

We interviewed Mr. Nomura, Chairman of the Central Institute for Experimental Medicine and Life Science (CIEM) , which changed its corporate name from Central Institute for Experimental Animals (CIEA) this year.



Exterior of CIEM

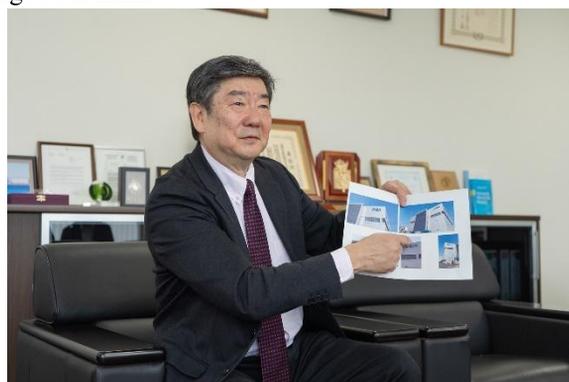
The Central Institute for Experimental Animals (CIEA), established in 1952, changed its corporate name to the Central Institute for Experimental Medicine and Life Science (CIEM) as of 1 April this year. Central Institute for Experimental Medicine and Life Science is a private research institute aiming to contribute to the development of medical care and the improvement of people's health and welfare through the development of laboratory animals that provide high-quality, homogeneous, and reproducible data, and through research and elucidation of human diseases using laboratory animals. We asked Mr. Ryuta Nomura, Chairman, about the background of corporate name change, the new projects and initiatives associated with it, the meaning behind the new logo and his passion on the prospects and we are pleased to share with you in this i-Newsletter.

Background and meaning of the corporate name change

“Preclinical systems = animal experiments” were the mainstream at the time when CIEM was established. However, it was a situation that medical research and drug discovery could not become science unless the quality of experimental animals was improved. Therefore, we thought that by producing high-quality laboratory animals, we could obtain reproducible data, and we have been working towards becoming the best animal laboratory. Whereas, unlike when it was first established, preclinical systems are now not limited to animal experiments and various test methods have been established such as in vitro testing using cells, in silico evaluation using computers, safety testing using organs differentiated from iPS or ES cells, organ-on-a-chip (organ chip) and organs produced with 3D printers. We clearly see that we should not only rely on laboratory animals but also address this diverse preclinical system. For that, we have been working on open innovation between our institute and other companies and the development of new fields for several years. We have a wide network in the preclinical systems industry; therefore, we want to continue

to work together, expanding our network through leadership and working with institutions with new technologies to create a system that will benefit the world. As such, we consider institutions with newly established preclinical system technology to be "collaborators" rather than "competitors". Our current goal is not to have the best laboratory animal research institute, but one that provides the best preclinical systems. Worldwide, no major laboratory animal research institute or company has laboratory animals in its name. Also, as they say “The name is a mirror of its character”, we changed our name to Central Institute for Experimental Medicine and Life Science (CIEM) to leap to a new stage by changing the name. The name of the Central Institute for Experimental Medicine and Life Science (CIEM) was chosen for it could be interpreted in various ways, such as 'Central Institute for Experimental Animals', 'Central Institute for Experimental Medicine' or 'Central Institute for Experimental Life Sciences'. The Central Institute for Experimental Medicine and Life Science has a history for more than seventy years and we have the trust and know-how of all those who have helped us, as well as technology that is recognized around

the world, thus we have no intention to change our base, but we are planning to come up with something new since we changed our name.



Mr. Nomura, Chairman

Passion behind the new logo

The 'M' shape in the new 'CIEM' logo is gently curved and eye-catching. This gently cured letter expresses helping each other. In addition, it has various meanings and thoughts such as "M" is the initial letter of "mouse" and "marmoset," and the original logo "CIEA" has been changed from "A" representing "Animal" to "M" representing "Medicine, Mankind, Multiplicity" and wanting to emphasize what was done and make it prominent. While we were working on a project to change our corporate name and logo, the moment we saw this logo, it was unanimously decided.



New CIEM logo

Experience as "Business person" is useful

When I was a small boy, there was a laboratory in the garden of my parents' house, and my father, Dr. Tatsuji Nomura, made me help him by washing the breeding cages. It was smelly, dirty, and painful, so I said to myself that I did not want to do this kind of work and considered a different path to my father. I had studied marketing at Faculty of Commerce at the university and worked for a trading company afterward. After working in New York, Germany, Singapore and elsewhere, also as the president's business secretary, I became a head of biotechnology business, which, coincidentally, I ended up getting involved with CIEM. There, I realized for the first time that there were so many intellectual properties hidden at CIEM. It looked very interesting for a businessperson like me, I strongly felt that it was not the time for me to work in business. When I joined the CIEM, I was 49 years old, and my father was 80 years old. If I were to work until I was 80 years old in the same way as my father, I would once again be a freshman and would enjoy 30 years of my working life twice, so I joined

the institute with the positive attitude of starting over from scratch. My experience working at a trading company was very useful and I could establish a new proposal model that promotes animals not as individual objects, but as a tool that compose an animal experiment system. This is an outcome of the experience of creating new business models as the need for trading companies, whose main business was intermediation, has diminished with the development of information and communication technology, just as the transition from fax to e-mail did.

Wheels of the CIEM

One wheel is to support Japan's research as a foundation that backs up the country's basic research. The other wheel is the development of a groundbreaking new technology that is only carried out by CIEM in the world. The latter wheel is determined to do something stand out with full blast. However, just being stand out is not an option, therefore we aim to make the technology available to people all over the world and contribute to humanity in various ways. By the time people are saying "good", it is already too late. People are already aware and taking action. Rather, I believe that we must try things that everyone is saying "No good" especially within this institute. For example, when we were developing a liver humanized model mouse, there were comments from within the laboratory saying, "How long are we going to keep doing this? Stop doing this." However, the strength of small and medium-sized research institutes is that there are no personnel transfers. That is why there is a continuity for the research. People working at large companies and governments, no matter how passionate they are about their job, they are going to be transferred after a few years and they must change their job. Then, even if you work with passion, your successor will say that the project was created by the previous person, and there will be an enthusiasm gap between them. As a matter of fact, it is difficult for one person to commercialize a single job after two to three years. If you would like to start something from scratch, it should still take five to ten years. I believe that the strength of medium-sized research institutes is that they can focus entirely on their job.

Challenge to a new stage

For example, while observing genetically modified mice under a microscope, I was wondering if it would be possible to automate the process of injecting sperm into eggs using the craftsmanship. Coincidentally, I had a chance to meet with someone from a car bearing company, and when I talked about it, I learned that the company has technology for positioning on the X, Y, and Z axes, and we could connect that this technology allows sperm to be placed inside an egg. This technology could potentially be applied to fertility treatment; therefore we proceeded as a social contribution initiative, named the completed machine 'Stork', and delivered this to a medical institution. Currently, the city, prefecture, and national government are responsible for the development of KING SKYFRONT, where the CIEM is located, but it is our role to passionately put our enthusiasm and all our efforts into the development of this area. The value of this area is tested depending on if we can really do that. We are moving forward with the determination to do that with all the neighbor institutes.

There are limits to what one person can do. If we build good relationships with everyone and work together, "1+1" can become 20 or even 50. I hope to continue to enjoy working together with the neighbor institutes and companies in the future.

This time, we asked Mr. Nomura about his thoughts on the change of the Institute's corporate name and his passionate outlook for the future. Thank you very much, Mr. Nomura.



Stork Mr. Nomura purchased on his business trip

Hot Topics

NANO MRNA starts clinical trials for drugs for malignant brain tumor

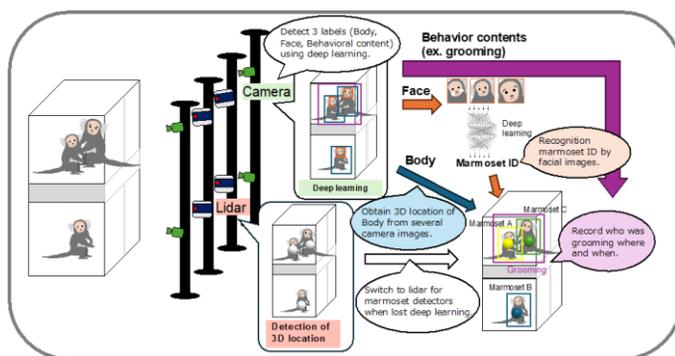
NANO MRNA Co., Ltd. (Head office: Minato-ku, Tokyo) announced that investigator-initiated clinical trials has started for drugs for malignant brain tumor "glioblastoma". The drug will be administered to up to twenty-four patients at three institutions, including university hospitals, and its safety and efficacy will be verified. Glioblastoma, with an estimated 2,000 new cases per year, is one of the most malignant of all brain tumors. It is difficult to cure with current treatment methods such as surgery and radiotherapy and has an extremely poor prognosis. The therapeutic drug developed by the NANO MRNA acts on TUG1, an RNA (ribonucleic acid) in the body that is linked to the proliferation of cancer cells, removes factors that help cancer cells proliferate, and induces cell death, is expected to become an innovative drug.



[Click here for NANO MRNA news release](#)

Central Institute for Experimental Medicine and Life Science (CIEM) Development of a novel AI-based marmoset behavior analyzer.

The research group led by Dr. Terumi Yurimoto, Senior Research Scientist, and Dr. Erika Sasaki, Director of the Department of Marmoset Biology and Medicine, CIEM, has developed FulMAI: a novel AI-based marmoset behavioral analyses system. Marmosets' behavioral characteristics are similar to humans, such as forming families consisting of parents and their children, and various disease models have been developed, including Alzheimer's and Parkinson's diseases. However, it is not clear how behavior changes because of the onset of the disease. In this research, by focusing on the fact that there are individual differences in facial features like humans and using AI to identify faces, non-invasive identification and tracking of individuals has been achieved. The research group anticipates that new insights into behavioral changes due to the early onset of various neurological diseases and feedback into human medicine will be provided in the future.



Analysis workflow of FulMAI system

[Click here for CIEM news release](#)

Held an event!

RINK FESTIVAL 2024 with LINK-J was held

RINK FESTIVAL 2024 with LINK-J hosted by Regenerative medicine & Cell therapy Industrialization Network of Kanagawa (RINK), now in its 6th edition was held at Mid-Town Yaesu on February 16. Under the theme 'Flexible connections, new encounters', four sessions were held, in which experts, renowned scientists and high-profile regenerative medicine-related start-ups shared their passionate thoughts in presentations and panel discussions. Many industry



professionals gathered and listened to valuable stories that could only be heard at this occasion. The networking between sessions also provided opportunities for new connections. The event lasted for about eight hours, but such was the enthusiasm that time was not enough. For those who were unfortunately unable to attend, let's look forward to next year's event.

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Joined KING SKYFRONT!

Data-Driven Business Development Improving Corporate Challenges through Data Analysis

Sukusui Transport Co., Ltd. is engaged in logistics, wholesale, agriculture, analysis, and chemistry, creating prosperity for many people. As a partner to major manufacturers and trading companies in the Tokyo metropolitan area, we leverage our expertise in data analysis and strategic knowledge to contribute to business efficiency, optimized sales management, organizational management, and improved marketing strategies. From February 2024, we will open a new office in Tonomachi Connect to further expand our support for businesses. Through a wide range of services including logistics for medical devices, data analysis, and corporate strategy development, we fully support our customers in solving their challenges. Sukusui Transport's services combine data-driven analysis with strategic thinking to achieve sustainable success for client companies. We are highly regarded as a trusted partner.

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iCONM Now



International School Students Learnt Nanomedicine at iCONM

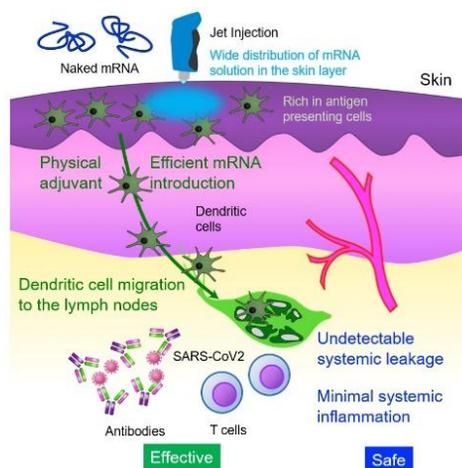
On April 17, 34 students from Horizon International School in Yokohama, who are equivalent to first-year high school students in Japan, came to iCONM. In prior to carrying out the following 4 experiments; 1) size measurement of nanoparticles, 2) microscopic observation of brain tissues, 3) electrophoresis of DNA, and 4) powder sampling under argon using a glove bag, the students were given a short lecture by Dr. Sabina Quader, Deputy Principal Research Scientist, and divided into four groups. For closing the event, the "incandescent classroom" by Prof. Kazunori Kataoka, Center Director of iCONM, was very exciting as it attracted the students' strong interest and elicited many comments. iCONM has 105 foreign researchers (38%) from 21 countries, and it was a good opportunity for them to become aware of a member of iCONM team and to increase their motivation.



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mRNA vaccines may be better naked.

mRNA vaccine saved mankind from the crisis of new coronavirus infection. Unlike conventional vaccines, they can be developed in a short period of time and work effectively during an epidemic of a new type of virus. mRNA is a protein blueprint, and proteins with amino acid sequences specified by the order in which the four compounds, denoted A, G, C, and U, are arranged, are naturally synthesized in the body. In other words, when mRNA is created and inoculated into the body to become a virus-specific protein, that protein is synthesized in the body, and when it is recognized as a foreign substance, antibodies are produced to eliminate it. This is the mRNA vaccine. However, since mRNA is a very unstable substance, it is usually inoculated by covering it with a membrane such as lipid. However, a group led by Prof. Satoshi Uchida, a principal research scientist at iCONM, and his colleagues have demonstrated in monkeys that antibodies can be produced with "naked mRNA" as if to overturn this common sense. The key point is that "naked mRNA" is inoculated into the skin using a tool called a jet injector. Compared to conventional intramuscular injections, there is almost no pain. In addition, since the inoculated mRNA stays in the skin, it is thought to prevent the occurrence of side effects such as fever and lethargy caused by the mRNA being transported throughout the body, as is the case with conventional methods. The results of this research were published in the journal *Molecular Therapy* on April 2, 2024 and attracted much attention.



S. Abbasi et al., *Molecular Therapy*, in press

Click here for details

<https://doi.org/10.1016/j.ymthe.2024.03.022>

Renewal of KSF net

We have renewed our website (homepage) to provide information to everyone at the KING SKYFRONT. We are pleased to give information not only about grants and seminars for located institutions but also about lunch arrangements for those working in this area. We have been operating our internet as "KSF Intranet" with user authentication, but to improve convenience, user authentication has been abolished for information references, and the name has been shortened to "KSFnet". We are committed to provide more information and would like to operate a more convenient website, so please use it.

<https://king-skyfront.ne.jp/>

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