KING SKYFRONT
Kawasaki INnovation Gateway at SKYFRONT
i-Newsletter
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The 4th KING SKYFRONT Science Forum (December 19, 2025)

Interview with the Chairperson

Yoji SATO, Ph.D.
DEPUTY DIRECTOR GENERAL
NATIONAL INSTITUTE OF HEALTH SCIENCES

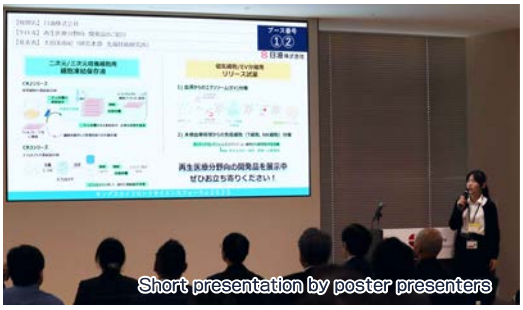
KING SKYFRONT organizes an annual "Science Forum," providing an opportunity for researchers and developers to connect, exchange ideas, and collaborate. Since 2023, the forum has featured talks and poster presentations by research organizations based at KING SKYFRONT and partner institutions. The 4th Science Forum achieved record-high participation from both organizations and attendees, marking its most successful edition to date. We spoke with Chairperson Yoji Sato, who led the organizing committee, to reflect on the event and hear his expectations for the future.

The Value of Bringing Everyone Together

When the National Institute of Health Sciences moved to KING SKYFRONT in 2017, there were relatively few organizations in the area, and collaborative research was carried out through partnerships with the Central Institute for Experimental Medicine and Life Science (CIEM) and the Kawasaki City Institute for Public Health. As the number of companies and academic institutions in the area steadily grew, so did interest in the work of neighboring organizations. We believe this forum offers an excellent opportunity for organizations based in the area to connect with one another, fostering unexpected matches and collaborations. Although individual organizations now host open seminars and discipline-specific events, this forum—bringing together the local community across disciplines—remains uniquely valuable.

A short presentation to quickly grasp what's happening "now"

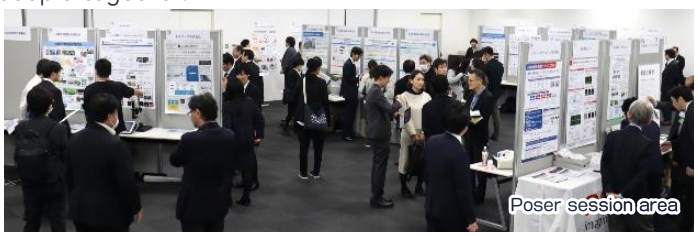
Short presentations of about 40 seconds, in which speakers introduce their posters, have become a signature feature of the forum. Visitors enjoy being able to quickly learn about the research, while exhibitors appreciate the chance to showcase their posters to many people at once. We also welcomed speakers involved in local industry-academia-government collaborations to present their research and join a panel discussion. Their candid discussion of the challenges they have faced on shared issues was especially valuable, and it was great to see these insights resonate with the audience.
I also very much enjoyed serving as the moderator.


Short presentation by poster presenters


Research presentation and panel discussion

Creating inclusive initiatives for all generations

The event has grown in scale with each edition; however, some people still seem to see it as something only for high-profile. Younger people may feel hesitant about joining more established circles, for those raising children, staying late isn't always easy. So instead of limiting interaction to the evening discussion session, we introduced a number of ideas to create more opportunities for interaction. We opened the poster session earlier so people could view it over lunch, and it was very well received. As it was our first time trying this, we were a bit unsure at first, but we were delighted to see so many people actively engaging. We also organized a stamp rally at the venue, and received feedback that It brought people together.


Poser session area


Stamp rally


Networking session

An annual local festival

As the number of visitors continues to grow, we hope to see a further increase in the proportion of younger participants. We were encouraged by the vibrant atmosphere at the lunchtime poster session, which gave us a strong sense of future potential. For example, we hope to expand opportunities for participation by inviting younger members to contribute from the planning stage, drawing on their unique perspectives and ideas. In addition, Ota City and Shin-Kawasaki, which have participated since the previous event, have drawn significant interest from local institutions, and we expect them to play an important role in connecting research clusters. We also aim to foster this event as an annual local festival that brings everyone together.

About KING SKYFRONT Science Forum 2025 ▶

Event Report

Collaborative Event with Shonan iPark

On February 12, 2026, a collaborative event was held by Shonan iPark Science Café and KING SKYFRONT. “Shonan iPark Science Café” is a weekly seminar series held at Shonan iPark, where volunteer researchers gather to discuss innovative scientific topics in an open and interactive environment.

On this occasion, Mr. Kenta Sonoda, Director of the Coastal Area International Strategy Headquarters, Kawasaki City, and Dr. Theofilus A. Tockary, Senior Research Scientist at the Innovation Center of NanoMedicine (iCONM) joined the event as speakers from KING SKYFRONT. The Q&A session was lively, and participants continued their discussions and asked individual questions even after the seminar ended, making it a highly engaging and successful event.

TONOBITO

"TONOBITO" is a feature series that introduces the personalities and everyday lives of the people working at KING SKYFRONT, offering a chance to get to know them and fostering opportunities for connection.

Kao Corporation.
Ren Kimura

For more details ▶

We spoke with Mr. Ren Kimura of Kao Corporation. After years of conducting trace analyses of food and biological samples at the company’s R&D-Analytical Science Research department in Tochigi, he launched Kao’s first chiral metabolomics research initiative. He is now based at the Kawasaki Tonomachi Laboratory, where he is working on the early detection of dementia through D-amino acid analysis.

Kimura explains that individuals with suspected mild cognitive impairment (MCI) or dementia tend to show elevated levels of D-amino acids in their blood. These findings suggest that blood tests may enable the detection of early signs of cognitive decline. “In the future, we hope to identify dementia risk at an early stage and ultimately work toward a world without dementia,” he says. Building on these discoveries, he is collaborating with companies, university hospitals, and government agencies to explore pathways for social implementation. He has also found that urinary D-amino acids may be useful for the early detection of chronic kidney disease in cats.

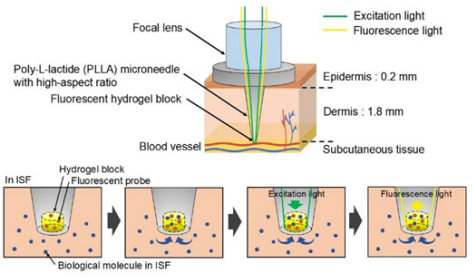
Outside the laboratory, Kimura is equally passionate about cheering for the Hokkaido Nippon-Ham Fighters. A native of Hokkaido, he visits ES CON FIELD HOKKAIDO whenever he returns home and enthusiastically supports the team. He is particularly excited to follow Chusei Mannami’s performances. The Fighters’ determination in striving for the top mirrors Kimura’s own commitment to his research and his vision of a world where diseases can be prevented through early detection and care.

Kimura’s pursuit continues through every experiment and collaborative research project.

iCONM NOW Aiming at blood-draw-free clinical testing

Little number of people like blood tests during health checkups, and nurses also find it stressful to draw blood from individuals with difficult-to-access veins. Responding to the demand for “something to replace blood draws,” research is advancing on using interstitial fluid—a bodily fluid found in the reticular layer between the skin and subcutaneous tissue—as a substitute for blood. Since the sample volume obtainable is vastly smaller than blood, the development of high-precision ultra-microanalysis methods is eagerly awaited.

A visiting scientist, Dr. Hiroaki Takehara (Associate Professor, Graduate School of Engineering, The University of Tokyo) and his colleagues have developed a device featuring a transparent micro-needle, just as thick as a mosquito’s mouth and 2mm long, with a tip loaded with a substance called fluorescent boronic acid hydrogel. This optical microneedle device quantitatively forms a complex with glucose at its tip, emitting fluorescence at a specific wavelength when exposed to laser light. Since the fluorescence intensity correlates with glucose quantity, quantitative analysis becomes possible.Currently,enzymatic methods are used for blood glucose measurement, but errors become significant with ultra-micro samples. The optical microneedle device developed by Project CHANGE,being an enzyme-free analytical method, not only enables high-precision analysis with sample volumes less than 1 nanoliter but also withstands long-term storage of the testing device. This alleviates the discomfort for those undergoing blood draws and relieves stress for nurses.



Quantification of Glucose in Interstitial Fluid Using Transparent Microneedles
©Takehara Lab., Graduate School of Engineering, The University of Tokyo

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This magazine shares a variety of information about KING SKYFRONT-affiliated institutions.
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