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

January to July, 2024 with travel Saturday, May 11 to Saturday, July 13, 2024

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):
- 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

### What is NOT covered:
- Passport fees
- Ground transportation to/from US airport
- Meals
- Ground transportation not related to program. Other personal expenses.
- Health insurance (required)
- Travel insurance

**To Apply:** Applicants must submit all required application materials by the deadline, Wednesday, November 9, 2023 11:59pm EST. Applications will be accepted from September 1, 2023 to November 9, 2023 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.

- Application deadline: November 9, 2023 11:59pm EST
- Interview of finalists: late November, 2023
- Final selection of participants and alternates: December, 2023

**Program dates for 2024:**
- January - May 9: Online pre-departure introduction (in the U.S.)
- May 11: Students depart for Japan
- May 13-May 17: Introduction to laboratory techniques in Nagoya
- May 20-July 12: Eight week program on site
- July 13: 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 2024 must be accepted to a graduate school program in science for Fall 2024 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 2025 (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 investigates the role of transcription factors in cancer and the reproductive system using fish as a model organism.

**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**

Please join one of our information webinars via Zoom (see dates below–all times are eastern time) using this link: https://montclair.zoom.us/j/7250788103

1. Thursday, September 14, 2023, 4-5pm ET
2. Tuesday, October 3, 2023, 8-9pm ET

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