



JSPS SAN FRANCISCO NEWSLETTER

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New Office at 1936 University Avenue, The Promenade Suite 250, Berkeley, CA, 94704

INSIDE THIS ISSUE

01 JSPS San Francisco Office is moving into the future

04 JSPS Fellow in America -1

06 Recent Activities

09 JSPS Fellow in America -2

10 The Latest from University in Japan

12 JSPS Fellow in America -3

14 Office Member Greeting

16 JSPS Fellow in America -4

New structure of JSPS San Francisco Office

After the three International Program Associates (IPAs) at JSPS San Francisco Office (JSPS SFO) returned to Japan at the end of March 2023, Izumi Tanabe from Hiroshima University joined as a new IPA on April 1st. She is working with the liaison officer, Abigail Hughes, to promote JSPS's activities, organize events such as the Japanese researcher gatherings and workshops for Japanese University administrative staff in the U.S., and publish newsletters.

At the end of August, Kengo Ohta, Deputy Director of JSPS SFO returned safely to Shizuoka University after two years of service. JSPS SFO has been operating in its current location (2001 Addison St, Suite 260, Berkeley, CA, 94704) for 15 years, however, due to a 3% increase in rent

every year and a sharp decline in the value of yen since last year, the office's budget was tight. To improve this situation, Ohta decided to downsize the office and relocate to a new office just down the street from the current office on October 1st and we have been proceeding with the administrative procedures.

On September 1st, Manabu Ikeda from the Tokyo University of Science took over as Deputy Director and we completed the move to the new office (1936 University Avenue, The Promenade Suite 250, Berkeley, CA 94704) within September and continue our operations.

Efforts to enhance JSPS presence and build researchers' networks

To date, we have held six online information sessions to introduce JSPS fellowship programs as well as other JSPS programs at University of California, Berkeley, University of California, Irvine, Rice University, University of California, San Diego, University Hawaii at Manoa, The University of Texas at Dallas, and Southern Methodist University. At each of the information sessions, several JSPS Alumni were available to share their experiences as JSPS Fellows, and they were able to provide sound advice based on their experiences in response to many questions from the participants.

JSPS SFO participated in the 2023 Student Experience in the Research Universities (SERU) Research Symposium held at the University of California, Berkeley on June 14-15th, 2023, at the invitation of John Aubrey Douglass (Senior Research Fellow, Public Policy and Higher Education, Center for Studies in Higher Education, University of California, Berkeley). On June 13th, we co-hosted a pre-symposium with SERU focusing on graduate student education and employment in Japan. Dr. Satoshi Watanabe (Policy Counselor, Cabinet Secretariat/Secretariat for the Promotion of Science, Technology, and Innovation) and representatives from Kyushu University and Hiroshima University spoke on the current state of graduate education in their universities. I was asked to respond to Watanabe's remarks on the state of higher education and introduced JSPS Initiatives in Graduate Education.

SERU has most of the top public universities in the U.S. as members, as well as universities in Europe and Asia. Member institutions conduct customized versions of SERU's undergraduate and graduate student surveys, share data and best practices, collaborate on research and best practices, and participate in consortium symposia

and work sessions. The symposium included discussions on a variety of topics, such as student satisfaction with advising, the future of AI and the student experience, and the use of GradSERU data to improve graduate education. During the symposium, we also learned a lot about the types of data collected from students through the SERU survey and what each university aims to improve as a result and had the opportunity to interact with more than 40 participants and introduce them to the JSPS and its fellowship programs.



SERU Meeting

On July 14th, JSPS SFO held the Summer Japanese Researcher Gathering to promote cross-disciplinary exchanges among Japanese researchers active in the U.S. and to further enhance their research activities. We had two presentations by young researchers and a keynote lecture using Zoom webinar. We also introduced JSPS Fund for the Promotion of Joint International Research (Home-Returning Researcher Development Research), which supports research to be conducted by a Japanese researcher with current affiliation abroad who is to be newly appointed at university or research institution in Japan, because the timing of this event coincided with the start of its open call. The details of the Summer Gathering of this year can be found in the article "Summer Japanese Researcher Gathering" in "Recent Activities."

In addition, from July 20th to July 25th, Stanford University School of Medicine, Japan Science and Technology Agency (JST), Kanagawa Prefecture, Japan Agency for Medical Research and Development (AMED), JSPS, Nagoya University, and the United Japanese Researchers Around the World (UJA) jointly hosted a Japan-U.S. Research Collaboration Week (JURC) at Stanford University.

During JURC, to promote various collaborations based on joint research between Japan and the U.S., three research funding agencies (JST, AMED, JSPS), and the UJA jointly organized a session entitled "Building networks of diverse and highly talented researchers" on July 22nd (Sat). In this session, various Japan-U.S. joint research initiatives were introduced from the different perspectives of funding agencies, national research institutes, and universities. It also provided a forum for discussion on the future design and operation of the system while listening to the voices of Japanese researchers in the Bay Area. The exchange of opinions with Japanese researchers reminded us of the importance of combining and effectively utilizing the systems possessed by each organization to meet the needs of researchers, and of finding and supplementing the gaps between the systems to provide support that have not yet been reached.

Director's Activities

I was invited to the Japanese San Francisco Bay Area Seminar (BAS)'s New Year Seminar held on April 29th, and gave a lecture entitled "Significance of the Defense Mechanisms against Oxidation of Nucleic Acids by Reactive Oxygen Species in Aging: from Carcinogenesis to Alzheimer's Disease." I also had an opportunity to introduce the activities of the JSPS SFO. On August 26th, I was also invited to the BAS-sponsored BBQ event in San Francisco, where I enjoyed barbeque and networking. This gathering made me realize that no matter how advanced technology becomes, the importance of human connections will never go away.



BAS's New Year Seminar

On June 9th, I was invited by Professor Tomoo Iwakuma of the Children's Mercy Research Institute (CMRI) in Kansas City, Missouri, to give a lecture at CMRI's

Academic Scholarship Conference Series. Professor Tomoo Iwakuma, like myself, completed his graduate studies in Professor Mutsuo Sekiguchi's laboratory at Kyushu University, then had postdoctoral training in Canada and the U.S. He is currently Professor and Director of Translational Laboratory Oncology Research at CMRI, Professor of Pediatrics, the University of Missouri-Kansas City, and Research Professor of Cancer Biology, at the University of Kansas School of Medicine. After my presentation, I had discussions with several researchers at CMRI, and they were also interested in the JSPS fellowship programs. I also had a chance to meet Dr. Tom Curran, Executive Director and Chief Scientific Officer of CMRI, who used to be one of my competitors when I was studying JUN/FOS at Johns Hopkins University from 1987 to 1990, for the first time in 30 years. My wife and I were invited to his home with Dr. and Ms. Iwakuma, and we enjoyed dinner and discussion together.



(From the left) Dr. Tom Curran, my wife and myself

On August 30th, I had the opportunity to participate in a discussion session with Dr. Shinya Yamanaka at the official residence of the Consul General of Japan in San Francisco. Together with Consul General Yasushi Noguchi, Consul Noritoshi Kurokawa, Professor Hiromitsu Nakauchi of Stanford University, Kazuhito Morioka, Assistant Professor at UCSF and Science and Technology Fellow at the Consulate General of Japan in San Francisco, and Yohtetsu Hayashi, Director of JETRO San Francisco Office, we discussed current situations in Japanese researcher's communities in the U.S. and Japan-US joint researches, study abroad issues for young researchers, open science, industry-university collaboration, start-ups, etc. We exchanged views on various issues facing academia in Japan and the U.S. today, and I introduced JSPS's efforts to address these issues. From 1993 to 1996, Dr. Yamanaka

had his postdoctoral training at the Gladstone Institute in San Francisco and is currently a Senior Investigator/Professor at the Gladstone Institute, Department of Anatomy, UCSF, where he runs his laboratory, now. He is well-versed in the various issues facing young researchers in the Bay Area, and he has expressed his understanding of the activities of the JSPS and his willingness to cooperate with us.

Activities of JUNBA after the Coronavirus Pandemic

Masato Miyake (Nara Institute of Science and Technology) resigned his position as Chairman of JUNBA on March 31st, 2023, following his transfer to Ritsumeikan University. In response, Director Mari Maruyama (Obirin Gakuen Foundation of America) and Director Scott North (Osaka University North American Center) were elected as the next President and Vice President at the Board meeting. During the meeting, we discussed, new JUNBA activities in response to the current situation in which many university centers have moved back to Japan or have been converted to virtual offices due to the coronavirus pandemic. In July, however, the

University of Tokyo, New York Office Inc. joined JUNBA, and now we expect that the number of member institutions will increase in the near future. At the May 25th JUNBA general meeting, we invited Mr. Hideki Takami, Senior Planning Officer of Cabinet Secretariat to discuss Japan-Mobility and Internationalization: Re-engaging and Accelerating Initiative for Future Generations (J-MIRAI) announced in April by the Council for Creation of Future Education chaired by Prime Minister Kishida. After his presentation on the points and intentions of the proposal, an opinion exchange session was held online with more than 60 participants who are involved in international student exchange at Japanese and U.S. universities. Participants raised many questions and requests to the government regarding career path support for international students, cost support for long-term study in the U.S., the impact of the imbalance in tuition fees between Japan and the U.S. on mutual non-collection of tuition and credit transfer, and financial support for strengthening English proficiency among Japanese students. Mr. Takami responded that these opinions will be reflected in future policy formulation at the Council for the Creation of the Future of Education.

JSPS FELLOW IN AMERICA - 1

Natsuko Emura



Brown University

April 2023 – present: JSPS Overseas Postdoctoral Research Fellow

May 2021 – present: Postdoctoral Research Fellow, Brown University

April 2018 – March 2021: JSPS Research Fellow (DC1)

December 2016 – September 2017: Visiting Research Student, Mercer University

September 2016 – September 2017: Scholar of Tobitate! Young Ambassador Program for Study Abroad

May 2011 – March 2021: B.S., M.S., and Ph.D. in Department of Agriculture, Iwate University

I am currently working at Brown University as a postdoctoral research fellow. My field of research is molecular developmental biology, and my specific interest is understanding how cells get new lineage through asymmetric cell division (ACD) during embryonic development. Using echinoderms such as sea urchins and starfish which are some of the best model animals for this purpose, I try to identify the ACD mechanism and its contributions to species divergence during evolution.

Q1: Why did you decide to research in the U.S.?

There are two main reasons I decided to study in the US. The first was to develop my research and scientific career. I had been conducting a study about developmental biology using pig embryos starting when I was an undergrad until my Ph.D. training at Iwate University. Using large animals like pigs was challenging for many reasons, one of which was that it is hard to get samples.

Culture methods are also not well established. Even though I had some ideas for the research and some techniques that I wanted to learn, the number of experiments I could do was limited. Therefore, I made the decision to change to a model animal which is well-studied and easier to handle when I moved to my next postdoc position. Echinoderm embryos are one of the best models for embryonic study that allow me to test my research ideas and obtain novel experimental skills. My current lab at Brown University has published fascinating papers about echinoderms that matched my interests. The second reason is that I wanted to know how female scientists succeed in the US. I met many female researchers who are successful both in science and their private lives when I first studied in the US during my master's course. This impressive experience encouraged me to go back to the US after my PhD program.



Presentation at an international conference in Massachusetts

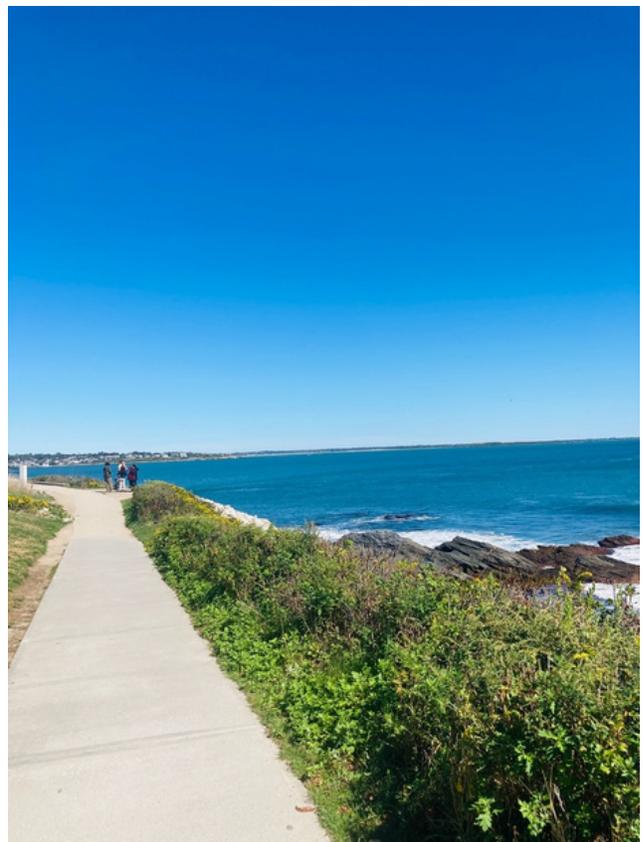
Q2: What is your impression of the research environment in the U.S.?

The research environment in the US impressed me a lot because many parts are different from Japan. For example, many laboratories in the US do not enforce strict borders between laboratories, so scientists can easily develop collegial collaboration. In contrast, Japanese laboratories maintain a singularly allocated space, and few connections are cultivated with other laboratories. Further, I feel the academic curriculum for students is more flexible compared to universities in Japan. Students can take any classes across departments and join labs whenever they want. Although there are pros and cons, my impression is that many students are highly motivated. Even outside of campus, there are various opportunities to interact with researchers. Rhode Island, where Brown University is located, is next to Massachusetts, and under one hour away by car. This

region known as New England is home to top universities in the world, such as Harvard University, and various collaborations and discussions are constantly taking place. There is also the monthly Boston Japanese Researchers Forum, which has provided me with a precious opportunity to present my research.

Q3: How do you take advantage of your experiences in the U.S. and apply it to your research or career?

My current final career goal is to become an independent researcher in the academic field in Japan. Conducting research here broadens my expertise, providing me with hands-on experience in studying embryonic development from various perspectives. At the same time, I hope I can be a good role model for female scientists and contribute to solving the problem of the small proportion of women scientists in Japan. Further, I believe implementing beneficial US systems into academia in Japan would allow students to gain a greater interest in science. After I get an academic position in Japan, by sharing my experiences, I will aim to encourage students to study abroad and help them grow as researchers who can succeed on the world stage.



Newport, a popular destination in Rhode Island

Recent Activities

01 JUNBA Discussion Forum

May 25th, 2023

JUNBA (Japanese University Network in the Bay Area), in which San Francisco office is involved as a core member, held an event on May 25, 2023, in conjunction with this year's general meeting. Views were exchanged on the J-MIRAI: Japan Mobility and Internationalisation: Re-engaging and Accelerating Initiative for future generations (Second-stage Proposal), which was released by the government's "Council for the Creation of Future Education," chaired by Prime Minister Kishida. Our guest speaker was Mr. Takami, Senior Planning Officer of the Cabinet Secretariat's, who was involved in the proposal. After explaining the key points of the proposal, participants exchanged opinions on the initiatives of each university and future policy directions.



JUNBA Discussion Forum

02 Summer Japanese Researcher Gathering

July 14th, 2023

Continuing from last year, the Summer Gathering of Japanese Researchers in the U.S. was held online on July 14th, 2023.

This event is biannually held by our office to promote cross-disciplinary exchanges and to further enhance their research activities. Last year's online gathering for summer was well received, so it was decided that this year's gathering would be held online and the winter gathering will be held in person.

Over 70 researchers and non-researchers have participated the summer event from various parts of North America (West Coast, Midwest, East Coast, Canada, etc.) and Japan.

Following opening remarks by Director Nakabeppu, two JSPS Postdoctoral Fellows, Dr. Kazumasa Takemoto (Connecticut University) and Dr. Satoshi Morita (Harvard

Medical School/Keio University) introduced their research and Dr. Keiko Torii gave a lecture and Q&A session. Dr. Torii, Professor of Molecular and Cell Biology at the Howard Hughes Medical Institute at the University of Texas at Austin, talked about her career path and how she achieved her current position as a female researcher in the U.S. She then presented her research in a very easy-to-understand manner to the general audience.

After the event on Zoom, the online reception (information exchange meeting) was held as last year, using SpatialChat, which allows participants to move to the online reception venue and interact with each other as in the face-to-face reception. Although the system did not allow face-to-face interaction as in a normal social gathering, it functioned well as a place for networking, with researchers actively exchanging information on their

実は私は日本のシステムに支えられてきた
(一人でアメリカで成功した訳ではない！)

アメリカのシステムは若手のスーパースターを発掘して売り込みコミュニケーションで持ち上げるというスタイル
(研究者のアメリカンドリーム)

大学院生、もしくはポストドク時代に【スーパースター】に認定されなかった者(=私)がやっていくのは難しい(ノミネーションが必要なものが多い)
 ・NSF CAREER, Presidential Early Career Scientist/Engineer, Sloan Research Fellow, Searl Scholar,
 Pew Scholar, Packard Fellow, etc, etc

しかも私はワシントン大でネゴシエーションに失敗し、スタートアップは無いも同然だった。。😞



Presentation by Dr. TORII

research activities and living environment. In particular, participants gathered around the speakers of the lectures, and active exchanges were taking place.

According to a questionnaire survey conducted after the event, about 95% of the respondents rated the event as "very good" or "good". The keynote speeches were particularly well received, with many participants saying they were informative and stimulating. Japanese participants also commented that they were glad to attend such an exchange meeting prior to visiting the US. The next Winter Gathering will be held in person on January 27th, 2023.

03 Japan-US Research Collaboration Week (JURC)

July 20th -25th, 2023

At Stanford University, the JURC Week was held from July 20th to July 25th. JSPS was honored to be a co-host of this collaboration week.

On Thursday, July 20th, Director Yusaku Nakabeppu introduced JSPS' mission and explained how the fellowships encourage relational bridges between the U.S. and Japan. He encouraged attendees to join on the 22nd to hear more details about JSPS fellowships. JSPS Staff were invited to attend a dinner that night with honorable guests to celebrate deepening inter-organizational bridges.



JSPS Presentation by Director Nakabeppu

On Saturday, July 22nd, the theme was Building networks of diverse and highly talented researchers. Takuto Miyamoto, Washington DC Office Director of the Japan Agency for Medical Research and Development was the moderator. JSPS SFO was joined by JSPS WAS Director Junji Urakawa and three alumni, Professor Justin L. Gardner, Professor Hirohisa Tanaka, and Fred Ariel

Hernandez, Ph.D., to discuss how JSPS fellowships can be beneficial in building networks of researchers as is crucial to the advancement of academic exploration. Also in attendance were students, researchers, and administrators who desire to further the collaboration of the two countries.

Other Co-Hosts included Stanford University School of Medicine, Japan Science and Technology Agency (JST), Kanagawa Prefecture, Japan Agency for Medical Research and Development (AMED), Nagoya University, and United Japanese Researchers Around the World (UJA).

Supporters of this week-long event were the Consulate-General of Japan in San Francisco and the Japan External Trade Organization (JETRO).

JSPS will continue to strive to connect with other organizations to encourage research and network between the U.S. and Japan.



Presentation by JSPS alumni

04 Fellowship Information Sessions

MAY 2
UNIVERSITY OF CALIFORNIA, BERKELEY

JUNE 6
UNIVERSITY OF CALIFORNIA, IRVINE

JUNE 22
UNIVERSITY OF CALIFORNIA, SAN DIEGO

AUGUST 2
RICE UNIVERSITY

SEPTEMBER 12
UNIVERSITY OF HAWAI'I AT MĀNOA

SEPTEMBER 19
**UNIVERSITY OF TEXAS AT DALLAS,
SOUTHERN METHODIST UNIVERSITY**



University of California, Berkeley



University of California, Irvine



University of Hawai'i at Mānoa

For more information about upcoming info sessions, please visit our [website](https://www.jspsusa-sf.org/) or contact us directly.



Helpful Links

- **JSPS INTERNATIONAL FELLOWSHIPS FOR RESEARCH IN JAPAN**
- **JSPS FELLOWS PLAZA**
- **US AND CANADA JSPS ALUMNI ASSOCIATION**
- **FAQ**

<https://www.jsps.go.jp/english/e-fellow/index.html>

<https://www.jsps.go.jp/english/e-plaza/index.html>

<http://www.jspsusaalumni.org/>

<https://www.jsps.go.jp/english/e-fellow/faq.html>

UPCOMING EVENT JSPS 2023 WORKSHOP FOR JAPANESE UNIVERSITY STAFF IN THE U.S.

AT JSPS SAN FRANCISCO OFFICE
NOVEMBER 8-9, 2023



JSPS FELLOW IN AMERICA - 2

Yoshinobu Konishi

I am a physician-scientist in the field of cancer biology focusing on cell-cell interactions within the tumor immune microenvironment. I graduated from Kyoto University Faculty of Medicine and worked as a hematologist for 5 years. After clinical training, I started my scientific career in 2015 in the laboratory of Dr. Michiyuki Matsuda at Kyoto University Graduate School of Medicine and obtained my PhD degree in 2019. I joined the Ghobrial lab, at the Dana-Farber Cancer Institute, at Harvard Medical School, in 2021. The lab studies Multiple Myeloma (MM) which is an incurable plasma cell malignancy of the bone marrow (BM) that is preceded by an asymptomatic precursor stage called smoldering multiple myeloma (SMM). The lab focuses on identifying mechanisms of MM disease progression from SMM to MM, those that are cell autonomous or those dependent on the BM microenvironment. I want to clarify the role of the BM immune microenvironment in disease progression and response to therapy, providing information that may directly support doctors and patients when making decisions about care and treatment for myeloma and precursor conditions.



Q1. Why did you decide to research in the U.S.?

I have always held a desire to conduct research in the U.S. where I believe translational research is more active than Japan. I listened to a lecture from Dr. Irene Ghobrial for the first time during the 9th Japanese Society of Hematology International Symposium 2018 in Kyoto. I was deeply inspired by her research vision targeting immune system of patients with precursor conditions to prevent the progression to hematologic malignancies and decided to become a part of her research team.

Q2. What is your impression of the research environment in the U.S.?

I think the research environment in the U.S. is highly dynamic with lots of active discussions, academic collaborations, and communications between academic researchers and the biotechnology and pharmaceutical industries. I am particularly surprised to see the strong ties between the biotechnology and pharmaceutical industries when conducting research activities. The Dana-Farber Cancer Institute is located in the Longwood Medical Area in the heart of Boston, which provides a high-caliber research environment with opportunities and resources across diverse fields.



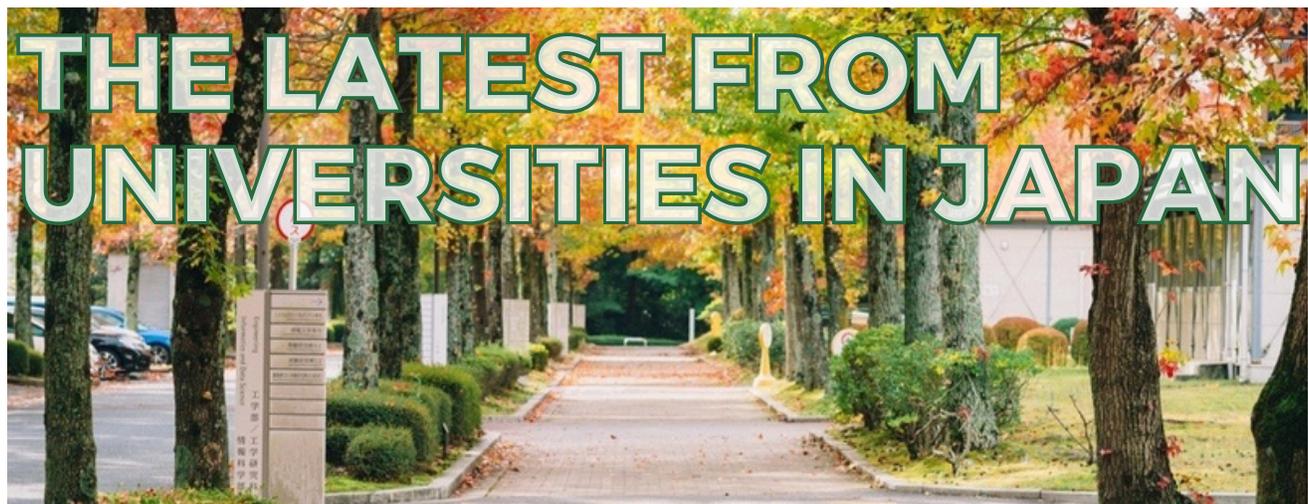
Farewell party in the Ghobrial lab. The woman wearing the green dotted dress is my mentor, Dr. Irene Ghobrial. I'm in the middle of the left row.

Q3. How do you take advantage of your experience in the U.S. and apply it to your research or career?

I believe the network I have built in the U.S., along with my connections to various biotechnology and pharmaceutical companies, will likely serve as invaluable assets that will support my research endeavors throughout my lifetime. As the composition of our lab's members and collaborators is truly diverse in nationality, I can cultivate relationships with fellow researchers around the world. My previous experience as a doctor seeing patients with hematological malignancies motivates me to commit myself to this research field. I plan to continue my career as a physician-scientist and want to become a future leader in the field of myeloma research.



Dana-Farber Cancer Institute Alumni event during the 65th American Society of Hematology (ASH) Annual Meeting & Exposition, which is truly helpful for the networking in the field. I'm almost in the middle of the 3rd row.



Hiroshima University joins landmark Japan-U.S. semiconductor partnership

Hiroshima University partners with Micron and a strong network of Japan-U.S. universities to advance semiconductor-based research and cultivate the next-generation workforce.

Hiroshima University has joined a landmark U.S.-Japan collaborative partnership launched by Micron and its industry partners to enhance semiconductor research and establish a talent development hub.

The University Partnership for Workforce Advancement and Research & Development in Semiconductors (UPWARDS) for the Future brings together eleven universities from across Japan and the U.S.: Hiroshima University, Tohoku University, Tokyo Institute of



U.S. President Joe Biden and Hiroshima University President Mitsuo Ochi

©Photo by the White House



HIROSHIMA UNIVERSITY

Technology, Nagoya University, and Kyushu University from Japan; Purdue University, Boise State University, University of Washington, Rochester Institute of Technology, Rensselaer Polytechnic Institute, and Virginia Tech from the United States.

Coinciding with the final day of the G7 Hiroshima Summit on May 21, participating universities signed the Memorandum of Understanding (MOU) in Hiroshima City in the presence of U.S. Ambassador to Japan Rahm Emmanuel, Japan's Minister of Education, Culture, Sports, Science and Technology Keiko Nagaoka, and U.S. Secretary of State Antony Blinken. Representing Japan were Hiroshima University President Mitsuo Ochi and Tohoku University President Hideo Ohno, while their U.S. counterparts were represented by Purdue University President Mung Chiang and Boise State University President Marlene Tromp.

U.S. President Joe Biden, who visited Hiroshima for the G7 Hiroshima Summit, also joined the subsequent press conference.

The partnership aims to promote the cultivation of diverse talent and foster research and development in the semiconductor field. The eleven participating universities, including Hiroshima University, were selected for their advanced curriculum and strong emphasis on diversity,

equality, and inclusiveness.

Future plans include implementing exchange programs between Japan and the United States, with a focus on promoting women's participation in the semiconductor industry. The goal is to educate a diverse pool of talent and actively engage in semiconductor development.

Hiroshima University has a long history as a center for semiconductor education and research among national universities in Japan.

In 1986, a year after Tohoku University's pioneering effort, Hiroshima University established its own state-of-the-art super clean room for semiconductor research. The 1980s and 1990s marked the peak of Japan's semiconductor industry, with both universities leading research and advancement, collectively shaping the nation's semiconductor innovation trajectory.

Last March, the university established the "Setouchi Semiconductor Co-Creation Consortium" at its Higashi-Hiroshima Campus, a joint effort involving industry, government, and academia to develop semiconductors. In collaboration with Micron's world-leading plant in Hiroshima, Hiroshima University aims to further contribute to the diversification and advancement of the semiconductor technology and the development of talent in Japan and the United States.

Micron, headquartered in Higashi-Hiroshima City, is a leading semiconductor memory company and the largest foreign investor in Japan over the last five years.



©Photo by the White House

JSPS FELLOW IN AMERICA - 3

Shota Yamamoto

Research Associate | Schnapp Lab

Division of Allergy, Pulmonary and Critical Care Medicine, Department of Medicine,
School of Medicine and Public Health, University of Wisconsin-Madison

Curriculum Vitae

2006–2012 M.D. | School of Medicine, Yamaguchi University, Yamaguchi, Japan

2018–2022 Ph.D. | Graduate School of Medicine, Tokai University, Kanagawa, Japan

2023–2024 Honorary Fellow | Department of Medical Microbiology and Immunology, University of Wisconsin-Madison, Madison, WI

–2024 Research Associate | Division of Allergy, Pulmonary and Critical Care Medicine, Department of Medicine, School of Medicine and Public Health, University of Wisconsin-Madison, Madison, WI

–2024 JSPS Overseas Research Fellow | Japan Society for the Promotion of Science

Research Interests

I am interested in acute lung injury, pulmonary fibrosis, respiratory infection, and biomaterials

As a physician, I have supported a number of patients suffering from respiratory diseases. My vision of an ideal physician encompasses perspective at every level—from the microscopic (molecular and biochemical) to individual cases, clinical studies, and the macroscopic (systematic reviews, meta-analyses, and study of real-world data). The ability to shift perspective freely while aiding patients is what defines my clinical aspirations. Having been extensively involved in clinical studies and meta-analyses on respiratory infections and lung impairments, I felt a compelling need for a deeper and more essential understanding of respiratory diseases and the lungs themselves.

Q1: Why did you decide to research in the U.S.?

The decision to challenge myself with basic research in the U.S. came naturally. For a decade after graduating from medical school, I dedicated myself to diagnostics and treatments of respiratory diseases. My Ph.D. research and development of new therapeutic strategies using biomaterials to treat respiratory infections from within the blood vessels was groundbreaking, yet I found myself needing more.

I realized that understanding the lung structure and function, its constituent cells, chemical messengers,



Lab members. The lady in red is my PI, Dr. Lynn M. Schnapp, with my dear colleagues Carole, Alec, and Monica. Everyone's gesture is a symbolic W for the University of Wisconsin.

extracellular matrix, inflammation and repair processes, the basic microbiology required a deeper knowledge of biology and physiology. The U.S., leading the world in both the quantity and quality of medical basic researchers, became the logical next step in my journey.

Q2: What is your impression of the research environment in the U.S.?

My experiences in four different laboratories, two in Japan and two in the U.S., have shaped my understanding



Lab member. Together with Ben, our dear Research Specialist.

of autonomy. This independence is manifested in the branding of individual departments, reflecting both the opportunities and challenges of a highly fluid system.

At the heart of these features lies the vitality of a nation that welcomes new knowledge and experience, continually striving forward.

Q3: How do you take advantage of your experiences in the U.S. and apply it to your research or career?

Everything was a fresh revelation to me, having been born and raised in Japan. The U.S. with its distinct international academic presence, opened new horizons. Encountering researchers I had only read about, and learning the unknown in English, unequivocally expanded my research field. The realization that scientists across the ocean are also human, sharing the same earnestness and transparency towards science despite differences in culture, economy, and language, was profound. This understanding, I believe, is the most significant advantage.

My experience in the U.S., a blend of the novel and the universal, has enriched my research and my perception of the scientific community. It has shown me that the thirst for knowledge transcends boundaries, and that the pursuit of understanding is indeed a universal human endeavour.

of the unique characteristics of research culture in the U.S. I've found it to be vibrant, open, and dynamic.

1. Diversity of Positions and Backgrounds: Labs are populated with professionals from a variety of fields, ranging from medicine to microbiology, biochemistry, and genetics. The blend of MDs, biologists, and chemists actively collaborating creates a fertile environment for innovation (Figures 1 and 2).

2. Embrace of Interns and Trainees: From high school students to medical undergraduates, labs are generously inclusive in the U.S. The readiness to prepare various programs for anyone interested, even minors, speaks of a commitment to education and public service. Reflecting it, a number of research conferences and symposia are held on the University of Wisconsin campus (Figure 3).

3. High Independence of Labs: Labs often rely heavily on grants secured by the head researcher, fostering a sense



Global Health Symposium 2023 held at the Health Science Learning Center in Madison, Wisconsin

UPCOMING EVENT

WINTER JAPANESE RESEARCHER GATHERING

AT DAVID BROWER CENTER (BERKELEY)
JANUARY 27, 2024



OFFICE MEMBER GREETING

Kengo Ohta

Deputy Director, September, 2021 - August, 2023

My two-year term is coming to an end in a few days. When I arrived in Berkeley in September 2021, all of our events and meetings were held online due to Covid-19.

The situation has changed dramatically over the past two years as it has been fluctuating. In my last year here, I have had the opportunity to meet many researchers and



people, hold face-to-face events, and visit universities in the UC system, Stanford and other organizations.

JSPS-SF office changes members every fiscal year, so it has been a very memorable experience and a great pleasure to work with different members in different social situations, and I am filled with gratitude to everyone who worked with me and supported me during each period. Thank you very much. I would also like to thank all the people I met through online and in-person events, and university visits.

Though I will be returning to Shizuoka University soon, I hope that you will continue to keep in touch with me.

Manabu Ikeda

Deputy Director, September, 2023 -

Hello, my name is Manabu Ikeda. I am very grateful for the opportunity to serve as Deputy Director of the JSPS San Francisco Office beginning September 1st, 2023. And as much as possible, I want to play a full role.

Originally, I worked as an administrative staff member at Tokyo University of Science (TUS).

TUS is working tirelessly so that, in ten years' time, TUS will be recognized as a world-renowned research hub in the areas of science and technology, where we excel, and contribute through our research to global sustainable development.

Therefore, I would like to work hard here in the U.S.A to increase the presence of TUS in the world and to contribute to the development of science and technology in Japan.



I would like to express my sincere gratitude to all the people who have helped me get here. And I look forward to working with the heartwarming and kind people who work here for the next two years. Thank you very much.



Izumi Tanabe

International Program Associate, April, 2023 -

Hello! I'm Izumi Tanabe from Hiroshima University. I joined the JSPS San Francisco Office as an International Program Associate (IPA) this past April. Before joining this office, I was in the JSPS Tokyo headquarters for one year, where I oversaw the organization of international Symposia for talented young researchers to engage in cross-disciplinary discussions on leading edge scientific topics which is called the FoS (Frontiers of Science) Symposium. Prior to that, I have been working at Hiroshima University and have been involved in the accounting department responsible for the procurement of high-value goods and services, as well as academic affairs for undergraduate students including international students.

Unlike last year, unfortunately, I am the only IPA at this office this year, so I am involved in most of the work here, such as the Japanese researchers' gathering, the Workshop for Japanese University Staff in the U.S., Japanese University Network in the Bay Area (JUNBA), and maintaining the office website and newsletter. It should be very challenging for me, but I would like to do my best until next March with my wonderful colleagues here!

During my stay here, I would like to learn how we can support Japanese researchers in the U.S. through the activities at the San Francisco office. Also, this is actually my second time living in the U.S.; I don't remember much about the last time because I was so young, so I hope to enjoy my stay even more than last time and create unforgettable memories.



Yuki Shigeta

Advisor, October, 2023 -

Hello, my name is Yuki Shigeta. I have joined JSPS San Francisco as a new advisor on October 1st, 2023, and will stay for one year.

I started to work for Japan's Ministry of Education, Culture, Sports, Science and Technology (MEXT) in 2014 and have experienced various areas of work for nearly ten years. I have engaged in the National University Corporation Support Division, Early Childhood Education Division, and Elementary and Secondary Education Planning Division at MEXT. Besides educational areas of work, I was also in the Sports and Youth Policy Planning Division and Basic Research Promotion Division. In addition, for the past two years, I have been working on a policy of investment in people, as the Deputy Counselor

for the Secretariat of New Form of Capitalism Realization Headquarters.

I'm so excited to join JSPS SF and look forward to meeting and talking with a lot of people. I hope to visit as many universities as I can. Through my work experiences, I would like to try my best to support Japanese universities and researchers.



JSPS FELLOW IN AMERICA - 4

Ryuta Watanabe

I received MD from Ehime University in 2008 and later trained in urological surgery before completing my PhD at the same institution in 2020. That same year, I joined the Fred Hutchinson Cancer Research Center, but due to the COVID-19 pandemic, I was forced to return to Japan just a few months later. As of 2023, I have been reassigned to the Fred Hutchinson Cancer Center, engaging in the comprehensive analysis of driver genes in prostate cancer and the functional analysis of the SPOP gene. My work has focused on the SPOP gene, identified as the most frequently mutated gene in prostate cancer according to a 2012 whole genome sequence. I discovered that the SPOP protein modulates DNA repair cells. This led to the finding that the DNA repair-related drug etoposide might be beneficial for patients with SPOP mutations, a result I reported in 2020.

In Japan, I applied single-cell analysis techniques which I learned during my first days at Fred Hutchinson Cancer Center, to study mutations in both neuroendocrine prostate cancer and Intraductal Carcinoma of the Prostate (IDCP), which are both highly malignant subtypes. My approach integrates a comprehensive analysis to identify genes contributing to the malignant transformation of prostate cancer.



Q1. Why did you decide to research in the U.S.?

In 1998, as a high school student, I was deeply moved by news of the turmoil in East Timor following the invasion by the Indonesian army. My friends and I felt compelled to help, so we established a volunteer organization. Through educational outreach on the streets and in

churches, we succeeded in donating a truck to an orphanage for transporting supplies. This experience ignited my interest in international medical aid, leading me to make the committed decision to pursue a career as a physician.

While working as a urologist, I often met patients facing incurable conditions. This motivated me to seek cures through basic research. In 2016, I entered a PhD course under Professors Saika Takashi and Shigeki Higashiyama at Ehime University, focusing on the SPOP protein in prostate cancer. I subsequently elucidated and reported on the DNA repair defects mediated by the SPOP protein.

Driven to contribute to cutting-edge global research, I applied to over 20 labs in the U.S., which culminated in a position at Peter Nelson's lab at the Fred Hutchinson Cancer Center. This lab, renowned for its work on BRCA mutations in metastatic prostate cancer, proved to be the ideal environment for my research pursuits. My passion was recognized, and I eagerly began my work in the United States.



With postdocs from the lab at the Human biology Division 30th Anniversary Event.



Weekly Lab meetings are held jointly by the five labs in the Prostate Cancer Research Group.

Q2. What is your impression of the research environment in the U.S.?

What struck me first was the substantial funding dedicated to cancer research. Unlike in Japan, where resources may be limited, the Nelson lab plans to conduct single-cell analysis on 300 samples. We have already completed 100. Weekly, a considerable sum is invested into the single-cell sequencing that I conduct.

Simultaneously, huge projects are underway, such as CRISPR Screening and projects using PDX and autopsy programs. The boldness to embrace new technologies without fear of failure is inspiring, although daunting to me personally.

Another notable aspect is the low barriers for collaboration within and between labs. By uniting diverse expertise, research can be amplified and enriched. Effective communication is vital although that is a difficulty for me. The Nelson lab, hosting 8 postdocs, is part of the Prostate Cancer Group, a substantial assembly of about 50 researchers. This creates an encouraging environment where questions are welcomed, and collective wisdom can be tapped into.

Q3. How do you take advantage of your experiences in the U.S. and apply them to your research or career?

In the U.S., I helped found the Seattle Japanese Researchers Group, fostering exchanges across various fields. Outside of my professional life, I have had the enriching opportunity to engage with local and international residents. It has been particularly inspiring to connect with promising young Japanese professionals and students in Seattle (especially in the IT and airline fields), individuals poised to shape Japan's future.

Upon my return to Japan, my ambition is to become a Physician Scientist, advancing my cancer research while maintaining my clinical practice as a urologist. Though balancing both is challenging in Japan, I feel a strong duty to pursue translational research that benefits patients directly.

Prostate cancer exhibits significant differences in malignancy and drug sensitivity between Japan and Western countries. A sufficient genome profiling database is lacking in Japan, and I aspire to lead the establishment of such a database.

As a JSPS Postdoctoral Fellow for Research Abroad, I take pride in being among a select few clinicians who have conducted research overseas. This experience is a stepping stone for furthering medical research in Japan.



BBQ event with Seattle Japanese researcher group



**Japan Society for the Promotion of Science (JSPS)
San Francisco Office**

1936 University Avenue, The PROMENADE Suite 250,
Berkeley, CA 94704

Email: sfo-info@overseas.jsps.go.jp

Website: <https://www.jspsusa-sf-org/>