

3-year PhD position at Ochanomizu University, Tokyo (Developmental Biology/ Reproductive Biology)

An interdisciplinary PhD studentship (3 years) for a female student will be available from Japan Science and Technology Agency (JST) under the supervision of Prof. Atsuko Sato, Department of Biology, Ochanomizu University. Ochanomizu University, established in 1875 (<https://www.ocha.ac.jp/en/>), is one of the oldest universities for women' higher education in Japan. The University is located in central Tokyo, and offers unique opportunities to support education and career development for women.

Application deadline: 8 November 2023 at noon CET, open until filled.

The studentship will start 01 April 2024 the earliest. Full time only.

Applicant eligibility

A female student who has Master's degree or going to obtain Master's degree in a relevant field of study, either in mathematical or computer science or biological sciences with a strong computational or bioinformatics component by the starting date of PhD. We are looking for motivated student interested in developmental biology, programming with problem solving abilities as well as resilience to solve daily problems. Research experience in molecular biology and basic programming would be advantageous. This position is open to applications from all nationalities, but for non-Japanese nationalities, the student will be in charge of getting a student VISA to start your PhD in Japan by the starting date at your own cost.

A male student who has Master's degree or going to obtain Master's degree in a relevant field can also join Prof Sato's group, but needs to be fully funded by other funding sources (see some examples in 'stipend' section).

Brief description of the project

The marine environment is under increasing thermal stress due to climate change. This is a major issue for development in poikilothermic animals that have thermal limits for correct development at the egg stage. Degradation in eggs quality has been a recent major issue in additionally for agriculture and human health. Prof Sato's research group has been investigating the molecular basis of egg development under thermal stress (<https://www.p.sci.ocha.ac.jp/bio-atsuko-en/>) and how environmental stress could have altered

developmental pathways in the evolutionary process with a special focus on maternal factors. The goal of this project is to predict development from initial maternal input by mathematical modelling. We also aim to develop a novel mRNA delivery system to keep eggs healthy and robust under environmental stressors.

The student will be engaged in computer programming to create a mathematical model and molecular work involving collecting tissue and RNA samples from fish and/or tunicates.

Molecular work will involve collecting tissue and RNA samples and the student will have opportunity to learn RNA extraction, PCR, immunohistochemistry, imaging and imaging analysis, under the guidance of Dr. Sato. In the computational work, the student will learn programming and simulation, but this requires experience and basic skills in programming using python and R.

Stipend

Maximum 200,000JPY per month. You need to pay for University tuition fees and other preparation to start your PhD in Japan (you can also apply for tuition fee waiver at the University). The studentship is for a student who requires financial support to do her PhD only. The student will be assessed their progress annually, and because of the funder's requirement, if the student do not have enough motivation and/or do not show enough skills to produce outcomes, the payment may terminate.

Apart from the JST studentship, there are several scholarships including one from the Japanese government MEXT, that students are encouraged to apply for. If you are not selected for this JST PhD studentship, you will still be considered as a candidate to join in Prof Sato's research group as long as you will be fully funded for at least three years from elsewhere and can work in full-time mode.

https://www.jasso.go.jp/en/ryugaku/scholarship_j/index.html

<https://scholarshiproar.com/mext->

[scholarship#:~:text=MEXT%20Scholarship%202024%20is%20a,%2C%20Preparatory%20Allowance%20\(2024%20Rate\)](#)

Prospective students are highly recommended to check application deadlines of these scholarships. Many Japanese scholarships applications are due by the end of October.

Once you get a place, the student is also encouraged to apply for JSPS fellowships (DC2), which come with research travel costs.

Application Process and Materials

Please send the following materials to Professor Atsuko Sato (sato.atsuko<at>ocha.ac.jp):

1. Cover letter stating what you are currently working on, your major expertise and any past experience in molecular work and/or computational work, when and which degree you are supposed to obtain as a Master degree, how many years of research experience, an expected starting date of PhD (either April 2024 or October 2024) and your career aspirations after getting PhD
2. CV including your name, your date of birth, your sex and your contact address, your academic career and past experiences with dates and name and contact addresses of your referees. Any special requirements should also be mentioned.
3. Degree transcripts and Certificates
4. Personal statement (stating what you would be most interested in, why you are interested in working on this project, how your past experience will contribute to the project, and what you expect to learn during your PhD. Max 1000 words in English excluding references (you can add references after the main text).
5. Three academic referees

Selection procedure.

Shortlisted candidates will be interviewed online by Professor Atsuko Sato between 27-30 November 2023. Applicant also needs to pass the University entrance examination process. The exam normally consists of presentation of your previous work and an interview by several faculty members. University exam February-March 2024 (to start on 1 April 2024) or July-September 2024 (to start on 1 October 2024). Dates are 5th March 2024 (to start from 1 April 2024; application deadline is 25-27 December 2023) or early September 2024 (dates to be announced if you chose to start 1 October 2024).

Please see: <https://www.ocha.ac.jp/en/admission/info/doctor.html>.

This is sometime after the interview by Prof Sato, and further information and advice will be supplied following interview.

For more information and queries, please contact Prof Atsuko Sato
(sato.atsuko<at>ocha.ac.jp)