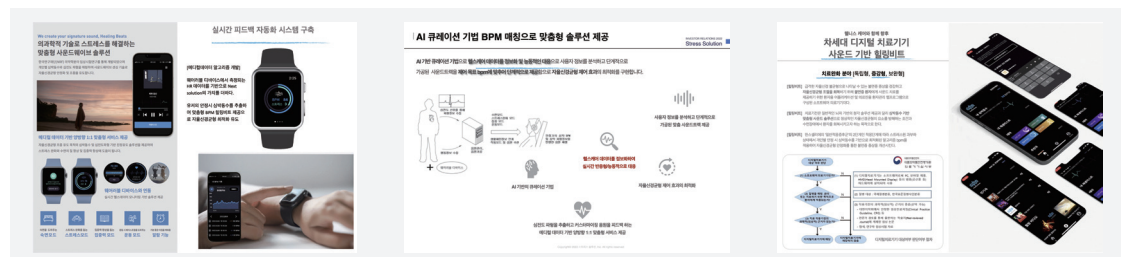
Healing Beat is an AI-based digital self-healthcare solution. It induces autonomic nervous system balance control through real-time, customized auditory stimulation using simulated heart rate and waveform. It integrates with wearable devices through an APP and API solution. R&D is conducted using AI technology and curation techniques for data analysis. Healing Beat offers five service modes: Stress Mode for relaxation, Sleep Mode for improved sleep quality, Focus Mode for enhanced concentration, Exercise Mode for better exercise effectiveness, and Safety Mode for activity detection and safety.

Progress of Healing Beat Technology Development

- Status of intellectual property related to proprietary technology: Among the total of 9 intellectual property holdings, 3 are patent applications related to stress solutions, and among the 3 registered patents, 2 are registered patents related to stress solutions. Additionally, 3 patent applications were filed by the representative as a former and current professor at the affiliated university.
- Status of research papers related to proprietary technology: The representative continues to conduct research on related technologies as a research director and is making efforts to protect the core technology through publications in SCI papers.

Differentiation and Innovation

Healing Beat: Personalized 1:1 service using user's ECG waveform and customized audio feedback. Scientific approach with medical data and AI analysis. Innovative auditory solution based on wearable device data. Next-gen sound-based digital therapeutic device. Wellness value creation.



Core IP & Awarded Status



Key intellectual property rights and award status

Registration	Wearable Device Interworking Stress Relief System
Registration	Driver stress relief system using sound sources corresponding to ECG waveforms when stabilized
Application PCT	Driver Stress Monitoring and Mitigation System

Certification & award status

2022	Music Plus Start-up Competition - Excellence Award (2nd place) / Chengdu City, China
2021	Uni-Tec Grand Prize for University Laboratory Start-up (1st place) / Minister of Science and ICT Award
2020	Start-up is a trend Demo Day - Grand Prize (1st place) Sejong Regional Small and Medium Venture Business Administration Award

Redefine Aging

Silvia builds a mobile-based cognitive health management solution.

- B2G: Subscription model for cognitive impairment prevention management solution for the elderly.
- B2B2C: Providing cognitive disorder prevention-treatment management solutions to institutional-led subscribers.
- B2H: Prescribing code for mild cognitive impairment treatment for hospital patients.
- B2C: Monthly membership for Silvia app contents.

Sales Amount

Sales Amount	Domestic		Major clients	① Public Health center in Gwangju Seo-gu
	2021	2022		② Hyundai Marine & Fire Insurance
	78,524 \$	31,959 \$		③ Shinhan Card
	Overseas			④ AAI Healthcare
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2021.03	Klim Ventures	Seed	N/A
2022.09	D3 Jubilee Partners	Pre-A	N/A
2022.09	Klim Ventures	Pre-A	N/A
2022.10	DSC Investment	Pre-A	N/A
2022.10	KB Investment	Pre-A	N/A



Company profiles

Established date	2020. 07. 24
CEO	MyungJin Ko
Employee No.	22
Business Category	Software development
Technology Field	AI, Digital Healthcare
Main Item	cognitive health management application
Main Team members	Myungjin Ko CEO / Founder - B.A. in Economics, Princeton University - M.D candidate, Seoul National University Jaemin Cheun AI Engineer / Co-Founder - B.A. & M.S. in HARVARD UNIVERSITY AI Researcher in Tencent - Software Engineer Intern in GOOGLE, RAKUTEN,
Address	Head Office 6F, 20-7, Yeongdong-daero 85-gil, Gangnam-gu, Seoul, Republic of Korea Overseas Branch 1755 O'FARRELL STREET APT 1611 SAN FRANCISCO CA 94115 United States

Technology



Silvia Health provides AI-based remote cognitive health monitoring solution for patients with neurodegenerative diseases

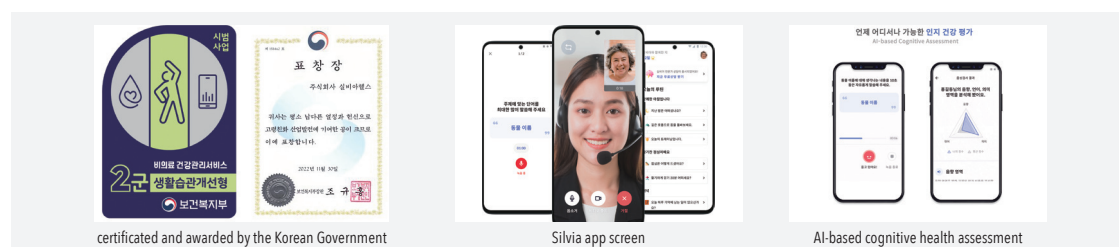
- Owning a cognitive health management system for early screening and prevention of dementia, and an all-in-one cognitive health management solution that identifies the subject's cognitive health status and provides customized prevention and expert management programs.
- The Silvia solution consists of "early screening of AI-based dementia," "academic research-based cognitive health intervention prevention/training/treatment system," and "direct management through remote counseling".

Technology development plan by product

In addition to the commercially available Silvia (Silvia Wellness) app, Silvia is developing products such as an app for guardians of dementia patients (Silvia Caregivers), a cognitive/physical assessment app for kiosk-type device (Silvia Arcade), a digital therapeutics for patients with mild cognitive impairment(MCI) (Silvia Rx), and a digital biomarker for dementia (Silvia VA).

App-based dementia identification technology using differentiated technology centered on AI

- Other companies deal with one-dimensional data such as accuracy and reaction speed, Silvia analyzes not only quantitative performance but also touch pressure, drag data and qualitative data to detect cognitive impairment through multiple digital biomarkers.
- Other companies simply have the technology to predict dementia, Silvia has developed a model that classifies not only the normal-MCI classification but also the detailed items of MCI (aMCI, nonaMCI).



Core IP & Awarded Status



Key intellectual property rights and award status

2022.11	Methods and devices for providing information related to cognitive impairment patent registration (No. 10-2472910, Korea)
2022.08	Cognitive state information providing method and electronic device patent approved (No. 10-2022-0098150, Korea)
2021.10	Own Silvia Trademark (registration No. 40-1784739, Korea)

Certification & award status

2022.11	Awarded by the Korean Government (Ministry of Health and Welfare)
2021.12	2021 DATA-Growth 2 nd award (K-DATA)
2021.08	2021 Chung Ju-yung Startup Competition 2nd award (Asan nanum foundation)

Atommerce Inc.

www.atommerce.com

Atommerce Inc. is on a mission to help a billion people find happiness.

Atommerce would like to popularize expert mental health care service via information technology.

Mindcafe was established in 2019 with a paid service for an in-depth consultation with experts and a significant profit model. Currently, we are innovating the user experience by developing artificial intelligence and Digital therapy (DTx) based on the largest accumulated mental health de-identification data in Korea.

Sales Amount				
Sales Amount	Domestic		Major clients	① NAVER
	2021	2022		② NHN
	2,000,000 \$	3,900,000 \$		③ LG Chem
	Overseas			④ HD Hyundai
	2021	2022		
	N/A	N/A		
Investment attraction history				
Date	Investor		Stage	Amount (\$)
2023.02	Lotte Healthcare...	etc	Series B	4,000,000
2022.02	Hashed Ventures...	etc	Series B	20,000,000
2020.01	GC Care...	etc	Series A	7,000,000



Company profiles

Established date	2015.10.10
CEO	KyuTae Kim
Employee No.	92
Business Category	Services, Software Development
Technology Field	Psychologh Counseling, Digital Healthcare
Main Item	Therapy Platform 'Mindcafe'
Main Team members	KyuTae Kim CEO Founder and CEO of Atommerce Inc. SungWon Song Vice President SeungWon Lee Head of Corporate annex Research Institute
Address	4F, 169, Samsung-dong, Gangnam-gu, Seoul, Republic of Korea

Technology



Korea No.1 Mental health platform, MINDCAFE

Mindcafe is a mental health platform for up to 1.5 million users in Korea that provides psychological tests, psychological counseling, coaching, and mental health community functions non-face-to-face. The advantage is that it can treat symptoms such as depression, anxiety disorders, and insomnia through online psychological counseling without restrictions on time and place through experts verified in the Mindcafe App.

Artificial intelligence Chatbot "RONI"

Mindcafe has launched an artificial intelligence chatbot "RONI" specialized in psychotherapy to accurately understand the stories and symptoms in its platform community and write support or support comments accordingly. Atommerce is advancing this and developing it into an artificial intelligence capable of psychological counseling and intends to expand it as a digital treatment.

Factor of Innovation

- (Anonymous) Users of Mindcafe can receive psychological tests and expert counseling anonymously, and share their experiences, symptoms, etc. with other anonymous users within the community. Users get a sense of psychological stability and respect from this anonymity.
- (Non-face-to-face) Users of Mindcafe can receive psychological tests and professional counseling without restrictions on time and place.



Mental Healthcare Platform MINDCAFE

Core IP & Awarded Status



Key intellectual property rights and award status

N/A	N/A

Certification & award status

N/A	N/A

AI.ble Therapeutics

https://www.aible.co.kr/index_eng.html

Provide the best digital solution for neuropsychiatric disorders

With Spick, we aim to help you live free from the fear of dementia.

We're developing different customers, including hospitals(B2B), senior care centers(B2B2C), etc. For B2B, Spick is on track to be certified as a medical device by KFDA. A confirmatory clinical trial will be held this summer, and we expect to complete the process within this year. For B2B2C, we're collaborating with DAEKYO, doing pilot service in its senior daycare centers three times. We're also working with Show Chwan Memorial Hospital in Taiwan to collect speech data in Chinese. With this, we aim to prove our algorithm's language independency.

Sales Amount

Sales Amount	Domestic		Major clients
	2021	2022	
	N/A	7,600 \$	
	Overseas		
	2021	2022	
	N/A	N/A	
			① Daekyo Newif
			② Catholic Univ. Central Medical Center
			③ DB Insurance Co., Ltd.
			④ Seoul National University Hospital

Investment attraction history

Date	Investor	Stage	Amount (\$)
2021.05	Alphain Investments	Seed	380,000 \$
2022.12	Changjo Investment Advisory	Seed	76,000 \$
2022.12	Private Investor	Seed	150,000 \$



Company profiles

Established date	2021.02.04
CEO	HyungJun Kim
Employee No.	10
Business Category	ICT
Technology Field	Digital Healthcare
Main Item	Dementia screening platform 'Spick'
Main Team members	HyungJun Kim CEO Business Development expert (22 yrs) SK Networks (former)
	WooJun Kim CSO Neurologist in Seoul St. Mary's Hospital M.D., Ph.D. in Neuroscience
	HoSang Cheon CXO UI-UX expert (20 yrs) LG Electronics Research Center (former)
Address	#1104, 18, Gukhoe-daero 70-gil, Yeongdeungpo-gu, Seoul

Technology



Introducing 'Spick'

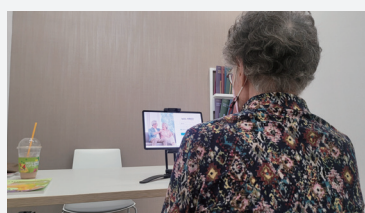
'Spick' is a mobile dementia diagnosis service platform that analyzes voice data with an AI algorithm and screens mild cognitive impairment & early-stage dementia. We developed 11 speech tasks that effectively elicit distinctive speech features of dementia patients. For 20 months, with 11 hospitals, we collected about 10,000 speech data from 1,300 subjects. Based on this big data, we've achieved an accuracy of 86.8% in screening for dementia.

Upgrading 'Spick'

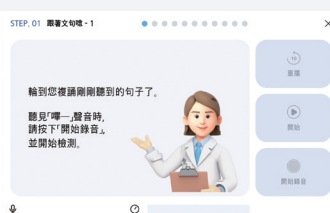
Spick platform is completed, and now we're preparing for commercialization. We're targeting different customers, and Spick is adjustable to their needs. For hospitals, Spick as a medical device will be provided. For the rest, Spick as a healthcare platform will meet customers in a more accessible way. To prove its effectiveness, we've got four domestic patent registered, Good Manufacturing Practice and Good Software certifications. We plan to add a new bio-marker, drawing, to diversify the tasks so that the users can use the service more often.

What's making 'Spick' special

Traditionally, analyzing speech to screen for dementia was about 'WHAT they speak.' On the other hand, we focus on 'HOW they speak.' It can detect dementia earlier, even before the symptoms become apparent. Based on this acoustic analysis, Spick's algorithm is language-independent. We don't need to build a new algorithm for a new language, and it's advantageous for rapid overseas expansion. Besides, we use image analysis, which is cost and time effective. And it allows the user to see the result only in 30 seconds.



A senior using Spick in DAEEKYO Newif daycare center



Spick Chinese version



Four domestic patents registered

Core IP & Awarded Status



Key intellectual property rights and award status

2021.07	[Domestic] Method and Apparatus for Determining a Degree of Dementia of an User (based on voice analysis)
2023.03	[Domestic] Method and Apparatus for Determining a Degree of Dementia of an User (based on drawing analysis)
2023.05	[Domestic] Method and Apparatus for Providing Cognitive-Motor Training To User

Certification & award status

2021.04	Top 6 finalists of D. camp startup demo day
2021.04	Won the first prize in the '2021 Idea Competition for Innovative ICT Products and Services' hosted by the Ministry of Science and Technology.

Bridging Humans and Data for a Healthier Tomorrow

We are pioneering advancements in digital health to create a more connected, efficient, and patient-centered healthcare ecosystem.

- HD Junction introduced 'truedoc,' the Cloud-based EMR, to Naver Healthcare Lab and developed specialized market entry strategies for each medical department.
- In March 2022, HD Junction launched 'truedoc mental' for psychiatric departments, providing specialized functions for psychiatry, such as scale test.
- To expand its business model, HD Junction is actively pursuing various R&D and commercialization projects funded by the Korean government.

Sales Amount				
Sales Amount	Domestic		Major clients	① NAVER CARE
	2021	2022		② +40 Psychiatry and Mental Health Clinic
	N/A	50,000 \$		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2022.09	Mirae Asset Capital, TONY Investment, SJ Investment Partners	Series B	7,000,000 \$
2022.01	NAVER Corp.	Bridge	2,300,000 \$
2020.09	NAVER Corp., Synergy IB, Pyeonghwa IS	Pre-A	1,615,000 \$

Company profiles

Established date	2017.11.21
CEO	DongJin Chang
Employee No.	37
Business Category	S/W Development, Research
Technology Field	Digital Healthcare Platform
Main Item	Cloud Based Electronic Medical Record
DongJin Chang CEO	Former Planning Director, Big Data Center, Catholic Central Medical Center
Main Team members	DongHwan Kim CTO Worked at Samsung SDS and Line Plus
	SeongHoon Jin COO Worked at Allergan Korea and Abbvie Korea
Address	2F, 22, Banpo-daero, Seocho-gu, Seoul, Republic of Korea

Technology



truedoc® - A cloud EMR service connecting the difference digital healthcare services

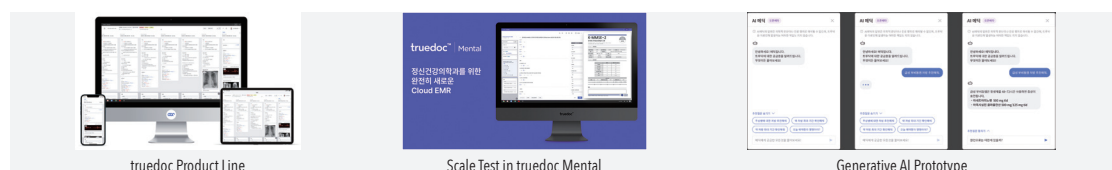
- truedoc® is a cloud-based EMR service that provides seamless integration of all healthcare services within a clinical setting.
- truedoc® facilitates data acquisition from a range of healthcare services via a single platform, enhancing service functionality and interoperability.
- HD Junction has launched "truedoc®Mental," a service specialized in psychiatry. This targets a high-demand area and is a key part of their ongoing commercialization efforts.

Current progress in technology development and commercialization for each products

- truedoc® is enhancing interoperability in operations at Naver Clinic and the Healthcare Lab.
- Launched on March 19, 2022, truedoc®Mental is a dedicated cloud-based EMR for psychiatry. It features a pre-test function specifically for psychiatric use and is currently deployed in 14 medical institutions at the clinic level, based on pre-bookings. The number of institutions seeking this service is continually growing.
- HD Junction is advancing the development of generative AI technology for medical applications, fine-tuned with ultra-large-scale AI technology to enhance the efficient use of EMR by medical staff and improve medical environments. This includes services such as patient consultation chatbots, analysis services for pre-scale tests in psychiatry, and services to summarize legacy patient data.

Specialized EMR functions for the psychiatry

HD Junction has refined over 70 types of scale test models to enhance psychiatric patient assessments through a web-based interface. The results are immediately accessible through EMR integration, improving interoperability. Patients can complete these tests prior to consultations, which are managed within the EMR systems, thereby improving workflow efficiency. The scale test service is user-friendly, allowing patients to complete it via text. Additionally, the development of medical AI technology is underway to further enhance the analysis of these tests



Core IP & Awarded Status



Key intellectual property rights and award status

2022.07	[Japanese Patent Registration] Medical Information Query And Input System, Medical Information Query And Input Method, And Program For Performing Same(7114812)
2021.11	[PCT]A System, A Device And A Method For Entering Patient's Answers For Medical Questionnaire(PCT/KR2021/018093)
2021.11	[PCT]A System, A Device And A Method Of Medical Questionnaire For A Patient[PCT/KR2021/017174]

Certification & award status

2023.06	Supporting Project for Promising SaaS Company (NIPA)
2022.04 2023.03	Cloud EMR Distribution Expansion Project (2022,2023) / (NIPA)
2022.06	R&D grant from MOTIE: ① Development of DTx Platform ② Development of Mydata Project between Cross-Industry

The best technology for a healthy life

Personalized digital care with Digital Biomarker of Neuromuscular Disorders.

EXOSYSTEMS collaborates with pharmaceutical company and clinical partners for neuro-muscular function assessment. Our short-term goal is to commercialize digital care solutions through partnerships. For future growth, we'll strengthen global partnerships, invest in R&D, and expand our core technology's application. We aim to become a leader in healthcare's digital transformation.

Sales Amount				
Sales Amount	Domestic		Major clients	① N/A
	2021	2022		② N/A
	160,000 \$	65,000 \$		③ N/A
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2021.09	SBI Investment, Laguna Investment, Korea technology finance corporation	Series A	3,700,000 \$
2020.02	Advisors	Angel	37,000 \$
2017.02	Kakao Ventures	Seed	250,000 \$
2017.01	SparkLabs Global Ventures	Seed	25,000 \$

Company profiles

Established date	2017.01.04
CEO	Hooman Lee
Employee No.	18
Business Category	Digital Healthcare
Technology Field	AI
Main Item	AI based Digital Health Intervention
Main Team members	HooMan Lee CEO Seoul National University (BS./MS.) ETRI(Government Funded Research Institute) SangUi Choi Chief Product Officer Kunsan National University (Ph.D.) CERAGEM R&D center InSeon Noh Business Development Seoul National University (MS.) National Forensic Service
Address	#A803, 43, Changeop-ro, Sujeong-gu, Seongnam-si, Gyeonggi-do, Republic of Korea

Technology



Personalized digital care with Digital Biomarker of Neuromuscular Disorders

EXOSYSTEMS provides a digital muscle functionality assessment solution that is S1) standardized for anyone with any status, S2) quick and simple to process, and S3) frequently traceable for monitoring. Our solution is already beyond concept to digitally assess the muscle functionality with the novel digital biomarker of neuro-muscular disorder.

Development of key technologies for digital biomarkers and commercialization of digital health intervention solutions

- Securing intellectual property rights and publishing in recognized journals for neuro-muscular digital biomarkers.
- Conducting clinical studies for neuro-muscular digital biomarkers.
- Developing innovative medical technology for diagnosis assistance using digital biomarkers.
- Clinical studies underway to validate effectiveness of digital health intervention solutions.

Collaboration with global pharmaceutical company based on differentiated technological capabilities

EXOSYSTEMS develops innovative digital biomarkers using AI analysis of physiological signals for objective and quantitative muscle function assessment. It offers standardized solutions overcoming limitations of traditional methods. The company collaborates with global pharmaceutical firm, investing in R&D to advance its technology and validate it through publications and clinical studies.



Digital Health Intervention solution



MEDICA 2022



MEDICA 2022

Core IP & Awarded Status



Key intellectual property rights and award status

Patent	13 registered patent including US / China
Paper	Published in a prestigious SCI academic journal

Certification & award status

2021	Minister of SMEs and Startups Award
2020	CES Innovation Award
2019	Minister of Science, ICT Award

Genome Insight Technology, Inc.

www.genomeinsight.net

Driving breakthroughs in biomedicine with genomic precision

We launched cutting-edge cancer and rare disease diagnostic whole-genome sequencing platforms. These platforms provide valuable insights to cancer patients (top 10 types, 2 million individuals) and rare disease patients (6,000 types, 800,000 individuals), benefiting clinical physicians. Available in Korea, the US, Hong Kong, the Middle East, and Europe.

Sales Amount				
Sales Amount	Domestic		Major clients	① SCL(Seoul Clinical Laboratories)
	2021	2022		② Ajou University Hospital
	1,682,835 \$	1,841,783 \$		③ Asan Medical Center
	Overseas			④ SNU Bundang Hospital
	2021	2022		
	N/A	N/A		
Investment attraction history				
Date	Investor		Stage	Amount (\$)
2022.04	Dunamu, Intervest. etc		Series B	23,284,104 \$
2020.11	DSC Investment, Schmidt Paratus		Series A	5,000,000 \$
2020.02	DSC Investment Schmidt. etc		Seed	308,000 \$



Company profiles

Established date	2020.01.09
CEO	Youngseok Ju, JeongSeok Lee
Employee No.	72
Business Category	IT / Whole Genomics
Technology Field	Whole Genomic Analysis
Main Item	Whole Genome Sequencing & Analysis
Main Team members	YeongSeok Ju Co-founder & CEO Associate professor at KAIST MD. Ph.D.
	JeongSeok Lee Co-founder & CEO Assistant professor at KAIST MD. Ph.D.
	JeheeSuh CFO (CEO of Genome Insight Inc.) CEO, Cartexell Inc. (CAR-T company) Partner, McKinsey & Company
Address	Head Office T331, 193, Munji-ro, Yuseong-gu, Daejeon, Republic of Korea Overseas Branch 6330 Nancy Ridge Drive, Suite 106, San Diego, CA 92121

Technology



Excellence in Whole-Genome Sequencing (WGS) Analysis Technology

We offer a cutting-edge genetic analysis platform for diagnosing and treating mutation-related diseases like cancer and rare genetic disorders. With our advanced Whole Genome Sequencing (WGS), we analyze the complete genetic information of 3 billion base pairs, enabling personalized and cost-effective treatments for patients. Pharmaceutical companies can also access our WGS big data to obtain vital information for future drug development.

Whole Genome Sequencing = the most advanced technology

The conventional 1st generation NGS technology (Target panel sequencing) analyzes less than 0.03% of an individual's entire genome, while the 2nd generation NGS technology (Whole Exome sequencing) covers only about 1.5%. In contrast, our company's 3rd generation NGS technology (Whole Genome sequencing) enables a comprehensive analysis of 100% of an individual's genetic information.

The World's First Whole Genome Analysis Platform

By utilizing our WGS analysis and interpretation services, patients can obtain precise and cost-effective optimal treatment options and therapies based on their genetic variations or mutations in their tumor tissue. Pharmaceutical companies can also secure essential information for future drug development by accessing our extensive WGS big data database, which consists of a large number of patient samples.



A joint research agreement with Ajou University Hospital



Report example of CancerVision



CLIA Certification (San Diego, USA)

Core IP & Awarded Status



Key intellectual property rights and award status

2022.12	KR Patent No. 10-2479065; Sequencing Method And System
2022.12	KR Patent Appln. No. 10-2022-0167819; Method And System For Providing Analysis Results For Genetic Information
2022.05	KR Patent No. 10-2404947; Method And Apparatus For Machine Learning Based Identification Of Structural Variants In Cancer Genomes

Certification & award status

2022.05	CEO Ju Youngseok Awarded the Chen Award by the Human Genome Organization (HUGO)
2022.08	2021 Global Innovator Festa(GIF) 2nd prize(Daegu City)
2022.11	Company has been selected as an Innovative Icon for the 8th Credit Guarantee Fund.

Don't Worry. Be Genie!

GenieCup makes technology to simplify and innovate women's daily-lives.

- Easy Menstrual Product Sales: 'GenieCup' provides comfortable menstruation, and 'GeniePod' ensures safe sterilization.
- Transition from Manufacturer to Data Company: We are expanding as the world's only menstrual data company, utilizing the smart case 'GeniePod+' for measuring menstrual blood volume and the AI menstrual calendar 'GenieCalendar'.
- Launch of Subscription Services & Smart Insurance: We introduce the world's first incentive-based personalized insurance for women.

Sales Amount

Sales Amount	Domestic		Major clients	① DuPont Korea
	2021	2022		② Korea Rubber Co., Ltd
	8,851 \$	426,157 \$		③ Aura Medical LLC
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
N/A	N/A	N/A	N/A

Company profiles

Established date	2020.05.12
CEO	TaeYang Yang
Employee No.	7
Business Category	Medical / Pharmaceutical R&D
Technology Field	Digital Healthcare
Main Item	GenieCup, GeniePod+, GenieCalendar

TaeYang Yang | CEO
Developed 7 medical device / smart system
US \$2.5M AI R&D General Manager

Main Team members
Juyeon Lee | Director of Research
Product design engineering Specialist

Ceyhun Pempeci | Researcher
PCB / Embedded Developing Specialist
Experience at Hyundai Rotem

Address
Head Office | 5F, 514, Dongsuwon-ro, Yeongtong-gu, Suwon, Gyeonggi-do, Republic of Korea
Overseas Branch | 3003 N First St, San Jose, CA 95134 USA

Technology



GeniePod+, Sensor Fusion-enabled IoT Menstrual Cup Sanitizer for Non-invasive Menstrual Blood Volume Measurement

GeniePod+ is a portable sanitizer that measures menstrual blood volume, cleans, sanitizes, dries, and stores menstrual cups. It offers one-handed operation, UV-C safety, and automatically sends data to a linked calendar for cycle, potential conception day, and uterine fibroid predictions upon cup insertion.

Improved Development 'Completed', Official Performance Testing and Global Beta Evaluation 'In Progress'

- GenieCup: Completed mass production and FDA Class2 medical device registration, Discussing with US distributors.
- GeniePod+ 2022/Q2: Initial development and Global Customer Beta Evaluation completed.
2023/Q2: Improved development completed (Improved accuracy and convenience).
2023/Q3: Certified test report on accuracy of the sensor and new Customer Beta Evaluation will be completed.

Make menstruation simple and hygienic, Gathering quantitative and qualitative women's health data

- Portable sterilization case for easy hygienic menstrual cup care outside: By bistable Lid, one-handed operation is possible.
- Secure quantitative and qualitative women's health data that is lacking in the healthcare industry: As personalized healthcare advances, the value of personal data increases. GeniePod+ can collect high-quality quantitative data automatically and easily in everyday life.



Core IP & Awarded Status



Key intellectual property rights and award status

2019.11	[PCT/KR2020/014065, CN/202080082936.7, US/17780231, IN/202217029835] Method For Contactlessly Measuring Amount of Menstrual Blood In Menstrual Cup
2020.10	[PCT/KR2020/014067] Optical Protein Measurement Sensor

Certification & award status

2019.07	Grand Prize of SMEs 'Dae-Star Solver Platform Task'
2019.08	Suwon Start-up Audition / Grand Prize (Mayor of Suwon Award)
2020.10	USWC / The only Korean team to reach the finals

World's leading solution technology company to interact with customers with healthcare services

Global Best, GB SOFT.

By developing a technology to measure blood pressure, pulse, and oxygen saturation by taking skin images with a camera, it is possible to establish a centralized medical system by measuring the vital signs of patients in a non-contact manner.

GBSoft is an efficient business model that marks the opening of the telemedicine era and provides digital healthcare solutions for medical facilities, construction, and manufacturing large-scale sites, mobility, and convenience.

Sales Amount

Sales Amount	Domestic		Major clients	① Lotte E&C
	2021	2022		② Chilgok Kyungpook National University Hospital
	2,578,842 \$	2,844,162 \$		③ Samitivej Hospital(Thailand)
	Overseas			④ LG electronic
	2021	2022		
	N/A	35,798 \$		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2022.12	Comes Investment	Series A	758,197 \$
2022.12	HB Investment	Series A	758,197 \$
2022.12	Solidus Investment	Series A	1,517,911 \$



Company profiles

Established date	2017.10.17
CEO	Kibum Park
Employee No.	35
Business Category	Software
Technology Field	Digital healthcare
Main Item	Non-contact biosignal measurement solution
Main Team members	Kibum Park CEO DL E&C, 6 years of business experience
	Jaeyoung Park Director 15 years of software development experience
	Haechan Cho Team Leader Computer engineering major, 6 years of software development experience
Address	7F Homyeong Building, 2392 Dalgubeol-daero, Suseong-gu, Daegu Republic of Korea

Technology



Non-contact biosignal measurement

GBSoft has been developed with pure domestic technology and has entered the global digital healthcare market stably.

It is widely used in industrial, medical, and public sectors to prevent safety accidents (worker absenteeism, health check), monitor biological signals of hospital inpatients, and prevent cardiovascular disease.

Stable entry into the global digital healthcare market with pure domestic technology development

GBSoft has been developed with pure domestic technology and has entered the global digital healthcare market stably.

It is widely used in industrial, medical, and public sectors to prevent safety accidents (worker absenteeism, health check), monitor biological signals of hospital inpatients, and prevent cardiovascular disease.

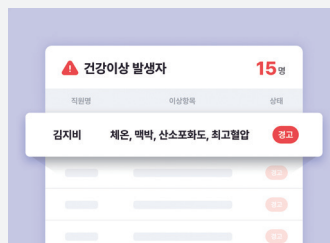
Changes in the wellness paradigm of non-contact measurement methods with two-way communication

Based on the independent development and application of image filtering technology, one of the most important technologies in image analysis, GBSoft enables non-contact measurement through biosignal measurement algorithms.

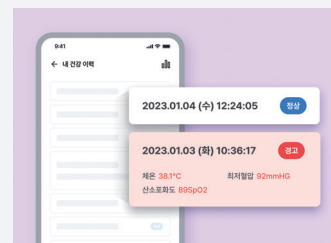
While most monitoring systems are unidirectional information provision methods, user measurement and analysis based on camera images enables two-way communication by real-time verification of one's information



GB SOFT Office (Seoul)



GB On



GB On

Core IP & Awarded Status



Key intellectual property rights and award status

2020.08	USA / 11,103,144 / Method of measuring physical parameter of subject in contactless manner
2021.06	KOREA / No.10-2273903
2023.09	KOREA / No.10-2444459

Certification & award status

2023.04	Presidential Security Service Commendation
2021.11	BIG3 Big Business-Startup Solver Platform Best Award
2020.12	Ministry of SMEs and Startups' Venture Merit Award for Minister of Youth Entrepreneurship Award

Care X Care

Digitizing RWD(Real World Data), Revolutionizing it to RWE(Real World Evidence).

Caresquare is a startup to build RWD(Real World Data) with PHR(Patient Health Record) in the overall healthcare market including medical care and clinical trial, and use it as an RWE(Real World Evidence) with a variety of partners to prepare a leading company in the customized care and digital healthcare industry.

Sales Amount

Sales Amount	Domestic		Major clients	① Chong Kun Dang pharm
	2021	2022		② Seoul St, Mary hospital
	328,000 \$	259,000 \$		③ Hanmi
	Overseas			④ JW pharmaceutical
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount(\$)
2021.06	Seoul National University STH No. 3 Private Investment Association	Series A	236,000 \$
2021.06	G&B Tech & Investment Co., Ltd.	Series A	78,000 \$
2021.06	Stryker Private Investment Association No. 15	Series A	393,700 \$
2021.06	Striker Capital Management	Series A	23,6000 \$
2022.12	personal investment	Bridge	2,742,000 \$

Care²

Company profiles

Established date	2019.07.10
CEO	Brian(Byung Yeob) Oh
Employee No.	28
Business Category	Healthcare
Technology Field	Blockchain, Big data, Digital healthcare
Main Item	DoseEase / I'm fine
Main Team members	Brian(Byung yeob) Oh CEO CFO, Pearl Abyss Tom(Jong hyuk) Lim Vice president CEO, Evatar Korea Jeonil Kang R&D head Head, Caresquare R&D center
Address	156 Yeoksam-ro, Gangnam-gu, Seoul, Republic of Korea

Technology



Care & Care

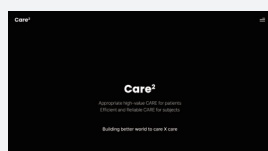
- I'm Fine Dr. Clinic work automation service to provide highly advanced reservation, reception and payment system
- I'm Fine mobile. Personal healthcare service to manage medication scheduling and health information with PHR data that provides high standard medical service.
- DoseEase. Digitizing clinical trials with a blockchain-based real time monitoring and a comprehensive management of decentralized clinical trial.

Care + Care

- I'm Fine Dr - v1.4.18.10 as of Jun 2023 since service launch on Sep 2021
- I'm Fine mobile - v1.14.3 as of Jun 2023 since service launch on Sep 2021
- DoseEase - v1.3 as of Jun 2023 since service launch on Mar 2020

Care x Care

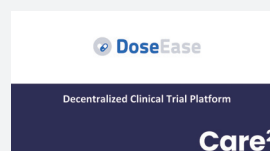
- "I'm Fine Dr & Mobile" is the EMR-PHR integrated platform for personal healthcare and additionally this service provides clinic work automation system. We are developing it to next version "Care Plan", a health and life monitoring service by care planner. It'll be launched in August, 2023.
- "DoseEase", a real-time medication monitoring service for clinical trials, is successfully commercialized and it is revolutionized to be a decentralized clinical trial platform with the cutting-edge processes and technologies.



I'mFine



I'mFine



DoseEase

Core IP & Awarded Status



Key intellectual property rights and award status

2019.11	[PCT] (No. KR2019/014793) Method And System For Blockchain-Based Medicine-Taking Management For Clinical Trial Subject
---------	--

Certification & award status

N/A	N/A
-----	-----

Smart Health Check at Home (QSCheck UIS)

Digitizing test results for convenient and accurate medical use. Providing reliable medical devices utilizing analyzed data.

Our company is to leverage data-driven personal medical devices, going beyond conventional diagnostics, to digitize test results for convenient and accurate medical use, while providing reliable medical devices that utilize analyzed data for predictive solutions, tailored treatments, and global disease prevention opportunities.

Sales Amount				
Sales Amount	Domestic		Major clients	① Hudadak Health
	2021	2022		② AMKOR Technology
	792,840 \$	13,945,369 \$		③ Kind doctor
	Overseas			④ N/A
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2022.03	Inside Equity Partners	Series A	763,664 \$
2020.11	KT Investment	Series A	763,664 \$
2020.11	Samsung Venture Investment	Series A	763,664 \$
2020.05	KB Investment	Series A	381,816 \$
2020.05	Naver	Series A	381,816 \$

Company profiles

Established date	2016.08.22
CEO	DongHoon Lee
Employee No.	14
Business Category	Bio Healthcare/Manufacturing
Technology Field	Biosensor
Main Item	Personal Urine Test Diagnostic Kit
Main Team members	<p>DongHoon Lee CEO Ph.D. Sungkyunkwan University Technology Development Department at Amkor Technology Korea</p> <p>SunAe Kim CFO MBA, Kyunghee University Formerly served as the FD at Suprema FMS and FM at Jeju Brewery</p> <p>EungKyu Park CTO Ph.D. Sungkyunkwan University Formerly served as the Research and Development Team Leader at QSTAG</p>
Address	<p>Head Office 29th floor, POSCO Tower, 165 Songdo Convensia-daero, Yeonsu-gu, Incheon, South Korea</p> <p>Factory 2104 M-dong, 32 Songdo Science-ro, Yeonsu-gu, Incheon, South Korea</p>

Technology



Mobile-based At-Home Testing Solution

- QSTAG provides a diagnostic testing solution for at-home use using mobile-based disposable medical devices. This solution utilizes a smartphone application to interpret diagnostic results and offers the following three key features.
 - Easy & Rapid: Designed for non-professionals, it is easy to use and provides instant result interpretation.
 - Accurate: It offers the same level of performance as medical devices used in hospitals and handles the same biomarkers.
 - Datafication: Diagnostic results are immediately stored as data and transmitted to a central server for management.
- Through this personal medical device with these three key features, QSTAG offers a solution for managing patients' health in a remote setting.

Digital IVD Disposable Medical Device Technology

- QSTAG has obtained approval for a total of three products in the field of digital in-vitro diagnostics (IVD) disposable medical devices. The approved products include four basic diagnostic products (Proteinuria, Glucose, pH, and Hematuria) under the In Vitro 20-4130 registration number, ketone test (In Vitro 21-5019), and ACR (Microalbumin and Creatinine) test (In Vitro 23-4068). Currently, approval from the Korea Food and Drug Administration (KFDA) is underway for a total of 12 comprehensive products.
- Among them, the ACR test is particularly crucial for the management of complications in diabetic patients. To enter the global market, clinical trials have been completed domestically, and the product is currently undergoing FDA evaluation for approval.
- In addition to the approved products, QSTAG aims to develop three main product categories: Dip Stick-based basic health management products, FEM Tech (women's health) products based on Rapid Kits for female hormone testing, and blood tests for the management of chronic diseases.

Uniqueness and Innovation

QSTAG provides a distinctive service by utilizing QR code-based proprietary technology, allowing individuals to automatically analyze and digitize test results using their smartphones. This service can be completed in just one minute and consists of a simple two-step process. With its differential color quantification recognition technology, QSTAG minimizes color variations in medical devices, enabling stable analysis in various environments. Based on this technology, QSTAG has developed products capable of analyzing urine test kits based on Dip-stick, which are commonly used in hospitals, and is expanding its product range to include immunoassays and blood tests. Product expansion is focused on developing products targeting various biomarkers used in hospitals. This allows for a more accurate assessment of patients' health status through diagnostic testing based on medical devices, overcoming the limitations of traditional remote screenings.



Introduction to the Solution



Instructions for Product Use



Product Performance Evaluation Results

Core IP & Awarded Status



Key intellectual property rights and award status

2023.01	Patent Registration for Diagnostic Strip (Patent No. 10-2492978)
2021.03	Patent Registration for Detection Method and Detection Pad (Patent No. 10-2226943)
2021.12	Application for Image-Based Diagnostic System and its Control Method (PCT/KR2022/014307)

Certification & award status

2021.05	Selection of Baby Unicorn Nurturing Project 200 (Ministry of SMEs and Startups)
2018.05	Winner of Bio Startup Competition (Korea Health Industry Development Institute)

Provide analysis anywhere, anytime, to anyone through spectroscopy

- PiQuant provides IoT devices for analyzing air and water quality and its analysis solution accordingly.
- We have provided indoor air monitoring solutions to local smart-city projects, government offices, public-use facilities, and research institutions.
- Our business model forms of 1) device sales and rentals and 2) monthly fee for system and data management.
- We aim to apply our solutions to smart cities, construction sites, smart factories, and anywhere that requires indoor environment management. With the help of UNICEF and the Bill & Melinda Gates Foundation, we will provide water and air monitoring solutions to developing nations and institutions in all parts of the world.

Sales Amount				
Sales Amount	Domestic		Major clients	① Bill & Melinda Gates Foundation
	2021	2022		② Seongdong-gu, Gwanak-gu, Jongno-gu
	1,715,177,000 ₩	2,327,012,000 ₩		③ K-Water
	Overseas			④ United Way Vietnam
	2021	2022		
	N/A	224,536 \$		
Investment attraction history				
Date	Investor		Stage	Amount (\$)
N/A	N/A		N/A	N/A

Company profiles

Established date	2015.07.12
CEO	Doyeon Pi
Employee No.	17
Business Category	Manufacture / Component analysis
Technology Field	IoT, SW, Optics
Main Item	Portable IoT spectrometer
Main Team members	Doyeon Pi CEO 15 years of H/W and S/W development 1 st place in Google, WowZapp hackathons
	Hyunchae Lim COO 10 years of career in business operations KOICA, GCE project lead
	Sungjoo Kim Director of Research 25 years of firmware development LG, Kumho E&G, ES
Address	Head Office 5, Teheran-ro 69-gil, Gangnam-gu, Seoul, Republic of Korea Overseas Branch 1600 Amphitheatre Parkway Mountain View, CA 94043 USA

Technology



Core technology of the product

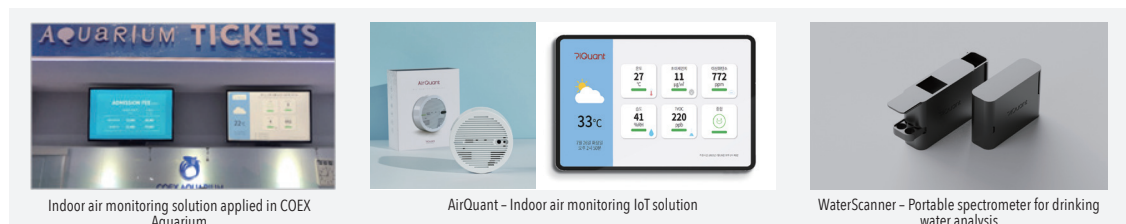
- WaterScanner: Portable IoT Device for analyzing drinking water quality.
- PiScanner: Spectroscopic method for analyzing blood alcohol content (BAC).
- AirQuant: Indoor air quality monitoring IoT solution.
- ColiQuant: Appropriate technology for detecting E. Coli in drinking water .
- Skin Scanner: Spectrometer for analyzing skin contents.

Technology development progress

- WaterScanner: Operating local and global test beds for feasibility tests in fields.
- PiScanner: After the first PoC, the R&D phase with Mercedes Benz.
- AirQuant: In the market.
- ColiQuant: In the market .
- Skin Scanner: R&D.

Differentiation and innovation

- Heightened Signal-to-noise ratio: Better SNR when using a small-sized spectrometer with PiQuant's patented signal processing algorithm. This allows you to use reduce the size of a detector while providing high-accuracy results.
- On-site and real-time detection: By providing high-accuracy results on-site with a portable IoT device, you can save the time of analysis from 24 hours to less than ten minutes.



Core IP & Awarded Status



Key intellectual property rights and award status

2019.05	(KR. 10-1984016) Spectrometer capable of analyzing composition of subject and electronic apparatus including same
2022.12	(KR. 10-2480305) Apparatus, system and method for analyzing component
2023.05	(KR. 10-2533166) Component analysis system using component spectrum, component analysis method thereof

Certification & award status

2020.12	Ministerial Commendation from the Ministry of Science and ICT
2022.12	Ministerial Award for Excellence in IP R&D from the Ministry of Trade, Industry and Energy
2023.01	CES 2023 Innovation Awards

Create a healthy life through synergy between hardware and software solution

Create a daily sustainable pain management ecosystem.

Establishment of a near-infrared pain management system.

- Provide digital healthcare service that can treat non-pharmaceutical pain by body part using near-infrared ray devices.
- Provides SaaS service to pain management experts for easy customer management and pain data management.
- Providing healthcare services that can treat pain, such as joints and patellas of companion animals, using near-infrared ray devices.

Sales Amount				
Sales Amount	Domestic		Major clients	① N/A
	2021	2022		② N/A
	2,471,585 \$	2,284,262 \$		③ N/A
	Overseas			④ N/A
	2021	2022		
	106,032 \$	38,931 \$		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2019.08	Tips	Tips	420,000 \$
2018.11	SpringCamp / Yonsei Holdings	PRE-A	420,000 \$
2016.01	fine & service	Seed	84,000 \$



Company profiles

Established date	2015.06.25
CEO	SeungHwan Park
Employee No.	13
Business Category	Manufacturing
Technology Field	Home electronics
Main Item	Cirius LED
SeungHwan Park CEO Developing Hardware & Software	
Main Team members	
TaeYoun Kang CTO Product Development Executive	
TaeKyun Kim CMO Product Marketing Executive	
Address	8f, 1801, nambusunhwan-ro, gwanak-gu seoul

Technology



Core technology of the product

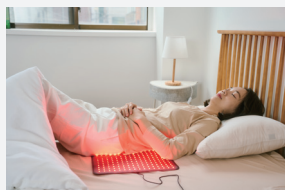
- Near-infrared-based hardware for pain users.
- Customer and data management SaaS for pain professionals.

Technology development progress

- Launch of new Cirius LED product.
- Cirius Sports Brand Launch.
- Launch of new Cirius Sports product.
- Launch of new Cirius Pet product.
- Poin-T development and release.

Differentiation and innovation

1. Establishing an ecosystem for pain management in everyday.
 - By combining hardware products such as near-infrared-based wearable pain devices, rehabilitation devices, and body composition meters with pain software solution services, we are building a pain management ecosystem in which products and services are linked.
2. Near Infrared Wearable Pain Management Device Technology.
 - It develops a product optimized for application areas with thin and flexible infrared module production technology made using transparent LED display film manufacturing and technology.



Cirius LED Grand



Cirius pet LLLT Warm Cape



Poin-T

Core IP & Awarded Status



Key intellectual property rights and award status

2023.01	patent - KR 10-2486207
2022.07	patent - KR 10-2428820
2022.05	trademark rights - us 6725917

Certification & award status

2022.12	New Product of the Year (Mega zoo)
---------	------------------------------------

Embrace your true self, and unlock your full potential

- 40FY a leading people-tech company that provides innovative solutions to help individuals manage psychological difficulties, and unleash their full potential.
- 40FY provide their flagship mental care software MINDLiNG, which uses data from over 100,000 cases to provide personalized insights based on personality and stress types. They also provide B2B service MOTIVE for diagnosing and caring organization's mental health status. With an average monthly revenue growth rate of 35% from January to June 2023, the company plans to improve its B2C products and expand into HR psychological management for the B2B market.

Sales Amount				
Sales Amount	Domestic		Major clients	① Samsung Electronics
	2021	2022		② McKinsey & Company Korea
	35,000 \$	350,000 \$		③ Financial Security Institute
	Overseas			④ Lotte Himart
	2021	2022		
	N/A	N/A		
Investment attraction history				
Date	Investor		Stage	Amount (\$)
2021.02	Klim Ventures		Seed	38,000 \$
2021.11	Klim Ventures		Pre-A	152,000 \$
2023.04	Klim Ventures		Pre-A Bridge	Undisclosed
2023.04	Insight Equity Partners		Pre-A Bridge	Undisclosed



Company profiles

Established date	2020.07.14
CEO	Woori Moon
Employee No.	18
Business Category	Information / communication industry, professional / scientific technology service industry
Technology Field	ML, AI, Bio-healthcare
Main Item	AI-based customized digital mental healthcare program
Main Team members	Woori Moon (Luna) CEO SNU School of Medicine, MD, Ph.D Johns Hopkins University MPH/MBA Psychiatrist ex) McKinsey & Company Consultant
	Chongtaek Lee (Patrick) Director, CSO B.A., Yonsei University Northwestern University Kellogg (MBA) ex) McKinsey & Company Engagement Manager
	Kyungjin Lho (Silvia) Head of R&D SNU School of Medicine, MD, Ph.D Psychiatrist ex) SNUH Medical Professor
	Address 493, 27, Yonghak-ro 50-gil, Suseong-gu, Daegu, Republic of Korea

Technology



Personalized digital mental care service

1. Digital measurement of physiological status and physiological signals to assess stress levels, characteristics, and resistance.
2. Tailored digital psychological care services based on personal psychological assessment result.
 - Development and commercialization of tailored digital psychological care services based on personality patterns that lead to stressors underway.
 - Clinical validation of tailored digital psychological care services completed (36% reduction in depression at Seoul National University Hospital).

Advanced technology using real-world psychological data and AI

1. Psychological pattern identification and classification technology.
 - Classification algorithms based 100,000 user data validated for reliability and accuracy through clinical validation with Seoul National University Hospital.
2. Technology for measuring and understanding stress-related physiological signals through smartphone cameras.
 - CES 2023 innovation Award-winning algorithm developed internally, clinical trials planned for 2023-2024 for further validation.
- 3; Effectiveness validated and commercialized through clinical validation with Seoul National University Hospital.
 - Advanced technology development underway for psychological specialist-user interaction based on user data collected during digital personalized mental -- care service process, using generative AI based on 20,000 collected data.

Core IP & Awarded Status



Key intellectual property rights and award status

2022.11	Facial recognition-based stress measurement devices and methods
2022.11	Customized stress care devices and methods
2022.11	Finger blood flow-based stress measurement devices and methods

Certification & award status

2021.12	Grand Prize in the Large-Star Solver Platform (Bio Health) Competition (Hosted by the Ministry of SMEs and Startups)
2023.01	2023 CES Innovation Award
2023.05	Cartier Women's Start-up Initiative 2023 Awards #1 in East Asia

Promedius Inc.

<https://www.promedius.ai/>

We make healthcare more accessible and affordable for all

Promedius provides cutting-edge AI solutions and cloud-native platform, Aldant, to assist healthcare professionals for better medical image interpretations.

We are dedicated to solve unmet healthcare needs especially in the field of radiology. We collaborate with medical imaging equipment companies and PACS providers that have strong sales capabilities, allowing us to swiftly penetrate the market. Currently, our products are available to the majority of small and medium-sized hospitals through partnerships with two leading domestic PACS providers. To further expedite our growth, we are planning to establish partnerships with global X-ray manufacturers in coming years.

Sales Amount				
Sales Amount	Domestic		Major clients	① Asan Medical Center (South Korea)
	2021	2022		② Dos De Mayo Hospital (Peru)
	0.5M \$	0.5M \$		③ Noul Co., Ltd.
	Overseas			④ Iamdt Co., Ltd.
	2021	2022		
	0.5M \$	1.5M \$		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2020.07	CNTech (Accelerator)	Seed	60,000 \$
2021.08	BigBang Angels (Accelerator)	Series A	500,150 \$
2021.09	Korea Credit Fund (FI)	Series A	499,975 \$
2021.09	Mobydick Ventures (FI)	Series A	499,975 \$
2021.10	YSU Holdings (FI)	Series A	149,975 \$



Promedius

Company profiles

Established date	2019.09.10
CEO	Hyun-Jin Bae
Employee No.	31
Business Category	Healthcare, MedTech
Technology Field	AI, Software
Main Item	Holistic imaging AI platform, Aldant.
Main Team members	HyunJin Bae CEO, PhD Asan Medical Center / AI Research
	MinGyu Kim Cheif Technology Officer, Ph.D. Asan Medical Center / AI Research
	JoonBeom Seo Cheif Medical Officer, MD, Ph.D. Asan Medical Center / Radiologist
	Address Head Office 4 Songpa-daero 49-gil, Songpa-gu, Seoul 05609, KR Overseas Branch Delaware, USA

Technology



Offer cloud-native AI imaging platform

We offer a holistic AI imaging platform that enables frictionless sharing, storage, and management of vast volumes of digital imaging data without infrastructure and any complex installation processes.

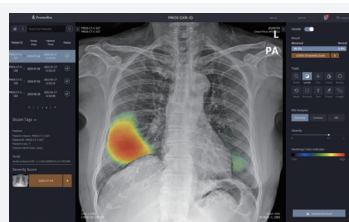
By joining Aldant, you can employ various types of novel AI diagnostic imaging solutions in daily practice and can deploy your own developed AI models.

Three product lines are slated for release this year, with technology adoption agreements underway.

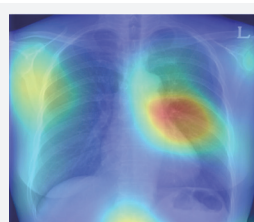
The main products are Aldant (medical image AI platform), PROS CXR: 01 (pneumothorax detection), PROS CXR: Bone Suppression (rib bone removing), and PROS CT: MQ (muscle quality quantification and musculoskeletal mass measurement), which are delivered directly to hospitals (Business to Hospital (B2H)) or through mounting and distribution contracts with existing equipment and PACS companies (B2B). The above product lines will be cleared regulatory board and supplied directly to hospitals within this year, and will also be supplied to hospitals through contracts with large imaging modality companies.

Providing Next-Generation Medical AI Technology

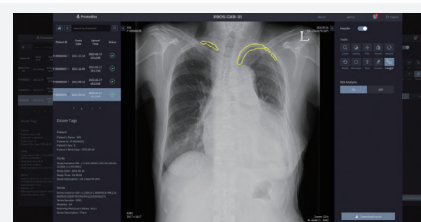
Our unsupervised learning-based next-generation AI technology is capable of learning the distribution of data, enabling precise transformation between different datasets and diagnosing various lesions simultaneously, which is its strength in scalability. Not only does this technology ensure accuracy and clinical validity in distinguishing diseases that may be overlooked in clinical settings, but it also has the potential to prevent medical accidents, making it a suitable AI technology for medical applications, which can possibly reduce over-fitting cases.



AI-CAD for infectious disease diagnosis



AI-CAD for osteoporosis screening



AI-CAD for pneumothorax detection

Core IP & Awarded Status



Key intellectual property rights and award status

2023.03	[U.S. Patent] (Pending) Image Learning Method, Apparatus, Program, And Recording Medium Using Generative Adversarial Network
2023.03	Medical Image Processing Method For Processing Pediatric Simple X-Ray Image Using Machine Learning Model And Medical Image Processing Apparatus Therefor
2023.03	[U.S. Patent] (Pending) Method And Apparatus For Providing Cloud-Based Medical Collaboration Service For Medical Images

Certification & award status

2021.12	Awarded Grand Prize Korean Minister of SMEs and Startup competition
2022.11	Awarded Grand prize at the 20th World Conference of Ethnic Korean Business startup competition
2023.05	Awarded Grand Prize at Supernova Challenge (Healthtech) of GITEX Africa 2023

Pixelro is a company that develops technologies to increase human comfort "for a better life"

NENoon isn't just for optometry; it also connects experts. Data is gathered through self-measurement of vision and contact with retina specialists is made based on the information gathered. At all times, a specialist monitors and manages my vision.

We also offer a variety of services related to companies and institutions using the eye test data collected by NENoon. We can do business with a variety of institutions and companies, including insurance companies, opticians, ophthalmologists, and educational institutions.

Sales Amount				
Sales Amount	Domestic		Major clients	① N/A
	2021	2022		② N/A
	430,597 \$	359,007 \$		③ N/A
	Overseas			④ N/A
	2021	2022		
	79,985 \$	43,940 \$		
Investment attraction history				
Date	Investor		Stage	Amount (\$)
2019.12	Industrial Bank of Korea		Series A	N/A
2019.12	IBK Capital			N/A
2020.01	Infobank Co., Ltd.			N/A

Company profiles

Established date	2017.11.30
CEO	SeokMyeong Kang
Employee No.	8
Business Category	manufacturing/service
Technology Field	Digital Healthcare
Main Item	Macular degeneration and vision measurement kiosks
Main Team members	<p>SeokMyeong Kang CEO Former Samsung Electronics President with 19 years of expertise</p> <p>JinKi No Director 30 years of expertise as a former researcher at Samsung Electronics</p> <p>JunTae You Researcher 25 years of experience, former SK Networks Sales Manager</p>
Address	815 Daewangpangyo-ro (Siheung-dong), Sujeong-gu, Seongnam-si, Gyeonggi-do Pangyo Creative Economy Valley

Technology



NENoon digital eye care solution

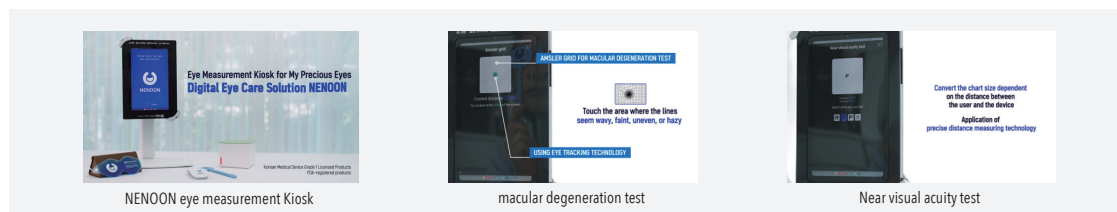
- NENoon solutions are classified into two categories. Pixelro created the mobile.
- NENoon App in 2021. It already has roughly 16,000 users worldwide and has accomplished approximately 7000% of its crowdfunding goal for 2022.
- Starting this year, Pixelro is developing a NENoon vision measurement kiosk. Unlike the NENoon app, Kiosk aims to install in public places such as banks and libraries and is pushing for the first grade of medical devices in the first half of this year.

Technology development progress

completed the development of the near visual acuity test, the macular degeneration test, and the presbyopia test.
Far-distance visual acuity test; children's eyesight test under development.
Domestic medical device class 1 approval and US FDA registration completed.
Scheduled for commercialization in mid-Jun.

Differentiation and innovation

Algorithms for various vision measurement methods have been developed by the NENoon. The vision chart conversion algorithm can be used to perform an eyesight test based on the distance. An algorithm that tracks gaze based on the Amsler chart is useful for macular degeneration testing. Eye movement and cognitive abilities are also measured using indexed images and algorithms. Furthermore Using the NENoon, you can choose one of several vision tests. After conducting a self-sight test, users can check the test results, visit the homepage of an ophthalmologist, or purchase a film through an advertisement.



Core IP & Awarded Status



Key intellectual property rights and award status

2018.09	Portable terminal having image comparison function and image comparison method using the same
2018.09	Automatic focus adjustment device and its control method
2018.09	A device that accurately captures a face image within the shooting area

Certification & award status

2021.12	Best Award at the 3rd Big Star Troubleshooter Platform (Bio Health) Competition
2022.01	Heilongjiang Korea-China Global Entrepreneurship Competition Encouragement Prize

New generation of AI aided drug discovery platform 'Hyper Lab'

Development of cloud-based interpretable physics-deep learning convergence technology for high-efficiency drug discovery.

HITS Inc. accelerates the development of novel drugs with our state-of-the-art AI technologies. HITS Inc. has shaped a new future for drug discovery with pharmaceutical companies and research institutes inside and outside Korea.

Sales Amount				
Sales Amount	Domestic		Major clients	① LG Chem
	2021	2022		② Boryung Corporation
	150,018 \$	603,254 \$		③ Ildong Pharmaceutical
	Overseas			④ Chongkundang Pharm.
	2021	2022		
	N/A	N/A		

Investment attraction history

Date	Investor	Stage	Amount (\$)
2020.09	Schmidt Co.Ltd	pre- Series A	113,139 \$
2020.10	Korea Investment Partners	pre- Series A	678,522 \$
2022.12	Korea Investment Partners, Capstone Partners, Laplace partners, Kiwoom Investment,	Series A	2,261,470 \$
2023.01	STIC VENTURES, Company K Partners, Limited	Series A	1,886,818 \$



Company profiles

Established date	2020.05.18
CEO	wooyoun Kim
Employee No.	25
Business Category	Application Software Development
Technology Field	AI New Drug Development
Main Item	AI New Drug Development Platform 'Hyper Lab'
Main Team members	<p>wooyoun Kim CEO professor of chemistry, KAIST</p> <p>jaechang Lim Director(co-founder) Ph.D. of Chemistry, KAIST</p> <p>sehan Lee Director Ph.D. of Biotechnology, Yonsei University</p>
Address	902, Samwon Tower, 124, Teheran-ro, Gangnam-gu, Seoul

Technology



AI drug discovery web platform(Hyper Lab)

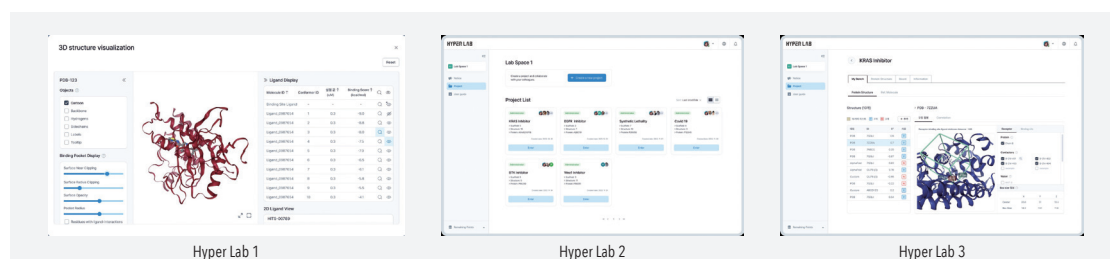
AI drug discovery web platform 'Hyper Lab' has implemented digital technology that can increase the probability of discovering candidate substances by more than 7 times through experiments. Hyper Lab provides smart workflows optimized for drug discovery researchers, enabling them to apply cutting-edge AI technologies to their research with a few clicks and no complex coding.

Developing an MVP for commercialization

Hyper lab increases the efficiency of drug discovery research through drug-target interaction prediction, molecular structure design, and collaboration features. In February 2023, we launched a prototype of Hyper Lab and completed beta testing. We are in the final stages of development with a targeted release date of September 2023.

High-performance and easy-to-use SaaS

- Hyper lab provides accurate prediction and AI driven analysis guides. The accuracy is three times higher than similar conventional software.
- Easy and intuitive UI/UX allows researchers to learn basic usage in 5 minutes.
- It's a cloud service, not on-premise software, so you don't have to install or update it.



Core IP & Awarded Status

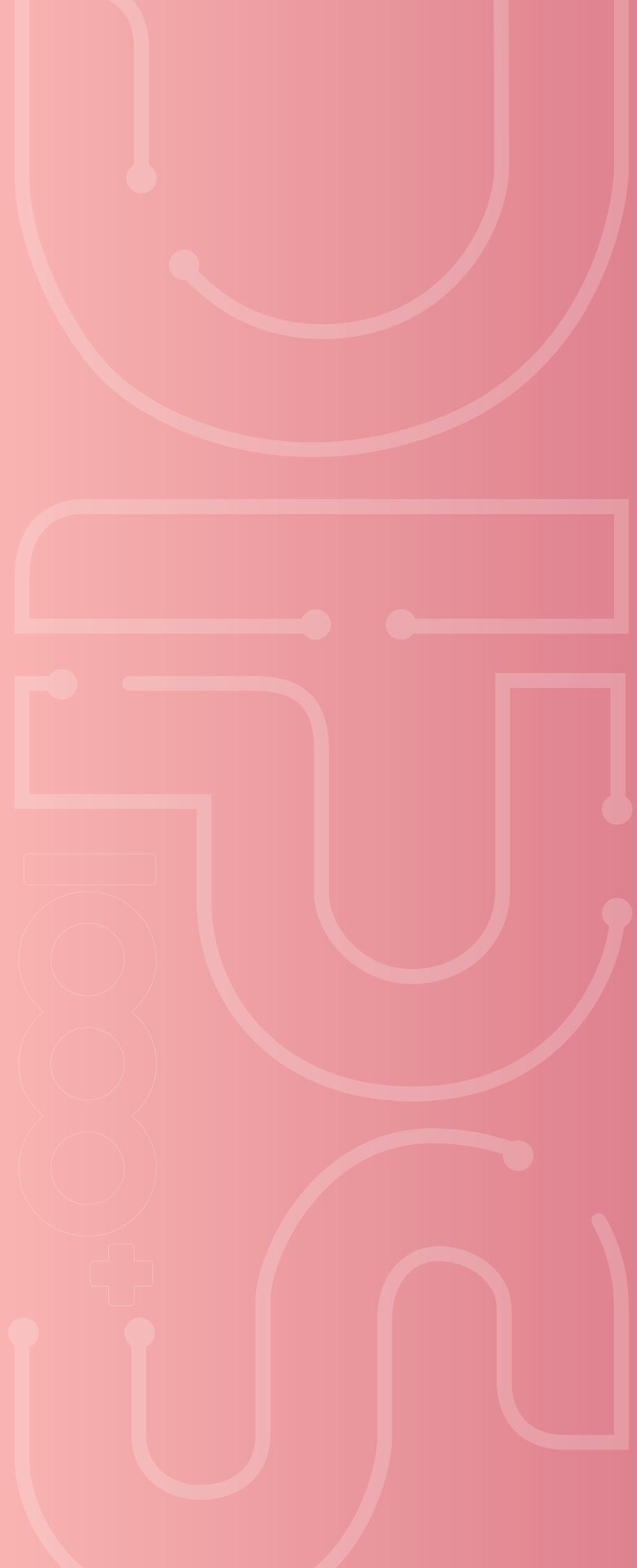


Key intellectual property rights and award status

2021.11	Challenge! K-Startup 2021 Patent Office Director Award
2022.10	KOREA AI Startup 100 Award

Certification & award status

2022.06	Patent registration of 'molecular design method and analysis device' using molecular fragment-based molecular deep learning model'
2022.08	Patent registration of 'molecular characteristics prediction method and analysis device using physics-based deep neural network model'



Bio Health

New Medicine

Biomaterials

Medical Devices

Digital Health Care

DIPS 1000+



중소벤처기업부



창업진흥원
Korea Start-Up

KSA 한국표준협회
KOREAN STANDARDS ASSOCIATION



서울대학교
SEOUL NATIONAL UNIVERSITY



성균관대학교
SUNGKYUNKWAN UNIVERSITY



안전성평가연구소
Korea Institute of Toxicology



Y&ARCHER



PEN
VENTURES