



**Okinawa Institute of Science and Technology  
Integrated Open Systems Unit / Group Leader**

The Okinawa Institute of Science and Technology Graduate University (OIST; see [www.oist.jp](http://www.oist.jp)) is a dynamic new graduate university of science and technology in Okinawa Prefecture, Japan. The university is located on 85 hectares of protected forestland overlooking beautiful shoreline and coral reefs. The campus is striking architecturally, and the facilities are outstanding ([OIST campus video tour](#)). There are no academic departments, which facilitates multidisciplinary research. Outstanding resources and equipment are provided and managed to encourage easy access and collaboration. English is the official language of the University, and the university research community is fully international, with more than 50 countries represented. OIST is rapidly gaining recognition in the worldwide academic community as a model for excellence in education and research.

**Unit summary:**

**Integrated open systems unit that has been working on systems biology and renewable energy systems now focuses on developing “AI Scientist” that can make major scientific discovery highly autonomously in the area of life science and biotechnology. A new team will be assemble under the leadership of Prof. Hiroaki Kitano.**

**Interested candidate shall access following two artricle to understand rearch directions and objectives.**

(1) Kitano, H., Artificial Intelligence to Win the Nobel Prize and Beyond: Creating the Engine for Scientific Discovery, AI Magazaine, 2016

URL: <https://ojs.aaai.org//index.php/aimagazine/article/view/2642>

(2) Kitano, H., Nobel Turing Challenge: creating the engine for scientific discovery, npj Systems Biology and Applications, 2021

URL: <https://www.nature.com/articles/s41540-021-00189-3>

**Position: Group Leader / Senior Researcher / Researcher**

**Working Location:**

1919 - 1 Tancha, Onna - son, Okinawa, Japan 904-0495



### **Responsibilities:**

#### Group Leader/Senior Scientist:

The successful candidate will lead the project that entails experimental systems development, software development, AI research, and research on multiple target biological issues. Breadth of knowledge on high-precision experiments, multi-omics measurement, data analysis, Artificial Intelligence and Machine Learning, software development, and domain knowledge on one or more of biological issues including microbiome, stem cell biology, aging, immunology and other topics of importance.

A group leader shall work with members of the team to lead development of automated experimental system involving both hardware and software, AI systems for hypothesis generation, data analysis, and verification in collaboration with experts in respective domains.

Initial focuses will be on microbiome and immunology related issues, and possible future topics includes aging, stem cell, and basic cellular biology using budding yeast and mammalian cellular systems.

The candidate will also strongly promote collaborative research through the automation system to other groups inside and outside of OIST. The candidate must have great organizational skills, related lab/instrument experience, excellent oral communication skills, good time management and outstanding multi-tasking abilities, and a fast-paced matrix working environment.

#### Researcher 1:

The successful candidate will work on development of highly automated system that performs a series of complex experiments on human gut microbiome, stem cell, and other domains. In-depth knowledge of experimental process (including metabolomics, genomics, and other experiments), automation, robotics is expected. Knowledge and experience on control and data analysis software development and AI/ML are major plus. As a part of the project, researcher is expected to perform scientific research using automated experimental systems.

#### Researcher 2:

The successful candidate will work on AI/ML aspect of AI Scientist and develop data analysis pipeline, hypothesis generation module, and other software systems as needed. Such software shall be integrated part of the entire system as will be interfaced to automated experimental systems. In-depth knowledge on AI and Data analysis is essential and knowledge and some experiences in biological wet-experiments are major plus.



**Qualifications:**

Applicants must have a Ph.D. in AI, computer science, stem cell biology, microbiology or related fields and demonstrated ability in publishing results in peer-reviewed journals.

Desirable qualifications include experience in bioinformatics, AI and machine learning, tool development for biological data analysis, handling huge cohort metagenomic and other omics data. Also, the applicants will have deep insight for human microbiome, stem cell, immunology, aging research and be available to connect to wet and dry team members seamlessly.

**Report to:** Prof. Hiroaki Kitano

**Starting Date:** Negotiable

**Term & Working hours:**

Term: Full-time, fixed-term appointment for 2 years. Contract initially with a 3-month probationary period (inclusive). This contract may be renewed to a total of three years.

Working hours: 9:00-17:30 (Discretionary)

**Compensation & Benefits:**

Compensation in accordance with the OIST Employee Compensation Regulations

Benefits:

- Relocation, housing and commuting allowances
- Annual paid leave and summer holidays
- Health insurance (Private School Mutual Aid <http://www.shigakukyosai.jp/> )
- Welfare pension insurance (kousei-nenkin)
- Worker's accident compensation insurance (roudousha-saigai-hoshou-hoken)

**How to Apply:**

Apply by uploading your submission documents [HERE](#).

\*This is a secure file uploading system for handling confidential materials.



**Submission Documents:**

**E.g.**

- Cover letter in both English and Japanese
- Curriculum vitae in both English and Japanese
- Names and contact information of 3 referees, one of which should be a previous employer

\* Please be sure to indicate where you first saw the job advertisement.

\* Prior to the start of employment all new hires are required to successfully complete a background check. Personal information including employment history and academic background should be submitted to third-party administrators after a conditional offer of employment.

**Application Due Date:**

Applications will be screened upon arrival. Applications deadline will continue until the positions are filled.

**Declaration:**

- \* OIST Graduate University is an equal opportunity, affirmative action educator and employer and is committed to increasing the diversity of its faculty, students and staff. The University strongly encourages women and minority candidates to apply.
- \* Information provided by applicants or references will be kept confidential, documents will not be returned. All applicants will be notified regarding the status of their applications.
- \* Please view our policy for rules on external professional activities  
(<https://groups.oist.jp/acd/information-disclosure/>).
- \* Further details about the University can be viewed on our website ([www.oist.jp](http://www.oist.jp)).