



NEWSLETTER

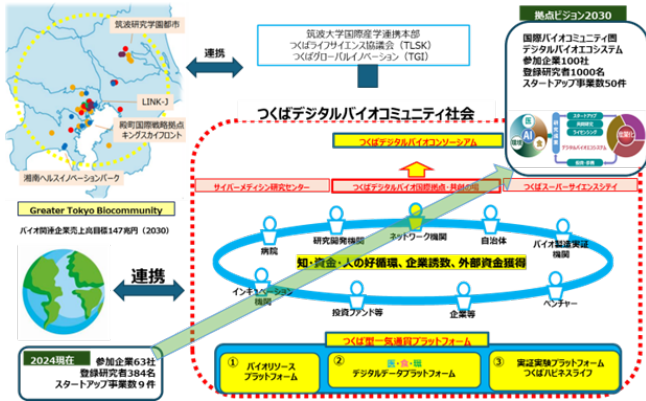
Tsukuba Digital-Bio International Center Consortium and International Activities Special Issue

April 10, 2024 vol. 8. Spring 2024 issue

The Tsukuba Digital Bio Consortium is now in full swing!

About the Tsukuba Digital Bio Consortium

The purpose of this program is to support the industrialization of innovation by conducting data-driven bio-research necessary for the development of products and services that meet corporate needs, based on strong collaboration between member companies and the Center's research institutions, using a "Tsukuba-style integrated research platform".



Tsukuba Digital Bio Consortium Features and Services

1. A place for information exchange between industry, government and academia, and consultation on individual development research
2. A place to support research planning and development driven by corporate needs for the purpose of social implementation
3. A place for matching with bioresources, specialized knowledge, digital analysis technology, POC verification fields, etc.

Tsukuba Digital Bio Consortium: Information on Joining

Apply for membership by submitting a "Membership Application" to the Center Project Leader, which will be evaluated by the Tsukuba Digital Bio International Center Steering Committee (Center Steering Committee). The decision will be made with the approval of the base project leader. If you have any questions about the consortium or the admission procedure, please contact the Tsukuba Digital-Bio International Center Secretariat

E-mail : digitalbioeco@md.tsukuba.ac.jp

Tel : 029-853-1131

(Extensions: 91416 or 91421)



つくばデジタルバイオコンソーシアム



International Activities (University Visit) Oxford University Cooperation and Exchange

Visitation from February 21 to 24, 2024: Hiroyuki Nishiyama (Project Leader), Tetsuya Sakurai, (Deputy Project Leader), Hiroko Isoda (Leader of R&D Subject 5), and Assistant Professor Takafumi Miyamoto (University of Tsukuba, School of Medicine and Medical Sciences).

Visitation from March 4 to 8: 2024, Hisato Suzuki (Associate Professor at the University of Tsukuba).



Our members visited prestigious Oxford University in the U.K., where they discussed research in their respective fields of expertise. During this exchange, the two parties enthusiastically discussed the promotion of future international exchange and the possibility of joint research. It is hoped that this exchange of researchers from both institutions will allow sharing of expertise and technologies, leading to new discoveries and the creation of innovative projects.

Through this visit, the Tsukuba site and Oxford University have confirmed their commitment to a close partnership. The two institutions plan to continue regular exchanges and develop joint research projects. This strengthened collaboration will provide valuable international experience for researchers at both institutions and will generate new scientific knowledge that will contribute to global health and well-being.

Visit Report

Associate Professor Hisato Suzuki, University of Tsukuba, School of Medicine and Medical Sciences

In the United Kingdom, whole genome analysis for congenital disorders can be performed by insurance through the NHS (National Healthcare Service) while, in Japan, whole genome analysis remains categorized as "research," but is expected to be implemented as a "clinical" insurance treatment for intractable diseases, following cancer genome treatment. In the UK, which is ahead of Japan in genome diagnostics, we were able to inquire about the current situation and challenges from both clinical and research perspectives.

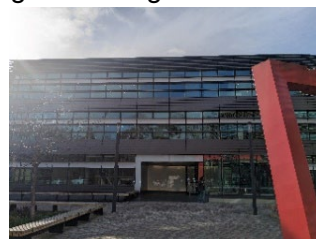
On the clinical side, Ms. Carolyn Campbell of Churchill Hospital and Professor Jenny Taylor of the Center for Human Genetics at the University of Oxford gave us an overall diagram of who is responsible for whole genome analysis when a physician actually requests it. The overall picture of who is responsible for whole genome analysis when a physician actually requests it was shown.



Compared to Japan, there was a utilization of human resources who did not graduate from medical schools, and students who graduated from the Faculty of Biology or the Faculty of Informatics were noticeably active as bioinformaticians after training in a curriculum designated by the government.

On the research side, Associate Professor Nicola Whiffin and Professor Andrew O M Wilkie from the University of Oxford discussed how to link patients with unresolved clinical whole genome analysis to research and future collaboration with the University of Tsukuba.

Coincidentally, on March 25, after my return to Japan, the three academic societies responsible for genetic diagnosis and treatment of intractable



diseases (the Japan Society of Human Genetics, the Japanese Society for Genetic Counseling, and the Japanese Society for Gene Therapy) issued the "Guidelines for Genetic Testing for Designated Intractable Diseases. The visit served as a road map for the clinical effectiveness of this guideline.



National Taiwan University Cooperation and Exchange

Researchers from the Tsukuba Digital-Bio International Center visited National Taiwan University, with whom they have been in contact since last year.

During the visit, researchers from both institutions exchanged information about each other's latest achievements and research plans, and had lively discussions about the possibility of future collaboration.

Through this visit, the two institutions confirmed their commitment to further strengthen international exchange and promote joint research. Researchers from both institutions will continue to interact and develop new research projects and, in doing so, we will promote digital (AI) and medical innovations. The Tsukuba Digital-Bio International Center and National Taiwan University are determined to further deepen international collaboration by leveraging each other's strengths. It is expected that the partnership between the two institutions will continue to grow stronger.

Visit Report

Center for Artificial Intelligence Research,
University of Tsukuba,
Yuji Kawamata (Researcher)



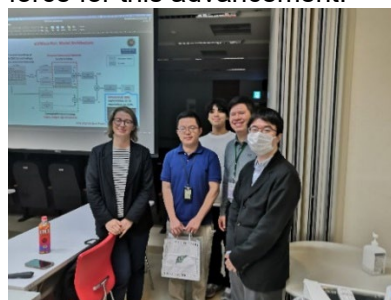
The meeting for the joint research between National Taiwan University and our university was held at National Taiwan University for four days from Monday, February 19th to Thursday, February 22nd. The meeting focused on several projects that utilize artificial intelligence technology in the medical field, which were discussed with great enthusiasm. This visit was made possible through the "Support for Human Resource Development for the Next Generation" program at Co-Creation Place. Assistant Professor Anna Bogdanova, student Tomoru Nakayama, URA Xiangyou Yu, and myself participated in this second exchange, following a visit in December 2023.



Discussions at the meeting included segmentation of neck tumors using MRI, predicting the onset of diabetes, and predicting left ventricular myocardial weight from electrocardiograms. These themes are ones in which artificial intelligence has great potential in the medical field, and the findings of the researchers from both universities were exchanged.



Through this meeting, it is expected that collaborative research between the two universities will become more active and yield further results. In the evolution of medical technology, artificial intelligence will play an increasingly important role. It is hoped that this meeting will serve as a driving force for this advancement.



TOPICS

The Consortium Symposium of the Tsukuba Digital-Bio International Center

The Consortium Symposium of the Tsukuba Digital-Bio International Center was held on March 13, 2024. We had nearly 100 diverse individuals, including representatives from businesses and organizations, participate in the event, which was held in a hybrid format at the Tsukuba International Congress Center and also via webinar.



At the symposium, ten speakers presented in detail the efforts and achievements at the Center by the University of Tsukuba and other research institutions in the Tsukuba area, providing a valuable opportunity to demonstrate new developments in the field of biotechnology and the importance of industry-government-academia collaboration.

During the reception that followed, presentations were made by Astellas Pharma Inc. and Tanita Corporation, who are already participating in the project.

The two companies' efforts demonstrated the new value and potential created by their collaboration with the Tsukuba International Center for Digital-Bio, and provided an effective opportunity to encourage other companies to participate.



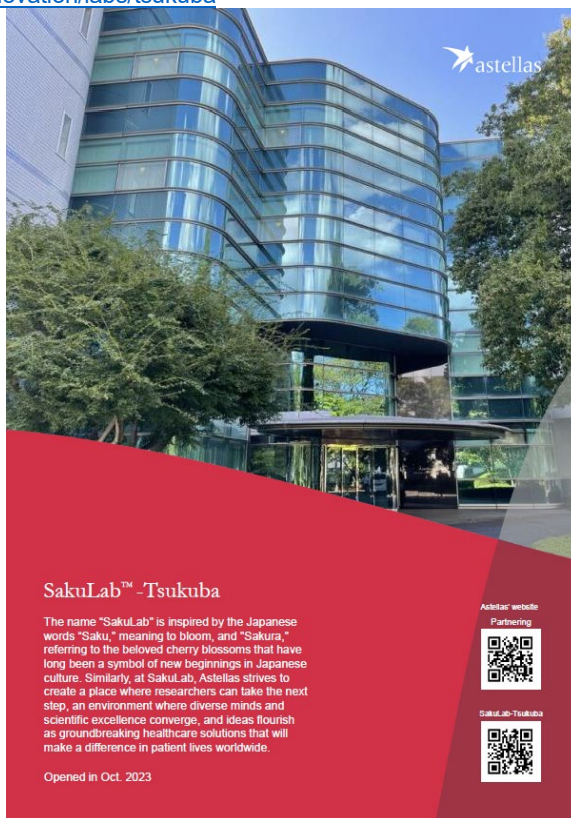
The Tsukuba Digital-Bio International Center was established within SakuLab™-Tsukuba, an open innovation center established at the Tsukuba Research Center of Astellas Pharma Inc.

The University of Tsukuba will promote needs-driven research in line with corporate needs toward the formation of "Tsukuba Bio Valley," a center for industry-government-academia collaboration in the biotechnology field.

As part of this effort, we will establish ITF.F (Imagine the Future. Forum), which will attract companies to the University of Tsukuba facilities to conduct large-scale joint research. We also established the Tsukuba Digital-Bio International Office within the open laboratory facility in Astellas Pharma Inc.

[SakuLab™-Tsukuba HP](https://www.astellas.com/en/innovation/open-innovation/labs/tsukuba)

<https://www.astellas.com/en/innovation/open-innovation/labs/tsukuba>



Astellas Pharma Inc.
From SakuLab™-Tsukuba pamphlet

【For inquiries about this office or to request an article to be published, please contact us here.】

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