



WPI-Bio2Q NEWSLETTER

Bio2Q Connect

Keio University
Human Biology-Microbiome-Quantum Research Center (Bio2Q)
URL: <https://bio2q.keio.ac.jp>

35 Shinanomachi, Shinjuku-ku, Tokyo 160-8582, Japan
E-mail: sc-wpi-staff@adst.keio.ac.jp

MESSAGE FROM ADMINISTRATIVE DIRECTOR The Pulse of Midterm Bio2Q

Last year we focused on building the structures for success. By sparking new conversations in our Q Bio Synergy Sessions and Faculty Club and launching the Structural Biology Facility as a fully functional unit, we laid a robust foundation. Now, our center prepares for its interim evaluation. This milestone reminds us that our greatest strength lies not in our infrastructure, but in our people.

A research center is more than a collection of labs and datasets. It is a living culture that thrives most when we move beyond collaboration and toward a true community. We already see this evolution in the growth of the STaMP Program. With enrollment rising to 30 students and a record 52 internship applications, our academic community is clearly thriving. We are also proud of the third-year medical students who joined us for their research electives. These researchers are already receiving peer recognition for their work, while our STaMP graduates have begun mentoring the next generation. The scientific leaders who joined us over the last two years have become vital drivers of our progress. They are advancing our scientific agenda while actively shaping the very environment in which we learn and discover. New colleagues bring new perspectives. By integrating these unique viewpoints, we challenge our old assumptions and spark a fresh wave of creativity.

Research excellence does not happen in isolation. It flourishes in a space where every member of the community feels supported, heard, and inspired. As we embark on this new year, we celebrate the diversity that makes Bio2Q a unique home for discovery. Thank you for being part of our shared journey.

(Oltea Sampetean, Administrative Director, PI)



Source: Bio2Q 2025 Retreat. Original Photo

WELCOME ON BOARD!

In this issue, we are delighted to introduce three new members who joined Bio2Q in April and May.

EVA ROMERA RECIO BIO-1 CORE, POSTDOC INTERN

I'm thrilled to be joining Bio2Q as a postdoctoral intern in Prof. Mende's group. After completing my degree in veterinary medicine, I carried out my PhD at



Eva Romera Recio
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Spanish National Research Council in Granada, in Prof. Yañez's group under the H2O2O HoloRuminant project. There, I studied how early-life microbial colonisation shapes host development in ruminants, including how dietary interventions and microbial exposure influence rumen maturation and physiological resilience during development. Through microbiome analyses, I explored how early microbial imprinting and conserved core microbiota emerge and persist beyond weaning. By integrating microbiome profiles with host physiology and immune data, I became increasingly interested in mechanistic host-microbiome interactions. At Bio2Q, I hope to contribute this integrative experimental and computational perspective while continuing to learn from the team and further develop research on genome-resolved metagenomics, the gut-brain axis, cognitive aging, and microbiome-derived biomarkers. I look forward to working with everyone and growing together!

DIANA SOLENTHALER BIO-2 CORE, LONG-TERM INTERN

Hello everyone!
I am excited to join Bio2Q as an incoming Master's student in the lab of Prof. Nadinath Nillegoda.



Diana Solenthaler
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During my studies at ETH Zürich Switzerland, my home university, I had the opportunity to gain exposure to a variety of research fields, ranging from omics data analysis to protein engineering and bacterial studies. This experience fostered my growing interest in protein pathways and their regulation. I am now embarking on my first international scientific journey for my Master's thesis at Bio2Q. I look forward to exploring regulatory pathways of primate-specific proteostasis in greater depth, while also learning from the open and collaborative environment at Bio2Q. My goal is to continue developing as a scientist, both in my technical expertise and in my scientific thinking. I am very grateful to Bio2Q and my host lab for this opportunity, and I look forward to my time here.

SHANSHAN ZHOU OPEN LAB, TECHNICAL STAFF

Hi, my name is Zhou Shanshan, and I am pleased to join Bio2Q as a technical staff.



Shanshan Zhou
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I completed my Master's degree in Japan, focusing on glaucoma and retinal neurodegeneration through mouse models and cell-based experiments. Through my research experience, I worked with a range of basic cell biology and molecular biology techniques, including cell culture, immunostaining, RT-qPCR, Western blotting, and animal experiments. Following my degree, I attended a Japanese language school to learn Japanese from scratch. My academic journey and life in Japan have taught me the value of careful experimental planning, teamwork, and flexibility when adapting to new challenges. I am committed to supporting the research activities of our team and maintaining a productive environment in the Open Lab. I look forward to contributing to Bio2Q through sincere and diligent work.

INTRODUCTION TO BIO2Q RESEARCH

Series #13

Dr. SHOHEI KOJIMA

Jr. PI, BIO-1 CORE

Temporal Dynamics of Genetic Disease Risk

Biological diversity of humans arises from the complex interplay between human genetic variations and environmental influences. While some people carry genetic predispositions to specific diseases, these risks are often conditional, manifesting only under specific environment, such as pathogen infections. My research explores these environment dependent genetic effects by investigating the temporal dynamics of human disease risk.

Using a combination of unique time-series experiments and statistical modeling, I track how genetic effects fluctuate over time in response to environmental stimuli. The goal is to pinpoint how and when these genetic risks exert their influences at a molecular level. By linking the static genetic predisposition and dynamic environmental exposures, our study offers a more nuanced understanding of disease pathogenesis. Ultimately, these understanding will lead to the advancement of precision medicine, hopefully enabling more accurate disease predictions considering individual's unique genetic and environmental landscape.



Shohei Kojima
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THE 3RD WPI-BIO2Q RETREAT

@ Resol no Mori

The 3rd Bio2Q Retreat is held from May 28 to 29 at Resol no Mori, Chiba. We are honored to welcome Dr. Moran Yassour as our keynote speaker, whose expertise in the infant gut microbiome will surely inspire our community. The program features oral sessions and interactive group work focused on developing interdisciplinary project ideas. To foster team spirit in a relaxed setting, we have also organized a Science Quiz and a recreation session. These two days will serve as a vital platform for sparking innovation and strengthening collaborative synergy across Bio2Q.



Source: Bio2Q 2025 Retreat. Original Photo

UPCOMING EVENTS

June 8 (Mon) 16:00-17:30

WPI-Bio2Q Open Seminar

by Christina Tobin Kahrstrom (Nature editor) and Emily White (Nature Microbiology editor) @Shinanomachi

June 9 (Tue) 15:00-16:00

WPI-Bio2Q Open Seminar

by Sasha Zhernakova (University of Groningen, The Netherlands) @Shinanomachi

July 1 (Wed) 16:00-17:00

LEAD50 Lectureship Series

by Yukako Uchinaga (Globalization Research Institute) @Shinanomachi

*Science Meeting Series @Shinanomachi *

June 3 (Wed) 14:00-15:00

#40 Koji Hase, Affiliated PI

June 17 (Wed) 14:00-15:00

#41 Koji Hotta, Affiliated PI

July 29 (Wed) 14:00-15:00

#42 Naoko Irie, Affiliated PI

WPI-Bio2Q Members (as of Apr. 1)

Position	F	M	Total
PI	4	17	21
Jr. PI	2	7	9
Postdoc	2	7	9
Intl. Collaborator	5	11	16
Affiliated PI	4	10	14
Dir. of Research Programs	0	1	1
WPI RA	17	13	30
Visiting Researcher	1	0	1
Advisor	0	7	7
Technical Staff	3	0	3
Admin. Staff	11	2	13
Total	49	75	124

OPEN LAB UPDATES

The Open Lab welcomed a new technical staff, Ms. Shanshan Zhou, at the start of the academic year.

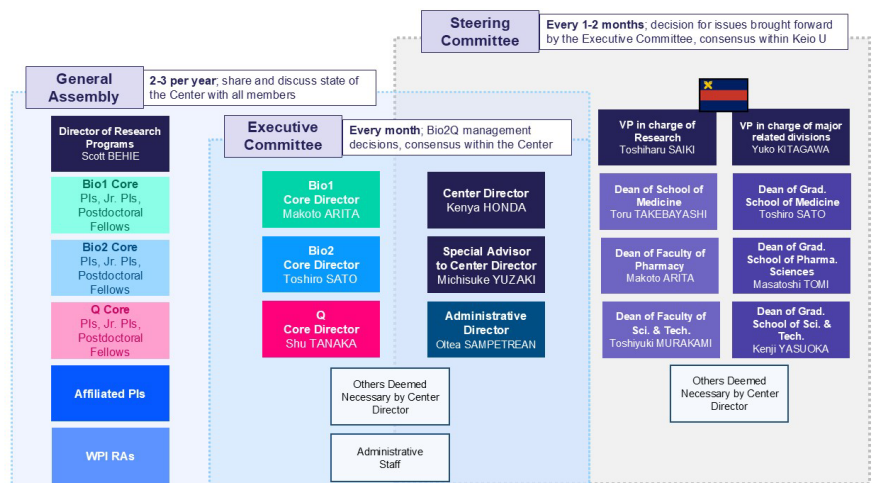


EpreDia CryoStar NX70
Original Photo

In addition, we are pleased to announce the acquisition of the EpreDia CryoStar NX70 cryostat to our shared equipment. This instrument offers motorized sectioning, independent temperature control for both the specimen and blade holder, and a sectioning range of 0.5–500 μm, making it a reliable workhorse for a wide range of frozen tissue applications. Its intuitive touchscreen interface and ergonomic design help streamline day-to-day workflows.

(Haowei Li, Postdoc)

DIAGRAM OF MANAGEMENT SYSTEM OF WPI-BIO2Q



FROM NEW EDITING STAFF

Hi everyone, I'm Hongping. I joined the Bio2Q Administrative Office this April. My background is in neuroscience. Outside of work, I love reading picture books, writing, and cooking. By the way, is anyone interested in reading an article about why fruit flies like bananas?

(Hongping Wei)



The next "Bio2Q Connect" will be issued on June 29, 2026.

