IRES: Summer Biology Research Program in Japan
Research focus: Novel Genetic Elements Regulating Behavior of Medaka and Zebrafish

January to July, 2023 with travel Saturday, May 13 to Saturday, July 15, 2023

This grant-funded research program allows students to engage in scientific collaborations at top biology institutes in Japan. Funded by the National Science Foundation (NSF Project #1952513), this summer program will provide students with invaluable research and intercultural experiences while working with an international team of biologists on CRISPR-Cas9 techniques generating transgenic fish to study genetic elements regulating behavior. The program consists of full-time research in a Japanese laboratory, mentored by a faculty member from the Japanese institution. The competitive fellowship is open to Montclair State University and non-Montclair State University advanced undergraduate and graduate students who are interested in state-of-the-art gene editing molecular biology techniques.

After the online sessions during the spring semester, the six students will spend one week in Nagoya for on-site orientation and then eight weeks at one of the following sites:

- The National Institute of Genetics (Mishima, Japan)
- The Institute of Transformative Bio-Molecules at Nagoya University (Nagoya, Japan)
- The National Institute of Basic Biology (Okazaki, Japan)

Students at all three sites will work on related projects, with the intent of publishing a joint study.

Fellowship Details

This is a National Science Foundation funded program. Each participant will receive a $5000 stipend for program participation. Other expenses associated with participation are covered by the NSF. Please see breakdown below.

What is covered (in ADDITION to the $5,000 stipend):	**What is NOT covered**:
• Roundtrip airfare between a U.S. airport and Nagoya, Japan • Ground transportation between Nagoya airport and site • Ground transportation between your research site and Nagoya, as necessary • Housing during the program in Japan • Laboratory supplies	• Passport fees • Ground transportation to/from US airport • Meals • Ground transportation not related to program Other personal expenses • Health insurance (required)

To Apply: Applicants must submit all required application materials by the deadline, Wednesday, November 9, 2022 11:59pm EST. Applications will be accepted from September 1, 2022 to November 9, 2022 and must be submitted online through IRES Summer Biology Research Program in Japan.

The online application requirements include a statement of purpose, unofficial transcripts, a resume and two letters of recommendation from research advisors. The program will also be offered in Summer 2024. Application periods for Summer 2024 will be announced at a later date.

- Application deadline: November 9, 2022 11:59pm EST
- Interview of finalists: late November, 2022
- Final selection of participants and alternates: December, 2022

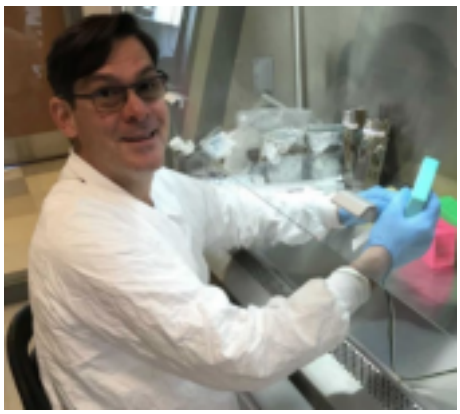
Program dates for 2023:

- January - May 9: Online pre-departure introduction (in the U.S.)
- May 13: Students depart for Japan
- May 16-May 19:Introduction to laboratory techniques in Nagoya
- May 22-- July 14: Eight week program on site
- July 15: return to US

Eligibility

- Applicants must be enrolled in good standing in a degree program at a U.S. Institution of higher education with a minimum overall GPA of 3.0 and minimum GPA of 3.0 in science courses.
- Graduate students (Masters or PhD) and upper-level undergraduate students in sciences: Bachelor's level applicants must have completed their sophomore year by the start of the program and students planning to graduate in Spring 2023 must be accepted to a graduate school program in science for Fall 2023 by time of program.
- Applicants are expected to have taken a molecular and cellular biology course or equivalent by time of application and have basic knowledge of molecular laboratory techniques. Applicants must have worked previously on a laboratory research project outside of class.
- Applicants must be a U.S. citizen, national or permanent resident (as per NSF requirements) and must have a passport valid through February 2024 (six months past program end) at time of selection.
- Students from groups that are typically underrepresented in STEM are encouraged to apply. ***Acceptance into the program is competitive. A total of 6 participants will be selected, with alternates. The members of the "NSF IRES-US Japan Collaboration" program committee are responsible for all final decisions.***

Faculty Leaders



Dr. Carlos A. Molina is a professor of molecular biology at Montclair State University. His laboratory works in post-translational regulation of transcription factors and the reproductive system of vertebrates using fish and mice as model organisms.

Dr. Mika Munakata is a professor in the Department of Mathematics at Montclair State University. She does research in STEM education, undergraduate education, and professional development. She will be co-directing and leading the educational, language and cultural components of the program.

Informational Webinars

- Thursday, Sept. 8th from 4-5pm EST. Register here. You will be sent a Zoom link after registering.
- Tuesday, Oct. 4th from 8-9pm EST. Register here. You will be sent a Zoom link after registering.

For further information, contact Dr. Carlos Molina, molinac@montclair.edu