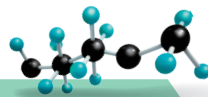


WBIF

2021 World Bio Innovation Forum at Jeonju

Dec. 7.^{Tue} ~ 9.^{Thu} 2021



KAIST MBI
Bio Innovation Management Program





Suchan Chae

Director of JBNU Center for Regional Innovation
KAIST President Advisor
WBIF President

I am very happy to welcome everyone to the 2021 World Bio Innovation Forum. In this forum, we would look into and discuss some innovations occurring in the bio/healthcare area. I hope the forum will evolve into a public forum where researchers, entrepreneurs, and policy makers feel comfortable to gather and talk about issues that concern the “health” of the human kind. This forum is, in a sense, an extension and expansion of the Pharma-Healthcare Economic Forum and the KAIST CHIP Global Advisory Workshop I have helped organize over the years. We were able to launch this new forum this year with the generous inputs of three cohosts: Mayor of Jeonju City, Seungsu Kim, President of KAIST, Kwanghyung Lee, and President of Jeonbuk National University, Dongwon Kim. I want to thank them all.

This year the forum will unfold over three days. Today there will be two sessions, one on Pharma/Healthcare trends and one on Bio Cluster. When I said “today”, I meant it by the Korea Standard Time. I would like to thank all participants for their willingness to coordinate over different time zones.

I hope everyone who participates feel at home and share their innovative thoughts. Thank you.



Seung-Su Kim

Jeonju City Mayor

It's a pleasure to meet you all. This is Seung-soo Kim, Mayor of Jeonju City. First of all, I would like to bow my head and express my deep gratitude to Professor Suchan Chae for preparing the World Bio Innovation Forum today. And thank you to everyone who will have the discussions and presentations today. Jeonju receives over 10 million tourists a year. The reason why many people come to Jeonju is that Jeonju is also the capital of Korean traditional culture. And during these difficult times of Corona, Jeonju has been recognized by many as the most innovative city to overcome the crisis. The Good Landlord Movement also started in Jeonju, and during this difficult period, the declaration of a city without layoffs to overcome the crisis without firing employees. The national disaster basic income started right there. Jeonju is a challenging city that preserves tradition but has such a DNA of innovation. Now, Jeonju has many factors of innovation. And with many bio-related assets, I started with a bold dream of the bio-health industry. I think that the content presented and discussed today will become a very important stepping stone for Jeonju's growth. We will do our best to make Jeonju the first city to solve the problems of our country and solve the problems of the earth through industry. Thank you very much to everyone who joined us.



Dong won Kim

Jeonbuk National University President

It is a great honor and privilege for me to take part in the first ever 2021 World Bio Innovation Forum at Jeonju. I would like to thank Jeonbuk National University Center for Regional Innovation Director, and Jeonju City Mayor for hosting this forum during these very challenging times.

Today, the world has an important opportunity to be connected and turn a new leaf “with Corona” into an overwhelming chance to create an environment that is more inclusive for all through advances in bio healthcare innovation.

The 2021 WBIF Agenda indeed provides the new blueprint and opportunity for the city of Jeonju and Jeonbuk National University to open up more and catch up with the latest and global trends in the pharma, healthcare, bio cluster, technologies and investments worldwide.

Therefore, as we mark the end of 2021, fully aligning our local resources and efforts behind the 2021 WBIF Agenda is of critical importance. We must rekindle the spirit of making efforts and going forward in the bio innovation forum to build back better and greener opportunities for our community and later expand globally.

Distinguished participants of the Forum,

To move forward building partnerships among governments, international organizations, international financial institutions, the private sector and civil society has never been more critical.

It is in this context that I look forward to this Bio Innovation Forum’s continued leadership in catalyzing and harnessing the collective wisdom of all the people involved in our common quest towards the 2021 World Bio Innovation Agenda.

Thank you very much.





Kwang-Hyung Lee

Korea Advanced Institute of Science & Technology President

It is a great honor to be a part of this 2021 World Bio Innovation Forum at Jeonju.

I am sending my gratitude to the people behind hosting this event, the Center for Regional Innovation at Jeonbuk National University and City Mayor of Jeonju.

The world has opened a significant position in creating new opportunities for much more inclusive environments for all through advances in bio healthcare innovations especially in these difficult times of the pandemic era.

The 2021 WBIF Agenda undeniably yields latest schemes and opportunity for Jeonju City and Jeonbuk National University to delve in the newest global trends in pharmaceuticals, healthcare, bio clusters, technologies, and investments worldwide.

The 2021 WBIF Agenda is of cynical relevance in coordination with our local resources and efforts. We must revitalize our endeavors to frame better platforms and take advantage of more valuable opportunities in our communities and then support those advances to expand globally.

To our distinguished participants of the WBIF, building partnerships among governments, international organizations, international financial institutions, the private sector and civil society has been very critical to move forward.

I hope for this Bio Innovation Forum's continued leadership catalyzing and harnessing the collective wisdom of all the people involved in our common pursuit to achieve the 2021 World Bio Innovation Agenda.

Thank you very much.

KAIST

WBIF

2021 World Bio Innovation Forum at Jeonju

| DATE | Dec 7 (Tue) ~ Dec 9 (Thu), 2021

| POINT OF ACCESS | WBIF website (www.wbif.or.kr)

| HOSTED BY | JBNU Center for Regional Innovation (JBNU CRI), Jeonju City, KAIST MBI

| SPONSORED BY | KAIST Center for bio-Healthcare Innovation and Policy (KAIST CHIP), ChipsBio, Han River Society

| ORGANIZED BY | WBIF Organizing Committee (WBIF Head Quarter)

| PROGRAM | Pharma / Healthcare Trend, Bio Cluster, Stem Cell Therapy, Healthcare Technology, Bio Investment, Funding IR

The 2021 World Bio Innovation Forum took place on December 7th!

The 2021 World Bio Innovation Forum at Jeonju, was held online for the first time from Dec 7th to 9th. The 1st World Bio Innovation Forum at Jeonju, which is one of the most comprehensive events deeply deals with the overall Bio Healthcare trends and technologies.

World Bio Innovation Forum is an extension and expansion of the Pharma-Healthcare Economic Forum and the KAIST CHIP Global Advisory Workshop that Dr. Suchan Chae, the president of WBIF have organized over the years.

World Bio Innovation Forum took its first step from 2021, it will be held annually and will be the best platform to share the current trends and information of the global Bio Healthcare and Pharma industry where researchers, scholars, entrepreneurs and policy makers gather and discuss issues that concern the "health" of the human kind and innovations occurring in the bio/ healthcare area, and furthermore it will be the best opportunity for both global startups and investors to meet together.

This year's World Bio Innovation Forum held all sessions virtually in line with the changing times and dealt with six key sectors of Bio Healthcare industry, including Pharma / Healthcare Trend, Bio Cluster, Stem Cell Therapy, Healthcare Technology, Bio Investment, and Funding IR.

We greatly appreciate all the distinguished participants and their contributions to the 2021 World Bio Innovation Forum at Jeonju. We would like to express our sincerest gratitude for your presence in this forum.

We hope this event delivers an experience beyond your expectations, and hope to meet you again in the near future at the 2022 World Bio Innovation Forum!

2021 WBIF at a Glance

Dec, 7 (Tue)		
Time	Session	Program
7:15–7:30	Opening	Welcoming Remarks
7:30–9:00	Pharma/ Healthcare Trend	Changing R&D and Business Focus
		Strategy and Transformation at a Time of Crisis
14:00–15:30	Bio Cluster	Bio Clusters in Japan
		Experience with Innovation Districts and Bio Clusters in Houston and Charlotte
Dec, 8 (Wed)		
Time	Session	Program
7:15–7:30	Opening	Welcoming Remarks
7:30–9:00	Transplantation	Personalized Cell Therapy for Parkinson's Disease : Hope or Reality?
		Transplantation Studies in Huntington’s Disease
14:00–15:30	Healthcare Technology	KARE MCM: Negative Pressure Ward for Infectious Disease Outbreak
		Digital Innovations for Clinical Development
Dec, 9 (Thu)		
Time	Session	Program
7:15–7:30	Opening	Welcoming Remarks
7:30–9:00	Bio Investment	Successful Investment of Digital Health
9:00–11:30	Funding IR	NurrOn
		TheraZyne
		Sozene Biotech
		FCB
16:45–17:30	Bio Investment	Bringing Start–ups to Market in Pharma Industry

Overview

01

Pharma / Healthcare Trend

| DATE | Dec 7 (Tue), 2021

| TIME | 7:30–9:00 AM (KST)

| POINT OF ACCESS | www.wbif.or.kr

| OFFICIAL LANGUAGES | English



Pharma / Healthcare Trend Session

During the past two years, healthcare has become more paramount to the global economy than ever before. As we are living in this pandemic, pharmaceutical industries have been facing a lot of challenges in the transition of infectious diseases following such trends in the pre-COVID and post-COVID era. Pharmaceuticals and Healthcare Trends will be pivotal to the economic recovery in the future. Definitely, vaccinations against Covid-19 will remain a fundamental priority in 2022 and the next coming years to come. Thus, healthcare systems will also need to address the existence of non-COVID care and other disease care.

This session tackles global R&D trends in pharmaceuticals in the post-COVID era as well as the business focus of multinational entities who are considered the giant players in the game of fighting infectious diseases around the world. Trends in the healthcare system were discussed such as strategies and transformation during this global health crisis and how we can have changes in the existing R&D to fit in finding solutions and bettering the crisis.

Speakers

► Changing R&D and Business Focus

Bernd Stowasser _ Head of European Public Private Partnerships, SANOFI Germany

► Strategy and Transformation at a Time of Crisis

Rasu Shrestha _ Chief Strategy and Transformation Officer, Executive Vice President, Atrium Health

Panel Discussion

► **Chair** Suchan Chae _ Director, JBNU Center for Regional Innovation / President Advisor, KAIST

► Panelists

Bernd Stowasser _ Head of European Public Private Partnerships, SANOFI Germany

Rasu Shrestha _ Chief Strategy and Transformation Officer, Executive Vice President, Atrium Health

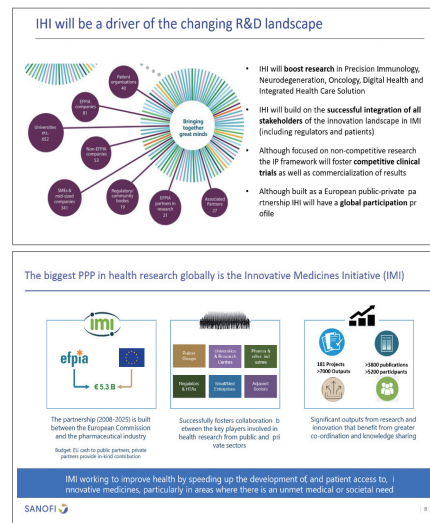
Uli Stilz _ Vice President, Novo Nordisk Bio Innovation Hub

Bernd Stowasser

Several trends in healthcare were discussed such as pharmaceutical industry sector having the highest R&D intensity, increasing R&D spending in the US, clinical trials R&D consumptions, oncology, and innovation wave. Innovative Medicines Initiative as well as smart investments were elaborated in this session. Working together to modernize clinical trials for pediatrics and rare diseases and boosting immunology with clinical data available were explained. During this time of pandemic, instead of competition, cooperation among pharmaceutical companies were emphasize that could lead to larger breakthroughs and opportunities in the world of medicine. Sanofi's role in the pandemic and trends were also introduced.



<https://youtu.be/i8zPPNwlJ-w>



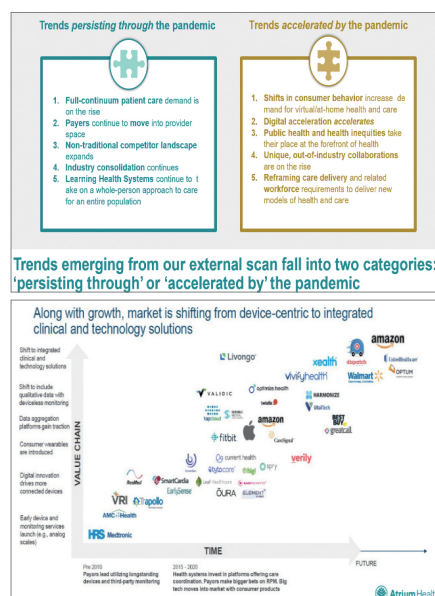
Rasu Shrestha

Chief Strategy and Transformation Officer

Being a community and acting as one global community was emphasized in this session. Digital Health Funding trends transitions were explained as well as healthcare systems. The emergences of trends persisting through and accelerated by the pandemic, ideas towards the "new normal", the need for proactive management during this pandemic was emphasized. Discussions together with building out capabilities of Atrium Health to create a health ecosystem that will power transformative consumer experience was also tackled.



<https://youtu.be/cWqqBGI-xaU>



Overview

02

Bio Clusters

| DATE | Dec 7 (Tue), 2021

| TIME | 14:00–15:30 PM (KST)

| POINT OF ACCESS | www.wbif.or.kr

| OFFICIAL LANGUAGES | English



Bio Cluster Session

The bio industry is at the heart of the fast-growing knowledge-based economy in which one distinguishing characteristic is clustering.

As Jeonju City desires to create its own bio cluster in the region, additional companies from the pharmaceutical sector as well as clinical research and development, connecting to several leading entities in medical and biopharmaceutical biotechnology around the world is a critical move.

The focus of the bio cluster's work is the identification, through active technology and product scouting by local partners at academic institutions, of research projects that can be commercialized in the future. For promising ideas, the cluster organization offers a funding program for project validation with the goal of founding an enterprise.

In this session, several bio cluster experiences were shared in the perspectives of our speaker's expertise in areas such as Japan and the United States. This session will open up new discoveries on the know-how techniques in building a successful bio cluster.

Speakers

► Bio Clusters in Japan

Taku Sakurai _ JPAC BD & Licensing Associate Director, SANOFI

► Experience with Innovation Districts and Bio Clusters in Houston and Charlotte

Lindsay Deneault _ Director of Commercialization, Atrium health

Panel Discussion

► Chair Suchan Chae _ Director, JBNU Center for Regional Innovation / President Advisor, KAIST

► Panelists

Panelists _ Taku Sakurai, JPAC BD & Licensing Associate Director, SANOFI

Lindsay Deneault _ Director of Commercialization, Atrium health

Seung-Su Kim _ Mayor, Jeonju City

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Japan has lagged behind in developing global life-science startup ecosystems

Life Science Global Startup Ecosystem Ranking *

Shonan iPark (2/2)

Shared equipment and facilities

Events & Programs

- Science/business seminars
- Mentoring programs
- MIT Venture Mentoring Services
- VC Consortium
- Various Club activities
- Etc.

Bio Clusters in Japan

Taku Sakurai

JPAC BD & Licensing Associate Director, SANOFI

Japan's strong source of innovation and technology was elaborated through Japanese academia. Japan's overview of new start-ups and venture capitals and the continuous development of global life science startup ecosystem were also explained. Company-driven ecosystem research centers were introduced located in several cities in Japan. Some progress and success seen in innovation hubs were explained. Sanofi's goal is to continue collaborations in addressing several needs to be fulfill and achieved.


<https://youtu.be/hmXCy0bgXAs>

Experience with Innovation Districts and Bio Clusters in Houston and Charlotte

Lindsay Deneault

Director of Commercialization, Atrium health

Background on Houston's Bio Cluster and Charlotte's Innovation District were elaborated. Health system programs, processes and venture capitals were discussed. Pipeline partners and ongoing market scanning strategies are necessary for a successful bio cluster. At the end of the presentation, several lessons learned in developing innovation districts were emphasized together with the planned approach for Korea.


<https://youtu.be/uUEj8k7e6AE>

TMC Future TMC³ Innovation Campus

Charlotte is ready for an Innovation District

- 2nd largest talent cluster – healthcare 47k people
- 12k degrees/year – 80% remain in Charlotte
- Growing data science sector – 21k people
- Charlotte Douglas International Airport
- Concentrated Medical Center
- Favorable Business Climate

Overview

03

Stem Cell Therapy

| DATE | Dec 8 (Wed), 2021

| TIME | 7:30–9:00 AM (KST)

| POINT OF ACCESS | www.wbif.or.kr

| OFFICIAL LANGUAGES | English



Stem Cell Therapy Session

Stem cell therapy, also known as regenerative medicine, promotes the repair response of diseased, dysfunctional or injured tissue using stem cells or their derivatives. It is the next chapter in organ transplantation and uses cells instead of donor organs, which are limited in supply. In this pandemic era, new discoveries and updates on the stem cell therapy will be discussed.

Amidst the Corona virus era, humans suffer more due to some complications and weakens the immune system. Thus, stem cells are cells with the potential to develop into many different types of cells in the body. They serve as a repair system for the body.

This session offers some new knowledge on the progress of stem cell therapy to humans, moreover, another area of disease such as Parkinson's disease. This session also offers new potentially beneficial approaches to fight Huntington's disease.

Transplantation Studies

► Personalized Cell Therapy for Parkinson's Disease : Hope or Reality?

Kwang Soo Kim _ Director of Molecular Neurobiology Laboratory, McLean Hospital
Professor of Psychiatry, Harvard Medical School / Founder, NurrOn Pharmaceuticals

► Transplantation Studies in Huntington's Disease

Francesca Cicchetti _ Researcher & Professor, Université Laval

Panel Discussion

► Chair

Sang-Hun Lee _ Biochemistry & Molecular Biology Professor, Hanyang University Medical School

► Panelists

Kwang Soo Kim _ Director of Molecular Neurobiology Laboratory, McLean Hospital
Professor of Psychiatry _ Harvard Medical School / Founder, NurrOn Pharmaceuticals
Francesca Cicchetti _ Researcher & Professor, Université Laval

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Personalized Cell Therapy for PD : Hope or Reality?

Kwang Soo Kim

Director of Molecular Neurobiology Laboratory, McLean Hospital

Professor of Psychiatry, Harvard Medical School

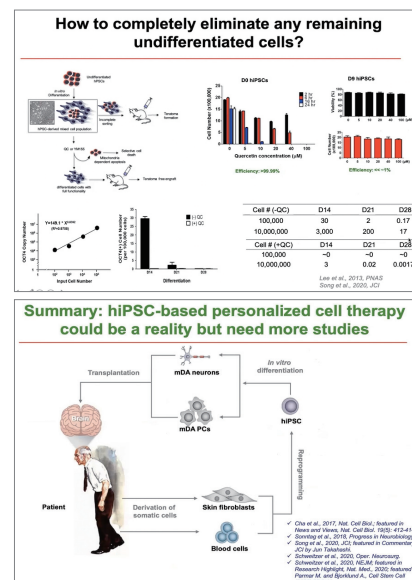
Founder, NurrOn Pharmaceuticals

Dopamine and Parkinson's Disease were introduced at the beginning of the presentation.

The idea of PD as a promising target disease for cell replacement therapy was also discussed together with corresponding circumstances. Continuous debates on the ideal cell sources were elaborated such as safety, technology, clinical trials, optimization and regulatory issues.



<https://youtu.be/ZUYceW6kGdQ>



Transplantation Studies in Huntington's Disease

Francesca Cicchetti

Researcher / Professor, Université LAVAL

Huntington's disease was introduced with the genetics, clinical features and neuropathological features. Some evidences from transplanted HD patients, evidence from mice transplanted with vesicles of HD-derived fibroblasts, evidence from blood circulation, evidence from parabiosis studies were also shown. Humanized 3D Blood-Brain Barrier Model was also presented with its biological relevance.



<https://youtu.be/zawAeflUWag>

HUNTINGTON'S DISEASE
The genetics

CELL REPLACEMENT THERAPY AND HUNTINGTON'S DISEASE
Lessons Learned

- 1 Although cell replacement therapy has not generated benefits in HD patients, post-mortem analyses of failed trials have revealed a number of important aspects of disease mechanisms.
- 2 Although we must be aware of the prion properties of proteins associated to neurodegenerative disease, there is potential benefits to cell replacement therapy for a number of such disorders, in particular PD.
- 3 Considering alternative approaches, such as antibody-based therapy to target other aspects of disease, will be important in future clinical endeavors.

Overview

04

Healthcare Technology

| DATE | Dec 8 (Wed), 2021

| TIME | 14:00–15:30 PM (KST)

| POINT OF ACCESS | www.wbif.or.kr

| OFFICIAL LANGUAGES | English



Healthcare Technology Session

Today's healthcare industry has transformed into gigantic part of the global economy. Using IT tools or software designed to boost hospital and administrative productivity has become more essential in this pandemic era. Healthcare technology gives new insights into medicines and treatments, or improve the overall quality of care provided. Tech-infused tools are being integrated into every step of our healthcare experience to counteract two key trouble spots, which are quality and efficiency. Healthcare technology companies have provided a much-needed setback of efficiency by tailoring experiences to the individual. The realization kicks in that there's no one-size-fits-all approach to proper care, so customization is key.

This session provides the newest healthcare technologies and also gives insights on the data strategies involved in the clinical trials and medical treatments.

Speakers

► KARE MCM: Negative Pressure Ward for Infectious Disease Outbreak

Tek-Jin Nam _ Professor / Head of Industrial Design Department, KAIST

► Digital Innovations for Clinical Development

Terttu Haring _ Global Head of Clinical Digital and Data Innovation, SANOFI

Panel Discussion

► Chair Koon Ho Rha _ Director, NAVER Healthcare Lab

► Panelists

Tek-Jin Nam _ Professor / Head of Industrial Design Department, KAIST

Terttu Haring _ Global Head of Clinical Digital and Data Innovation, SANOFI

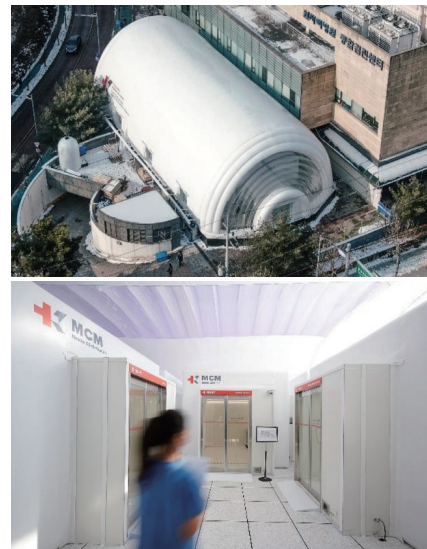
Contents

KARE MCM: Negative Pressure Ward for Infectious Disease Outbreak

Tek-Jin Nam

Professor / Head of Industrial Design Department, KAIST

KAIST's Antiviral Mobile Clinic Module Project was introduced with the negative pressure isolation room and ward designs. Application Scenario and Clinical Usage was also explained. Due to coronavirus, treatment of patients has become much more advanced through the MCM.



 https://youtu.be/_vQmnUy8pus

Digital Innovations for Clinical Development

Terttu Haring

Global Head of Clinical Digital and Data Innovation, SANOFI

Clinical development objectives, healthcare system operations in the future such as planning, how to leverage digital innovations for strategy and centricity and productivity were explained in this session. Changes in the collaboration paradigm was also elaborated with the patients, sites and sponsors. Clinical trials assessments were emphasized such as safety monitoring outside clinical setting, rapid decisions for medical personnel and enabling home health.

 https://youtu.be/UTfXDHF_q24

Maximize • Maximize the value of each molecule

Enhance • Enhance productivity of the organization

Respect • Respect medical journey of patient and doctor

OUR CLINICAL DEVELOPMENT OBJECTIVES

OPERATING IN THE HEALTHCARE SYSTEM OF THE FUTURE

Healthcare: building a digital healthcare system

Care anywhere
Patients will move closer to the home through advanced care, remote home and vital care, and all the high-quality medical services in making decisions.

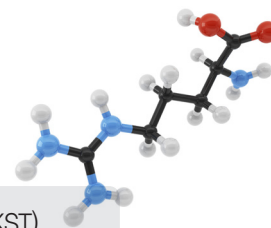
Empowered care
Through the development of this service, empowered care solutions will enable doctors to make a more solid decision by including their own self-being and treatment.

Intelligent health enterprises
Our future solutions will enable healthcare workers and their enterprises to transform their efficiency and allow patient health to be monitored more effectively in real time.

Overview

05

Bio Investment



| DATE | Dec 9 (Thu), 2021 | TIME | 7:30–8:15 AM (KST) / 16:45–17:30 PM (KST)

| POINT OF ACCESS | www.wbif.or.kr | OFFICIAL LANGUAGES | English

Bio Investment Session

In the bio industry, inclusions of investors and start-ups make the recipe complete. WBIF works to promote the creation of a strong private sector in emerging economies, to enable them to gain access to prosperity and development in the future. Bio Investments have fueled the biotech industry networking with investors, focused on established and emerging publicly traded and select private biotech companies. Latest updates on start-ups in the pharmaceutical industry were discussed in this session.

Speakers

► Successful Investment of Digital Health

George Mclendon _ CEO, ML Bio Solutions

► Bringing Start-ups to Market in Pharma Industry

Laia Crespo-Martin _ Global Head of Investments, Sanofi Partnering / Head of Europe, Sanofi Ventures

Panel Discussion

► Chair Wonjoon Kim _ Head of Bio Innovation Management Program, KAIST

► Panelists

George Mclendon _ CEO, ML Bio Solutions

Laia Crespo-Martin _ Global Head of Investments, Sanofi Partnering / Head of Europe, Sanofi Ventures

Hyunjun Park _ CEO, Catalog

Contents

Making Pain Optional? Migraine Prediction through Automated Machine Learning

George McLendon

CEO, ML Bio Solutions

The dynamic MigrnX software system was introduced in this session as migraine is considered the most common chronic disease. The software is a robust migraine mitigation platform, utilizes a quick-entry method that enables accurate documentation by the patient, improves care via integrated workflow, creates personalized ML algorithms.



<https://youtu.be/luPMPidfG1c>

TRADITIONAL DIVISION BETWEEN ACUTE AND PREVENTIVE TREATMENT

	Acute treatment	Preventive treatment	Pre-emptive treatment
Purpose	Treat after pain begins to relieve pain and associated symptoms and restore function	Treat independent of acute attacks to reduce attack frequency and severity; manage disability and make acute treatments more effective	Treat in anticipation of predictable attacks
Primary endpoints	24Hr 2h MBSF	Change in PREs	Absence of headache after treatment
Advantages	Treat only when needed Compatible with patient class of "episodic disease"	Constant exposure to treatment Patients must accept a "chronic disease" model	Treat only needed like acute treatment Compatible with an "episodic disease" model
Side effects	Only on headache days	On headache and non-headache days	Only on days when headache is predicted
Disadvantages	Suffering while treatment benefits develop If treatment is late benefits are reduced	Rarely 100% effective	If effective, headache is completely eliminated with pre-therapy

MIGRX® PLATFORM UTILIZES A QUICK-ENTRY METHOD THAT ENABLES ACCURATE DOCUMENTATION BY THE PATIENT

- Easy overview of patient Monthly/Weekly migraine record with prominent number display
- Average time to enter a migraine is 30 seconds
- Edit any aspect of the migraine record during the episode or after its completion; each entry is time-stamped
- Minimalist interface with migraine-friendly colors enables consistent use
- Total monthly headache frequency are easily visualized on calendar that also allows patients to include menstrual info

Bringing Start-ups to Market in Pharma Industry

Laia Crespo-Martin

Global Head of Investments, Sanofi Partnering

Head of Europe, Sanofi Ventures

Discussions on venture capitals were elaborated as a critical effort in funding early-stage innovation due to some risks of the start-ups. Idea, Team and Money were considered as the key ingredients of a successful venture. The importance of the biopharma ecosystem was also explained through data availability. Sanofi's effort in bridging the gap between the early stage and innovation ecosystem were emphasized.



<https://youtu.be/HZUg6J9Z110>

Three Key Ingredients of a Successful Venture

Idea	Team	Money
<ul style="list-style-type: none"> • Strong vision / concept • Addresses a clear unmet need 	<ul style="list-style-type: none"> • Building a business is hard, the right team can predict and overcome roadblocks 	<ul style="list-style-type: none"> • Clear fundraising strategy • Sophisticated co-investors • Justified target raise

Venture Capital:
Capital invested in a project in which there is a substantial element of risk, typically a new or expanding business

Sanofi Ventures' Investment Model

- Investing to Strategic Purposes**
 - Access to Innovation
 - Sharing of Learnings
- Building Relationships with Companies**
 - Seat at the Table
 - Support & Expertise
- Creating Value & Future Pipeline Opportunities**
 - BD Opportunities
 - Reputation and Awareness

Funding IR

| DATE | Dec 9 (Thu), 2021 | TIME | 9:00–11:30 AM (KST)
 | POINT OF ACCESS | www.wbif.or.kr | OFFICIAL LANGUAGES | English

In this session, several start-ups in the bio innovation were presented. WBIF believes company presentations are an integral programming element that allow companies to discuss their pipeline, R&D activities, and future fundraising goals to this exclusive audience of investors and collaboration partners in the future.

Introduction of Startup

NurrOn Pharmaceuticals

NURRON
PHARMACEUTICALS

COUNTRY	United States	CEO	Deog Joong Kim	URL	www.nurronpharma.com	E-mail	djkim@nurronpharma.com
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NurrOn Pharmaceuticals Inc. is a clinical-stage biopharmaceutical company dedicated to developing novel, targeted therapeutics for the treatment of Parkinson's disease (PD) and other Nurr1-related incurable human disorders.

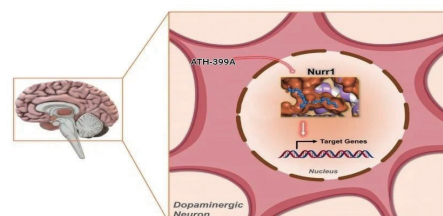
Our mission at NurrOn Pharmaceuticals is to develop innovative, targeted Parkinson and other neurodegenerative therapies with the potential to improve survival and quality of life in patients with neurodegenerative diseases.

While currently there are only symptomatic treatment options for patients with PD, there has been no successful therapies to slow or prevent the progression of the disease.

Nurr1 is the master regulator in dopaminergic neuron development and maintenance. Based on the unique dual role of Nurr1 for development and maintenance of dopaminergic neurons and their protection from inflammation-induced death, we believe that Nurr1 can be a molecular target for paradigm changing therapeutic development for PD.

We identified Nurr1 activators that enhanced the contrasting dual functions of Nurr1 by increasing transcriptional activation of dopaminergic-specific genes and further enhancing transrepression of neurotoxic proinflammatory gene expression in microglia. These Nurr1 activators significantly improved behavioral deficits in both 6-hydroxydopamine lesioned rat and MPTP-lesioned mouse models of PD without any detectable signs of dyskinesia-like behavior.

Building on a strong foundation in Parkinson research and discovery, we have assembled a diverse portfolio of novel neurodegenerative disease assets that includes novel investigational lead compounds for the investigational new drug (IND) enabling studies.



Introduction of Startup

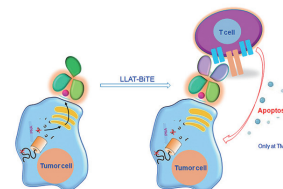
TheraZyne Co. Ltd



COUNTRY	Republic of Korea	CEO	Byung-Ha Oh	URL	www.therazyne.com	E-mail	bhoh@therazyne.com
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Therazyne create next-generation immunotherapies for the treatment of cancers that do not respond to currently available therapies.

By state-of-art computational protein design and deep learning-based prediction of protein-protein interaction combined with experimental methods, we create monoclonal antibodies (mAbs) against next-generation immunotherapeutic targets. These mAbs can be recreated into next-generation bispecific T-cell engagers, CAR-T receptor or antibody-drug conjugates.



Sozene Inc.



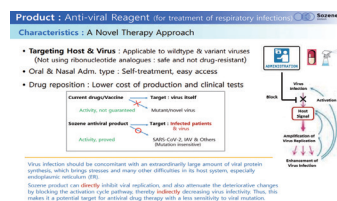
COUNTRY	Republic of Korea	CEO	Sang-Yun Choi	URL	www.sozene.kr	E-mail	esychoi@gmail.com
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Sozene, a science-based biotechnology company, is dedicated to creating a safe life in an unsafe world.

Our specific goal is to advance therapeutic medicine for preventing and treating virus infection-associated illness and degenerative diseases through innovative research.

On the basis of a variety of professional research experiences concentrated in highly pathogenic viruses and virus infection-associated diseases in animal host cells and their impaired balance, our researches make efforts on the development of the new forms of anti-viral treatment that are less dependent on genetic diversity and less susceptible to resistance.

As we pursue the goal, we integrate basic life science, informatics and recent interdisciplinary biotechnologies.



FCBIO



COUNTRY	Republic of Korea	CEO	Peter Kang	URL	www.fcbiomedical.com	E-mail	song133436@gmail.com
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Fiat Care Biomedical is focused on development of novel therapeutic drugs to treat oxidant-induced injury or inflammatory disease.

FCB-101 is an orally available and specific H₂O₂-targeting small molecule that can treat or prevent ischemia/reperfusion (I/R) injury. Currently no drug or agent similar to that of FCB-101 exists, and thus we believe our IP will likely keep us unique in the market place.

FCB 102 is a novel vitamin D analog that does not cause hypercalcemia even at high doses.

FCB 102 could also be incorporated into cosmetic compound (cosmeceutical) to supplement vitamin D deficiency, which is commonly observed when lacking sunlight exposure. In addition, it has potential to prevent viral infections, such as COVID-19.

FCB-101: VDR Immune Activator (VDRIA)

- FCB 101 is a novel VDR (vitamin D receptor) Immune Activator (VDRIA) that that strongly activate VDR signaling pathway.
- FCB-101, unlike vitamin D, is also able to achieve super activation of vitamin D pathway without causing hypercalcemia, which is the main drawback of vitamin D therapy.
- FCB 101 was initially developed for the therapy for cardiac hypertrophy and heart failure, especially in renal failure patients.
- FCB 101 has potential to prevent and treat viral infections, such as COVID-19. It could be used as an adjunctive therapy for COVID in conjunction with other approved therapy, such as anti-viral (remdesivir) or antibody therapies.
- In addition, FCB 101 could be incorporated into cosmetic compound (cosmeceutical) to supplement vitamin D deficiency, which is commonly observed when lacking sunlight exposure. Vitamin D deficiency and increased COVID infection has been widely recognized

WBIF
2021 World Bio Innovation Forum
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