

2025

University of Tsukuba

Tsukuba -Plant Innovation Research Center

"Plant Transgenic Design Initiative (PTraD)" Joint Usage and Joint Research Project

Handling Guidelines

1 Business Objectives and Overview

As a comprehensive research center for plant science that promotes the use of the results of basic science related to plant genetic resources, it aims to promote academic research on transformed plants.

Utilizing advanced transformation technologies for model crops and new plant breeding technologies, including genome editing technology, we will conduct joint research on understanding the functions of genes involved in the expression of important plant traits and joint research on social implementation research.

We will share with the researcher community know-how on risk assessment, management technology, intellectual property management, database, social acceptance promotion, etc. related to plant gene transformation technology and transformation plant development research, and function as a base for ELSI and understanding promotion.

2 Joint Usage and Joint Research Themes for this fiscal year

(1) Basic Technology Research Group [Research Group Leader: Takuya Suzuki]

- Search for practical genes related to the regulation of plant morphology and environmental responses, and plant-microbe interactions
- Search for useful genes related to the production of functional substances in plants
- Mass expression of proteins in plants and their purification

(2) Next Generation Breeding Technology Development and Application Research Group

[Research Group Leader: Satoko Nonaka]

- Development of research infrastructure for new resources for model crops
- Development of new plant breeding technologies, including genome editing technology
- Creation of new crop varieties that accumulate useful substances, and evaluation of safety and characteristics
- Creation of new crop varieties with high value-added traits related to yield, disease

resistance, suitability for cultivation and processing, etc.

(3) Characterization and Biodiversity Impact Assessment Research Group

[Research Group Leader: Taichi Oguchi]

- Construction of examples of cultivation and management methods for genetically modified plants in specific reticence rooms and isolated fields
- Development of case studies of cultivation and management methods for genetically modified plants with outdoor planting in mind
- Development of technologies such as new applications and simplification of biodiversity impact assessment
- Research on establishing a foundation for biodiversity impact assessment and management technology for transforming plants
- Research on environmental diffusion risk assessment of transgenes and development of technologies to prevent diffusion
- International comparison and dissemination of information on environmental impact assessment of genetically modified plants
- Development and practice of effective methods for promoting social acceptance of biotechnology-derived plants

(4) Bioresource Utilization Research Support Group

[Research Group Leader: Naoya Fukuda]

- Genomics and molecular genetic research using Micro-Tom mutants
- Selection of Micro-Tom mutants by reverse genetic method
- Creation of recombinant and genome editing strains using tomato bioresources including Micro-Toms

(5) other

- Joint usage and joint research on other research topics related to the design of biotechnological plants, including transformation techniques.

※Due to a partial review of the contents of PTraD's activities, the group structure, group leaders, etc. may change, but this will not affect the decision on the selection of proposals. If you have any questions, please contact us.

3 Implementation period

The joint usage/research period shall be from April 1, 2025 to March 31, 2026.

4 Expenses associated with joint usage/research

When requesting expenses, the prescribed "**Application for Joint Usage/Research and Research Grant and Research Plan" (Form 1)** must be submitted to each faculty member in charge of receiving expenses at the beginning of the fiscal year, and the director of the Tsukuba Functional Plant Innovation Research Center shall approve the request.

(1) Amount of allocation of expenses for selected projects

A-1 type (general type)

One joint usage/joint research project with a maximum cost of 400,000 yen.

A small number will be recruited and adopted after the start of the fiscal year (around April or May).

A-2 type (general type for young researcher)

Among the joint usage/joint research projects with a maximum cost of 400,000 yen per project, the principal investigator is a young researcher (a researcher who is 40 years old or younger as of April 1, 2025).

A small number will be recruited and adopted after the start of the fiscal year (around April or May).

B Type (specialized for the use of special facilities and equipment)

A joint usage/joint research project dedicated to the use of the Center's special facilities and equipment, with a maximum of 50,000 yen per project.

This research is being recruited at any time outside of this application period depending on the budget situation.

C Type (Information Dissemination Technology Research *Including symposiums and workshops)

Limited to the Information Dissemination Technology Research Group, we will support the holding of the event in collaboration with faculty members of the Gene Research Center. Research will not be allocated directly to applicants, but please consult with us in advance about necessary expenses. This research is being recruited at any time outside of this application period depending on the budget situation.

D Type (used by overseas collaborative research institutions)

Joint usage/joint research projects using the University of Tsukuba and overseas

research institutes affiliated with the Center. (Please contact us in advance for details.)

(2) Expense classification

Expenses are divided into "research expenses" and "travel expenses".

The maximum amount of travel expenses is 50% of the total expenses, but if there is a possibility that this amount will be exceeded, there are no restrictions on allocating it to other expense categories by submitting a separate statement of reasons (optional format) to each faculty member in charge of receiving the center with the prior approval of the Center Director.

(3) Use of Research and Travel Expenses

① Research Grants

Research funds may be used for the following purposes:

- Consumables necessary for conducting research (excluding general office supplies)
- Shipping fee for resources required for experiments at our center
- Usage fees for common equipment of the Center, including state-of-the-art equipment
- Venue rental for research meetings and seminars

* Only projects selected in Type C (Information Dissemination Technology Research) are selected.

Items that cannot be used for any purpose.

- Purchase of fixtures
- Reward

Procedures for Execution of Research Funds

If the research project representative wishes to purchase goods, etc. using research funds, the research project representative must contact each host faculty member in advance and prepare an **"Application for Purchase of Joint Use/Collaborative Research Goods" (Form 2)** and submit it to each host faculty member (a copy of Form 2 with a stamp is also acceptable). However, the original will be kept for 5 years).

All administrative management of expenses shall be carried out by the University of Tsukuba.

Management of purchased consumables, etc.

In principle, purchased consumables, etc. shall be managed by the faculty member in charge of accepting each assignment at the University of Tsukuba.

② Travel

Travel expenses may be billed only for the following services:

- Visiting expenses for joint usage/joint research

However, if it is unavoidable among the research participants to travel to other institutions other than the Center for meetings with researchers from other institutions, the research project representative must submit a **separate statement of reasons (optional form)** to each faculty member in charge of receiving the research trip at least 3 weeks before the scheduled date of the trip. The prior approval of the Director shall be obtained.

- Travel expenses for invitations related to research meetings and seminars

In principle, the venue will be held at the Center, but the representative of the research project will submit a **separate statement of reasons (optional format)** to each faculty member in charge of hosting the meeting at least one month before the scheduled date of the meeting or seminar. Holding the event at a place other than the Center may be permitted only if the Director of the Center determines that the purpose of the event is appropriate and that the ripple effect is sufficiently expected.

Application and procedures for travel expenses

When applying for travel expenses, "**Application for Joint Usage/Research Travel Expenses (Form 3) and a request for registration of the business traveler's transfer destination, etc.**" must be submitted to each faculty member in charge of receiving the business trip at least two weeks before the scheduled date of the trip. In principle, requests for business trips from the Center to the affiliated institution after completing this procedure shall be omitted, and since they will be issued only when it is necessary for the procedures of the affiliated institution, each business traveler must complete the travel procedures of the affiliated institution.

Payment of travel expenses and eligibility

- Travel expenses shall be paid by settlement in principle and transferred to each business traveler's personal account.
- Travel expenses are eligible for the project representative and those who have been notified in advance using the "**List of Research Participants (Form 4)**".
- The method of handling and calculating travel expenses shall be in accordance with the "Regulations Concerning Business Trips and Travel Expenses of the University of Tsukuba" and the "Regulations for Enforcement of the Rules on Business Trips and

Travel Expenses of the University of Tsukuba".

Documents to be submitted after a business trip

Travelers should submit a travel report as soon as the business trip is over. If you use an aircraft for a business trip, you must submit the original receipt for purchase and the boarding pass stub (required for both the outbound and return flights), and the accommodation receipt or proof of accommodation if you are accommodating overnight.

5 Use of the Center

When using the Center, please carefully read the **attached materials (rules and matters)**.

6 Use of common equipment for joint usage/joint research

The common equipment that can be used for joint usage and joint research at the Center is as shown in **the attached table**. In addition, since some devices require reservation or consultation, inquiries must be made to each faculty member in charge of receiving students at least two weeks before the desired use and confirmation must be made in advance.

7 Challenges for conducting genetic recombination experiments

· Attending workshops

Among the projects adopted for joint usage/joint research, if you want to conduct genetic recombination experiments at our center, you are required to attend the "Genetic Recombination Experiment Worker Course" conducted by the University of Tsukuba. However, those who have already attended the "Genetic Recombination Experiment Worker Workshop" in the previous fiscal year and have subsequently registered as an employee shall apply for renewal of the worker registration.

· Submission of experimental plan

Among the projects selected for joint usage/joint research, when conducting genetic modification experiments at the Center, the "Joint Usage/Research Grant Application and Research Plan" (Form 1) must be submitted with the **"Genetic Recombination Experiment Plan (Outline)" as an attachment**. Depending on the circumstances, based on this information, we will apply for recombinant experiments within the University of Tsukuba. If genetically modified products are brought in, approval of the experimental application is mandatory. However, if there is no change in the "Genetic Recombination Experiment Plan (Outline)" submitted in the previous fiscal year in the continuing project, submission is not required.

8 Publication of Intellectual Property Rights and Results

Intellectual property generated by the use of the Center shall be subject to the University of Tsukuba Intellectual Property Regulations.

(URL reference: http://www.tsukuba.ac.jp/public/ho_kisoku/s-05/2004hks12.pdf)

In addition, when presenting the results of this joint usage/joint research as a paper, whether during or after the research period, the acknowledgment will be clearly stated as "Joint usage/joint research and project number at the Tsukuba Plant Innovation Research Center (T-PIRC), University of Tsukuba (Ex: This research was supported in part by Cooperative Research Grant # XXXX of the Plant Transgenic Design Initiative (PTraD) by Tsukuba-Plant Innovation Research Center, University of Tsukuba.)

9 Provision of information on transfer, provision, consignment, etc. of genetically modified organisms

- When transferring, providing, or entrusting to the faculty member in charge of accepting students

at our center (when bringing it to our center)

Students must exchange sufficient information with the host faculty member in advance, and each project representative must submit one copy of the documents related to the provision of information approved by the safety committee of the institution to which the host organization belongs, etc., to the faculty member in charge of the host program.

- When transferring, providing, or entrusting from the faculty member in charge of accepting students at our center (when taking it out of our center)

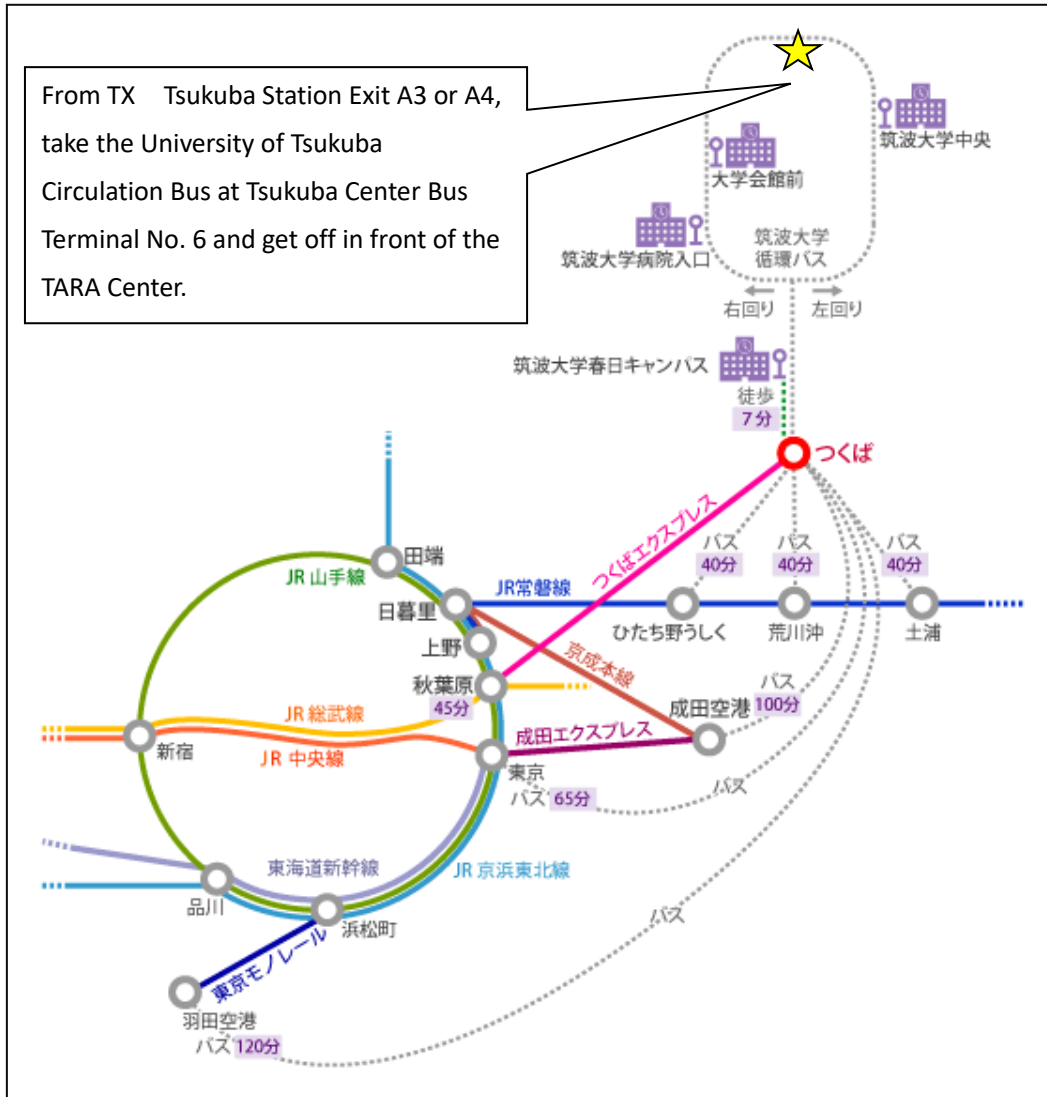
Sufficient information shall be exchanged with each host faculty member in advance, and each project representative shall receive a copy of the documents related to the provision of information prescribed by the University from the faculty member in charge of receiving the Center, and then take it out.

10 Submission of Joint Usage/Joint Research Report after the Research Period

The project representative must submit the **"Joint Usage/Joint Research Report" (Form 5)** to each host faculty member by April 3, 2026.

Agree to use the submitted joint usage/joint research reports in publications published by the Center.

11 Center Map



12 The others

If you have any questions or questions regarding this guideline or any other information about the Center, please contact the following.

<<Inquiries about joint research>>

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