

Tokyo Medical and Dental University

PhD Program in
Data Life Science Global Leader Program
(5-year Master's and Doctoral Program)

Admission Guide 2022

For International Students with Japanese
Government Scholarship

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1. Introduction

Dear Applicant:

Thank you for considering Tokyo Medical and Dental University for your graduate study. Our master's and doctoral programs are highly ranked and are comprised of a full spectrum of biomedical study for both academic and professional carriers. In 2007 Tokyo Medical and Dental University has started a new International Graduate Program for Biomedical Science to offer more opportunities for international students to study in this area. In 2022, this program was reformed. In this program, all courses are lectured in English. Tokyo Medical and Dental University gratefully accepts motivated applicants and promotes the diversity of the graduate school.

We offer you our best wishes for your successful application to the Program.

Caution:

The International Graduate Program for Biomedical Sciences is supported by a Japanese Educational Government subsidy. Tokyo Medical and Dental University ensures to provide scholarship for international students who will start their study from the master's program and continue to complete the doctor's program in totally up to 5 years. In other words, the International Graduate Program Scholarship is not allowed to those who will start the study from the doctor's program in Tokyo Medical and Dental University.

2. Academic policies

Outline of the Data Life Science Global Leader Program

Recent advances of the Digital Revolution (also known as the third Industrial Revolution) have enabled us to utilize “big data” in all scientific and social fields. In biological and medical sciences, analyses of very complex systems such as immune system, epigenomics, lifestyle diseases and aggravation of infectious diseases have become possible. At the same time, the importance of techniques and methodology for data acquisition has also been increasing. As data life science is expanding so rapidly, professionals and leaders who have research capability and practical knowledge and skills in these fields are urgently needed.

Data Life Science Global Leader Program (DLS-GLP) aims to educate students so that they can contribute to solve problems in the life science with knowledge of various aspects of data; from their acquisition to analyses. They are also expected to learn related subjects such as the basic science, technology development and clinical medicine.

The DLS-GLP is a rigorous and flexible program. Japan has the highest level of bioscience and medicine in the world, with the quality of advancement in bioscience and biotechnology, and Tokyo Medical and Dental University has been consistently ranked by Times Higher Education (THE) World University Ranking and Quacquarelli Symonds (QS) World University Ranking as one of the top five medical schools in Japan. The students will be exposed to an environment with high standards of research. At the same time, the students will be given opportunities to study across disciplines from

bioscience and biotechnology to data science while developing their own specialty.

Furthermore, students are able to have advisors from other disciplines such as chemistry, pharmaceutical science and information science, and to participate in various educational programs outside the classroom.

List of Supervisors

Supervisor	Field	Contact Address	Research Projects
Nobutoshi Ito (Professor)	Structural Biology	ito.str@tmd.ac.jp	<ol style="list-style-type: none"> 1. Structure analysis by protein crystallography and cryo EM for disease-related proteins, including immune-system, nuclear receptors, and autophagy-related proteins. 2. Thermodynamic analysis of protein-protein interactions.
Katsumori Segawa (professor)	Biochemistry & Molecular Genetics	segawa.mche@tmd.ac.jp	<ol style="list-style-type: none"> 1. Mechanisms of membrane lipid homeostasis 2. Physiology and pathophysiology of diseases caused by dysregulated membrane lipid homeostasis
Itoshi Nikaido (Professor)	Single-cell omics	Itoshi.nikaido.fgin@tmd.ac.jp	<ol style="list-style-type: none"> 1. Development of data analysis tools for single-cell omics
Hirokazu Kaji (Professor)	Biomechanics	kaji.bmc@tmd.ac.jp	<ol style="list-style-type: none"> 1. Drug delivery system 2. Cell delivery system 3. Micropysiological system

Hirokazu Tamamura (Professor)	Medicinal Chemistry and Organic Chemistry	tamamura.mr@tmd.ac.jp	<ol style="list-style-type: none"> 1. Medicinal chemistry of small drugs: antagonists and inhibitors 2. Organic chemistry of peptides and peptidomimetics 3. Development of mid-size drugs 4. Chemical biology for bioprobes
Yoshikazu Nakajima (Professor)	Biomedical Information	nakajima.bmi@tmd.ac.jp	<ol style="list-style-type: none"> 1. Medical data analysis with complex artificial intelligence 2. Deep learning-based segmentation and annotation on medical images 3. Surgical navigation system with deformation tracking of soft tissues 4. Stiffness-tunable devices for laparoscopic surgeries
Masashi Ikeuchi (Professor)	Biodesign, Biomedical Microdevice and System Integration	ikeuchi.mech@tmd.ac.jp	<ol style="list-style-type: none"> 1. 3D Microfabrication of Biomaterials 2. Microdevice for Regenerative Medicine and Assisted Reproductive Medicine 3. Integrated Microfluidics for Biomedical Mass Processing

3. Graduate Admission

- Admission Requirements

(1) Academic Background: Applicants must have a minimum of 16 years of education or will complete such education by the end of September 2022, and have a bachelor's degree or will gain such degree by the end of September 2022. Alternatively, applicant's ability must be recognized by Tokyo Medical and Dental University Graduate School as equal or superior to that of a university graduate.

(2) Age: Applicants must be 34 years old or younger as of April 1, 2022.

(*1) Military personnel and civilian military employees registered on the active list are not eligible.

(*2) The grants will be cancelled if grantees fail to arrive in Japan by October 14, 2022.

(*3) An applicant who has already won scholarships awarded by the government of his/her own country or/from private organizations will not be selected unless he/she declares intention to decline receipt of these scholarships once he/she is selected as this scholarship student.

(*4) The grants will be cancelled if an applicant on a bachelor's program at the time of application fails to complete the bachelor's program by September 30, 2022

(*5) The following people are not qualified to apply for this course;

1. Those who applied or will apply for the Japanese Government Scholarship for the year 2022 with the recommendation of universities other than Tokyo Medical and Dental University.
2. Those who applied or will apply for the Japanese Government Scholarship for the year 2022 or 2022 with a recommendation from a Japanese embassy.
3. Those who intend to study at a university in Japan under the Short-term Student Exchange Promotion Program Scholarship for the year 2020 offered by the Japan Student Services Organization (JASSO).

(4) The scholarship will be canceled if, at the time of enrollment, an applicant does not possess the Japanese visa acquired through the procedure instructed by the Foreign Student Support Unit, Tokyo Medical Dental University (see 8. Visa Acquisition).

Applicants need to take contact with the prospective supervisor before sending application documents. Please refer to the Division / Department page:

https://www.tmd.ac.jp/english/faculties/graduate_school/life_science_and_technology/department/

- Application Filing Period
January 21, 2022

- Acceptance of Admission
The results will be posted to all applicants by the beginning of July 2022.

Note: Applicants must have sufficient English language proficiency. Applicants' English proficiency must be certified by one of the following.

- (a) An English language proficiency test score equivalent to the B2 CEFR (Common European Framework of Reference for Languages) level or above. (Test scores equivalent to the B2 CEFR level: TOEFL iBT 72-94, IELTS 5.5-6.5.)
- (b) Completion of courses of study where the language of instruction is English to meet entry requirements to the Graduate School in Japan.
- (c) English proficiency as equal or superior to the above (a) qualification recognized by TMDU.

4. Application Documents

The applicant should first obtain approval of a course of study from the supervisor of the laboratory you wish to belong to. The supervisors are listed at <http://sbsn.tmd.ac.jp/eng/faculty/>

Applicants must submit the following documents:

1)	Application form for Japanese Government (MEXT: Monbukagakusho) Scholarship: Form 5 (digital file and a paper version printed on both sides)	1 (original & digital file)
2)	Field of Study and Study Program: Form 6 (digital file and a paper version printed on both sides)	1 (original & digital file)
3)	Recommendation Report: Form1 (filled out by the prospective supervisor)	1 (original & digital file)
4)	Total academic Report: Form 3 (filled out by the prospective supervisor)	1 (original)
5)	Certificates of graduation (or expected graduation) from university. Certificate of completion (or prospective completion) of graduate course or degree, if any	1 (original)
6)	Official academic transcripts from university and/or graduate school attended which certifies the achievement of an excellent academic record issued by the last school you attended (e.g. GPA, classification, ranking, etc.)	1 (original)
7)	Thesis or its equivalent by which the applicant earned his/her bachelor's degree, if any. Only documents in English are acceptable. If the applicant attended a bachelor's program which does not require a thesis, please state so and submit its equivalent, if any.	1 (copy)
8)	Certificate of family register or citizenship in the applicant's home country, if any	1 (original)
9)	A photocopy of your passport	1 (copy)
10)	A letter of reference from a head of the institution the applicant belongs to and another reference is desirable from a supervisor who knows the applicant personally. <u>All recommendation letters should be addressed to "the President of Tokyo Medical and Dental University."</u>	1 (original)
11)	A photograph taken within the past 6 months (4.5×3.5 cm-sized, upper frontal view without a hat) Write the name and nationality on the back, and paste it on the application form as indicated.	1 (original)
12)	A document to certify English proficiency, such as a TOEFL/IELTS score, when an applicant is not a native in English.	1 (original)
13)	Medical certificate (should be within the past 6 months)	1 (original)

All of the above documents should be sent by email and also by express mail in a single package to:

Foreign Student Support Unit,
Global Gateway Division,
International Exchange Division,
Institute of Global Affaires,
Tokyo Medical and Dental University
5-45, Yushima 1-Chome, Bunkyo-ku,
Tokyo 113-8510, JAPAN
TEL +81-3-5803-4077/4076; FAX: +81-3-5803-0366

E-mail: fssu@ml.tmd.ac.jp

The documents must be received by January 21, 2022.

Applicants from China Medical University (CMU) are advised to contact the International Exchange Center, CMU, but must submit the application documents directly to Foreign Student Support Unit, TMDU by January 21, 2022

Caution: Applicants need to take contact with the prospective supervisor before sending application documents.

5. Japanese Government (MEXT) Scholarship

Students accepted to the program will be financially supported by Monbukagakusho (MEXT) Scholarship through university recommendation.

Although the master's and doctoral programs are independent from each other, this scholarship will only be granted to students who will start their study at Tokyo Medical and Dental University from the master's program and continue to complete the doctoral program. The scholarship gives a monthly stipend (147,000 Yen for master's program students, 148,000 Yen for doctoral program students*) for two years. If Japanese government approves extension of scholarship, you can receive the scholarship for a maximum of five years (*This stipend is subject to change by the rule of Monbukagakusho).

Successful applicants for the Monbukagakusho Scholarship are not requested to pay the entrance examination, admission and tuition fees during the master's program. If you can extend the scholarship for five years, you are not requested to pay the entrance examination, admission and tuition fees for the doctor's program during the master's program.

6. Features of the Program

- (1) Students engage in study and research using English
- (2) Applicants are allowed to take the entrance examination in their countries of residence
- (3) Once students gain required credits at master's and PhD programs, submit a dissertation on their research work, and pass a final examination, students will be awarded a Master's degree (Science or Engineering) and PhD degree (Science or Engineering).

7. Selection

Successful applicants will be selected based on their application documents and the interview (direct or over the Internet) with our professors. Applicants will be

interviewed by Internet in February, and are informed of the details of interview by email at the beginning of February. Applicants from CMU must contact the International Exchange Center, CMU, to obtain information of interview.

8. Visa Acquisition

Successful applicants living abroad must apply for visa according to the instruction given by the Foreign Student Support Unit, Tokyo Medical Dental University.

Successful applicants must not apply visa before they receive a formal acceptance letter issued by Tokyo Medical and Dental University in June/July 2022. After receipt of the formal acceptance letter, “Student” visa must be newly applied at the Japanese embassy or consulate in the applicant's country of nationality regardless of whether they possess valid Japanese visa.

9. Enrollment Term

October 1, 2022

10. Contacting the Application Processing Service

If you have questions about your application, please ask by e-mail.

E-mail: fssu@ml.tmd.ac.jp

Foreign Student Support Unit,
Global Gateway Division,
International Exchange Section,
Institute of Global Affairs,
Tokyo Medical and Dental University
5-45, Yushima 1-Chome, Bunkyo-ku,
Tokyo 113-8510, JAPAN