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THE 3RD BIO2Q "LEAD50" LECTURE WITH MS. YUKAKO UCHINAGA

On July 1, 2026, Keio University Human Biology-Microbiome-Quantum Research Center (WPI-Bio2Q) hosted the 3rd Bio2Q "LEAD50" Lecture at the Shinanomachi Campus. The event aimed to deepen the understanding of diversity among our researchers and young medical faculty.
We welcomed Ms. Yukako Uchinaga, President and CEO of Globalization Research Institute (GRI), who delivered an insightful presentation titled “Diversity Management as a Business Strategy.” Pointing out Japan’s current gender gap, she emphasized that embracing diversity is an essential “Game Changer” for driving innovation amid rapid technological shifts. She shared practical approaches from her career at IBM, including mentoring programs and flexible e-work systems, while stressing the importance of strong leadership to overcome traditional organizational barriers. The lecture concluded with an active Q&A session. We sincerely thank Ms. Uchinaga and all participants for making this event a great success.

(Miyuki Ogino, Administrative Office)

Ms. Yukako Uchinaga,©Bio2Q 2026

DISCOVER OPEN LAB: ADVANCED TECHNOLOGY & COLLABORATIVE SPACE

Our Open Lab offers cutting-edge instrumentation to empower innovative research.
Key highlights include our advanced mass spectrometry capabilities — combining the Orbitrap Exploris 120 for deep LC-MS profiling with the Bruker timsTOF fleX for high-resolution MALDI analysis — alongside the Zeiss Lightsheet 7 for high-speed & gentle 3D optical sectioning, and a rare anaerobic Robot Colony Picker for automated microbiological workflows. Additionally, we host the ODiN Biolog system for automated phenotyping. To maximize research efficiency, our facility is equipped with an automated pipetting robot (INTEGRA ASSIST PLUS), a 6-color absolute nucleic acid quantification (QX600 ddPCR), and a newly installed CryoStat NX70 for smooth sectioning. Routine capabilities such as fluorescence and confocal microscopy, qPCR, HPLC, and ultracentrifugation Optima XE-90 are also fully available. By bringing these state-of-the-art technologies together under one roof, we accelerate breakthroughs from bench to discovery. Our space hosts young researchers across diverse disciplines, and we are always eager to welcome visitors for joint projects or sharing ideas over tea!

(Shanshan Zhou , Technical Staff)

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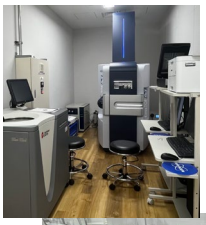


Left: Ultracentrifuge Optima XE-90, Right: timsTOF fleX (MALDI) ©Bio2Q 2026

Anaerobic Robot Colony Picker,©Bio2Q 2026

WELCOME ON BOARD!

In this issue, we are delighted to introduce two new members who joined Bio2Q in July.

Dr. Amrita Mishra
Used with permission.

Dr. AMRITA MISHRA

BIO-1 CORE POSTDOC INTERN

Hello! My name is Amrita Mishra, and I am from India. My research focuses on T-cell biology, mucosal immunology, and microbiota–immune interactions. I completed my Ph.D. in Immunology at the National Centre for Cell Science, Pune, where I studied how neuroimmune signaling regulates $CD4^+$ T-cell responses and intestinal inflammation. After that I did a short postdoctoral training at Columbia University Irving Medical Center, New York where I learned how gut microbiota influences mucosal immunity. I joined Bio2Q because its vision of bringing together diverse disciplines to better understand biology and human health closely aligns with my research interests. I am particularly excited to learn new approaches, broaden my scientific perspective, and collaborate with researchers from different backgrounds. From the moment I joined Bio2Q, I have been warmly welcomed by everyone. The kindness, patience, and willingness of people to help me at every step—from settling into the institute to getting started in the laboratory—have made my transition smooth and enjoyable. Outside the lab, I enjoy trekking, hiking, and spending time in nature. I look forward to learning, contributing, and growing as part of the Bio2Q community.

Ms. Valeria Kamozina
Used with permission.

Ms. VALERIA KAMOZINA

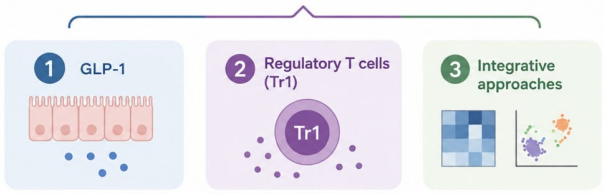
BIO-1 CORE RESEARCH INTERN

My name is Valeria Kamozina, and I am currently completing my Master’s degree in Biochemistry, specializing in Microbiology and Human Biology, in Munich, Germany. Throughout my studies, I have had the opportunity to gain research experience across Germany and the USA, and I am thrilled to continue my journey in Japan, at Keio University.
Joining the laboratories of Prof. Dr. Arita and Dr. Brockmann is an incredible opportunity to deepen my scientific knowledge while experiencing a leading interdisciplinary research environment. I look forward to advancing my skills with Bio2Q’s research approaches.
Beyond the laboratory, I am excited to experience Japanese culture, embrace student life in Tokyo, and learn from Japan’s collaborative and inspiring research environment. I hope this internship will broaden both my scientific perspective and my personal growth, and I look forward to meeting and learning from all of you.

INTRODUCTION TO BIO2Q RESEARCH

Series #14
Dr. LEONIE BROCKMANN
Jr. PI, BIO-1 CORE

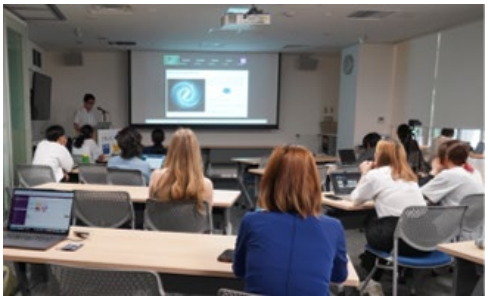
Left: Dr. Leonie Brockmann , Right: Dr. Amrita Mishra , ©Bio2Q 2026



Diet and the microbiota shape the intestinal environment, which in turn regulates host-derived signals and immune cell function. My research explores how these environmental cues influence tissue-resident immune cells to maintain intestinal health or drive inflammation.

A central goal of my laboratory is to understand how environmental and host-derived signals shape specialized regulatory T cell populations that preserve immune tolerance in the gut. One example is the intestinal hormone GLP-1, best known for regulating glucose metabolism. We have shown that GLP-1 also protects against severe intestinal inflammation, and we are now investigating how GLP-1 and other tissue-derived signals directly or indirectly regulate immune cells. In parallel, we combine transcriptomic and bioinformatic approaches to define the molecular identity of intestinal regulatory T cells and uncover the signals that shape their tolerogenic function. I am pleased to welcome Dr. Amrita Mishra to the laboratory as a postdoctoral researcher, and I look forward to advancing these research questions together.

STRUCTURAL ANALYSIS WORKSHOP SERIES KICKS OFF AT SHINANOMACHI CAMPUS



Bio2Q Structural Analysis Workshop, ©Bio2Q 2026

The 1st session of the “Structural Analysis Workshop” was held on June 19 at the JKiC Conference Room at Shinanomachi Campus by Kunimichi Suzuki, Jr. PI. It was the first time for me to organize an event in Bio2Q, so everything from the preparation to the actual event felt so fresh, and I learned so much. I was very happy that so many people joined us, not only in person but also online. Furthermore, since I had never been exposed to the field of structural analysis before, the program was absolutely fascinating. It made me realize the power of science, which allows us to clearly visualize three-dimensional structures that are invisible to the naked eye. With six more sessions scheduled to be held, I look forward to giving my best to the preparation and management while continuing to deepen my understanding of the field. I hope more people will discover the excitement of this unknown world and enjoy this program just as I did!

(Futaba Kato, Administrative Office)

BUILDING BIO2Q'S SUSTAINABILITY: TEAM NEXUS AT MEXT×FUNDS FORUM 2026

Team NEXUS, ©Bio2Q 2026

On Monday, June 29, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) held a fundraising event titled “Mext×Funds Forum 2026”-An Ecosystem for Future Transformation Shaped by Funds × Fun × Fans-and Bio2Q’s Team NEXUS (Next-gen, Enterprise, X (for innovation), Upscaling, Sustainability) attended the event to build a fundraising infrastructure and network toward Bio2Q's future operational sustainability.

We learned that the essence of fundraising lies in “identifying social issues, gaining empathy, and bringing in participants to solve them together”; “it is crucial to understand the root causes of social problems and convince people of the need for change”; and “sufficient results can only be achieved by combining the power of systems and organizations.”

Bio2Q’s Team NEXUS will continue to strengthen its fundraising outreach efforts. We also welcome active contributions from every single Bio2Q member.

(Junta Komamura, Administrative Office)

UPCOMING EVENTS

Sep. 14 (Mon)
WPI-Bio2Q Open Seminar
By Nicolas Manel (Institut Curie, France)@Shinanomachi

Oct. 4 (Wed) – 5 (Thu)
Yotsuya Festival@Shinanomachi

Dec. 9 (Wed) – 10 (Thu)
The 5th Keio University WPI-Bio2Q International Symposium 2026 @Shinanomachi

QR Codes→
Left: Web Page
Right: Registration Form

Dec. 11 (Fri)
Symposium on Spatiotemporal Dynamics of Biological Systems@Mita

Science Meeting Series

Jul. 29 (Wed) 14:00-15:00 @Shinanomachi
#42 Naoko Irie, Affiliated PI
Sep. 30 (Wed) 14:00-15:00@Shinanomachi
#43 Yuki Kagoya, Affiliated PI
Oct. 14 (Wed) 14:00-15:00@Yagami
#44 Yukari Fujimoto, Affiliated PI
Oct. 28 (Wed) 14:00-15:00@Shinanomachi
#45 Koji Atarashi, Jr. PI
Nov. 11 (Wed) 14:00-15:00@Shiba-Kyoritsu
#46 Kenjiro Hanaoka, Affiliated PI

Structural Analysis Workshop Series @Shinanomachi

Sep. 18 (Fri) 15:00-16:30
#4 Kenji Murakami, Intl. Collaborator
Oct. 9 (Fri) 15:00-16:30
#5 Wataru Shihoya, Jr. PI
Nov. 13 (Fri) 15:00-16:30
#6 Tatsuya Ikuta, Assistant Professor , Keio Univ.

The next “Bio2Q Connect” will be issued on September 29, 2026.