

Academic Year 2027

**Second-term Doctoral Program (Three Years) in
Pharmaceutical Sciences**

**Division of Pharmaceutical Science Research,
Graduate School of Pharmaceutical Sciences,**

Osaka Medical and Pharmaceutical University

Student Recruitment Guidelines



Osaka Medical and Pharmaceutical University

Second-term Doctoral Program (Three Years) in Pharmaceutical Sciences

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University Philosophy

Based on its founding ethos and credo "*Shisei Jinjutsu* (Sincerity and Benevolent Medical Practice)", the Osaka Medical and Pharmaceutical University educates students to become highly humane and creative medical professionals who will contribute to the welfare of humanity and the advance of culture through the provision of teaching with an international outlook, research and high-quality medical practices.

Purpose of University

The University aims, in conformity with its philosophy, to foster human resources with rich humanity and an international outlook who will:

1. Strive to maintain and promote well-being, prevent and overcome diseases, and relieve pain, which are challenges shared by all mankind;
2. Respond to changes in society and continue to learn the latest knowledge and the best technology throughout their lifetimes; and
3. Play an active part with an inquisitive spirit in fields ranging from community healthcare to world-class research and development.

Purpose of Graduate School

The Graduate School aims to teach and research the theory and applications of medical science, pharmaceutical science and nursing science, and master their depths, thereby contributing to the advance of culture.

Purpose of Second-term Doctoral Program

The second-term doctoral program aims to train human resources to become pharmaceutical researchers and/or educators who can systematically develop and carry on the field of pharmaceutical science research which is closely related to the life sciences and advanced medicine, through drug discovery study.

Admissions Policy

The second-term doctoral program, based on the first-term doctoral program (master's course), seeks students who understand the philosophy of the university, meet the second-term doctoral program purpose of human resource development, and possess flexible thinking and creativity. The following qualifications are also required:

- Those who have acquired advanced expertise, research skills, and ethics in the field of pharmaceutical science research closely related to the life sciences, drug discovery sciences, and advanced medicines, with a strong motivation to become active as researchers or professionals who can develop drug discovery research.

Those who have received a master's degree abroad are also eligible.

Successful applicants will be selected based on the results of each applicant's 1) foreign language proficiency (English); 2) essay (in specialized field); 3) interview, and 4) presentation and an oral examination.

Curriculum Policy

Students in the second-term doctoral program belong to one of three research domains: molecular structure and functional analysis, discovery of new drugs and life and environmental sciences. They receive education and research guidance mainly from supervisors in the assigned laboratory. In addition, the teachers in the research area of the students, as well as those outside of the domains, cooperate to furnish the students with multiple perspectives. The curriculum, therefore, is organized and implemented according to the following policies:

1. To arrange lecture topics that enable students to make use of the knowledge and skills of research areas related to their specialized area, to cultivate qualifications with flexibility, and to apply power and ethics to cultivate and develop unique fields with a great degree of originality.
2. To arrange special seminars, special research seminars and special studies in order to foster student problem-solving and problem-finding abilities.

Instruction incorporates active learning, experiential learning, online education, and LMS-based platforms, adapted to the needs of each course.

Diploma Policy

The requirements for the awarding a degree in the second-term doctoral program are: being enrolled for the designated period, receiving educational and research instructions in line with the philosophy of doctoral education and research, passing the screening and examination of a doctoral dissertation, and completing the doctoral program. The degree to be awarded is Ph.D. in Pharmaceutical Science, and the criteria below are to be used for the screening.

- Having the ability to accurately grasp problems from new perspectives and original ideas, and advanced expertise, skills and the ethics to solve them and to further demonstrate leadership that would contribute to medical science research in the discovery of new drugs and the development of related research areas that would apply to the life sciences.

Second-term Doctoral Program (Three Years) in Pharmaceutical Sciences

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Student Recruitment Guidelines

1. Number of students to be recruited: 2 students

2. Major and field

Major	Field
Pharmaceutical sciences major	Molecular Structure-Function Analysis, Drug Discovery Chemistry, Life and Environmental Sciences

A special timetable consideration*¹ will be given to working students in accordance with Article 14 of the Standards for Establishment of Graduate Schools. Furthermore, the rules*² for long-term study have been established.

*1. Education may be provided by an appropriate method, such as teaching or research instructions at night or at a specific time slot or period (specified by the inner regulations of this graduate school).

*2. Those who have a job or who have circumstances, such as the necessities of childcare or nursing care, can systematically extend the term of stay for one year or two at this graduate school. Tuition fees for extended periods will be waived.

3. Application Qualifications

- 1) Those who hold a master's degree or those who are expected to complete the course in March 2027.
- 2) Those who have been awarded a degree equivalent to a master's degree abroad.
- 3) Those who are appointed by the Minister of Education, Culture, Sports, Science and Technology
- 4) Those who have reached the age of 24 and have at least the same academic ability as those who have a master's degree at this graduate school.

Note: If you are an international student (a person who does not have Japanese nationality and has not obtained a permanent residence permit in Japan) and privately financed, you are eligible for the above-mentioned application, on the condition that you can obtain or renew your status of residence of Student stipulated by the Immigration Control and Refugee Recognition Act after admission.

4. Application Period and Method

- 1) Period: Monday, August 24, 2026 to Tuesday, September 1, 2026
- 2) Submission in Person: Educational Affairs Section, Pharmaceutical Academic Affairs Department Business Hours: 9 am–4:30 pm on weekdays
- 3) Submission by postal mail: Send your application to Educational Affairs Section, Pharmaceutical Academic Affairs Department by simplified registered mail or express mail. Only ones marked with a postmark during the application period will be accepted. In addition, write Second-term Doctoral Program Application in red on the envelope.

5. How to Apply for Admission

Please submit the following documents along with the entrance examination fee of 20,000 yen (exempted for graduates of this university) during the application period.

If you submit your application by postal mail, please transfer the application fee of 20,000 yen to the bank account listed below. Please note that the bank transfer fee shall be borne by the applicant.

Application Fee: 20,000 yen*

Bank Account for Payment : Bank: Sumitomo Mitsui Banking Corporation, Takatsuki Branch

Account Type: Ordinary Account

Account Number: 1777923

Account Name: Gak. Osaka Ika Yakuka Daigaku

Please note that the bank transfer fee must be borne by the applicant.

- Please make the payment under the name of the applicant.
 - Applications will not be accepted if the payment is not completed within the application period.
- 1) Application Form
Use the form designated by this university and attach a photo of yourself taken within three months prior to the application.
 - 2) Completion Certificate of Master's Course or Certificate of Expected Completion and Official transcript*³
To be prepared and sealed up by the university
 - 3) Recommendation Letter from the supervisor of the Master's Dissertation*³
 - 4) A copy of Master's Dissertation*³
 - 5) Abstract of Master's Dissertation
Limited to five pages of a 400-character manuscript paper or 500 words in English
 - 6) If you fall under application qualification 1) or if you work in a company or hospital and are conducting new research, please submit your applicable research report and abstract (limited to five pages of a 400-character manuscript paper or 500 words in English) in place of the document specified in 3) to 5), along with a letter of recommendation signed by your supervisor.
 - 7) Return Envelope (*Nagagata* #3 (120 mm x 235 mm) Standard-size envelope)
Required only if you mail the application documents: In order for us to send the examination ticket, the envelope needs to be self-addressed with a 374-yen stamp on the envelope.
 - 8) Data on Graduation Research and Research Summary Presentation
Please submit Microsoft PowerPoint files (to be stored on CD-R or DVD-R) to Educational Affairs Section, Pharmaceutical Academic Affairs Department by 10 am on the day of the examination.
 - 9) Prior Consultation
Please consult in advance and obtain approval from the faculty member (prospective supervisor) of the laboratory you wish to join.

10) Examination Permit

If you work for a firm, submit a written form (any form) signed by your immediate manager stating that you will take the examination and will be affiliated with the firm during the study under the consent of the supervisor.

*3. Required only if you are from a different university.

Submit the following items in addition to items 1) to 9) if you are an international student.

11) Certificate of Eligibility status or resident card (with the residence status and period of residence stated), and a copy of passport in the case of applying from outside Japan

12) Guarantor's letter^{*4} (The guarantor needs to be a resident in Japan.)

13) Medical Certificate

14) Letter of Recommendation

15) Resume

*4. Required only if you are an international student privately financed.

6. Selection Method

The applicant will be selected as a screening result of an academic examination^{*5}, interview, and submitted documents.

*5. You may be exempt from the academic examination if you are a government-sponsored foreign student.

7. Academic Examination

1) Date: Friday , September 11, 2026

2) Place: The Abuyama Campus of Osaka Medical and Pharmaceutical University 4-20-1 Nasahara, Takatsuki City

3) Schedule

Time	Examination subject
11:00 am - 12:00 pm	Foreign language (English) ^{*6} : Common area
From 1:00 pm	Presentation and oral examination: To be presented based on applicant's submitted data on his/her graduation research and research summary

An interview will be held after the presentation and oral examination.

*6. 1) Applicants may bring dictionaries (except for electronic and specialized dictionaries).

2) Those who completed the master's course at Osaka University of Pharmaceutical Sciences will be exempted from the foreign language test .

3) The foreign language test may be exempted if applicants are an international student making a presentation in English.

8. Announcement of Acceptance

The announcement of acceptance will be made at The Abuyama Campus of Osaka Medical and Pharmaceutical University on Friday, October 9, 2026, and each successful applicant will be notified in writing.

9. Admission Procedure

Each successful applicant will be notified individually of the admission procedure in detail.

The applicant who has accepted the procedure described in this notice will be admitted.

Deadline: Primary Deadline (for payment of the enrollment fee and submission of the required documents) Friday, December 11, 2026

Secondary Deadline (for payment of the first half-year tuition fees) Monday, March 8, 2027

10. Payment

1) Admission fee: 100,000 yen (excepted if you are a graduate of this university or have achieved all required credits)

2) Tuition: 500,000 yen (annual sum)

In addition, pay 18,000 yen (annual sum) as a commission (the PA fee at Faculty of Pharmacy).

11. Research Assistant (R.A.) System

Students in the doctoral program can be commissioned as a research assistant (R.A.) to receive payment. However, this system does not apply to working students and applicants with long-term study.

12. Others

1) Neither documents submitted nor payment, once made, will be returned.

2) The admission may be canceled if there is a fact such as a false statement on admission.

3) Those who wish to receive special considerations before taking an exam or studying, contact Educational Affairs Section, Pharmaceutical Academic Affairs Department in advance.

4) Applicants must be sure to discuss the research details with the academic advisor in charge at the laboratory they wish to join, prior to submitting an application.

Contact information for entrance examination:

Educational Affairs Section, Pharmaceutical Academic Affairs Department,
Osaka Medical and Pharmaceutical University

4-20-1 Nasahara, Takatsuki, Osaka 569-1094

Tel.: +81-72-690-1000 (Main phone number)

Tel.: +81-72-690-1013 (Direct)

E-mail: p-educate@ompu.ac.jp (Direct)

Website: <https://www.ompu.ac.jp/>

Major research projects in the Pharmaceutical sciences major (Second-term doctorate program)

Field	Department・Academic advisor	Research themes
Molecular Structure and Function Analysis	Biochemistry Prof. Tomoaki Hishida	• Role of stemness and cellular senescence in carcinogenesis • Regulation of cellular phenotypes using partial reprogramming technologies • Molecular mechanism of inflammatory response regulated by cytokines • Molecular mechanism of growth and differentiation signaling mediated by protein kinases And transcriptional factors • Systematic analysis of intracellular signal transduction pathways by using the CRISPR/Cas9 method • Molecular theory of the enzymatic function of phospholipases
	Physical Chemistry Assoc. Prof. Koji Tomoo ★ Assoc. Prof. Akiko Asano	• Analysis of the structure and function of translational initiation factors of eukaryote • Elucidation of the self-aggregation mechanism of tau protein related to Alzheimer's disease and development of inhibitors for tau aggregation • Elucidation of the intracellular transport mechanism of xylooligosaccharide in bacteria • Elucidation of the iron transport system in the pathogenic bacteria and development of the new antimicrobial agent • Research on the conformation control of peptides • Research on the cell penetrating peptides using non-proteinogenic amino acids
	●Functional Morphology Prof. Hiroaki Okuda	• Research on the mechanism of chronic pain and the development of new treatments • Research on anti-inflammatory mechanisms of plant-derived phytochemicals • Research on the functional diversity of glial cells • Research on the mechanisms of cell proliferation, differentiation, and cell death
Drug Discovery Chemistry	Pharmaceutical Organic Chemistry Prof. Yoshihide Usami ★	• Research on the synthesis and biological activity of carbasugar type natural products and their analogs • Synthesis of novel heterocyclic compounds • Design and synthesis of vanin-1 inhibitors
	Natural Products Research Prof. Masahiko Taniguchi ★	• Research on the structural analysis and bioactivity of various herbal medicine constituents • Research on the usefulness of supplements • Research on medicinal plant-derived epigenome (histone deacetylase) and protein-protein interaction modulators
	●Bioorganic Chemistry Prof. Shinya Fuji Assoc. Prof. Shun-ichi Wada	• Development of novel biologically active compounds using a wide variety of elements • Development of new synthetic methods for functionalized organometallic compounds • Medicinal chemistry research based on vitamins and hormones • Development of carrier peptides capable of cell penetration • Application of carrier peptides as a tool for the intracellular delivery of nucleic acid drugs • Development of molecular imaging peptide probes for visualization of cancer cells • Development of small molecule drugs to improve mitochondrial function • Design and synthesis of novel bioactive compounds
	●Medicinal Chemistry Prof. Tomoya Hirano	• Development of photofunctional molecules for medical purposes • Development of assay system for epigenetics and epitranscriptome • Drug discovery for biological defense, anticancer and senolytics
Life and Environmental Sciences	Pathobiochemistry Prof. Ko Fujimori	• Function of lipid mediators and their regulatory mechanisms • Regulatory mechanism of lipid mediator-related diseases • Molecular mechanism of obesity and development of anti-obesity medicines • Disease control by functional compounds

Field	Department·Academic advisor	Research themes
Life and Environmental Sciences	●Environment and Health Sciences Prof. Keiichiro Okuhira	• Research on the function and physiological role of atherosclerosis-related factors • Research on the development of drug delivery systems for cancer chemotherapy • Research on the molecular mechanism of various diseases where reactive oxygen species are involved • Research on the tight junction modulation of blood-brain barrier • Research on the investigation of pharmaceutical residues in the environmental waters
	●Microbiology and Infection control Prof. Atsushi Komano	• Development of novel strategies to control pathogenic microbe infections • Elucidation of molecular mechanism of the virulence of pathogenic microbes via host-pathogen interactions
	●Pathological and Molecular Pharmacology Prof. Mamoru Ohkita Assoc. Prof. Masashi Tawa	• Research on pathophysiological roles of endothelin and nitric oxide • Research on drug efficacy evaluation for acute kidney injury and chronic kidney disease and its underlying mechanism • Research on drug development targeting soluble guanylate cyclase • Development research of new therapeutic agents for various cardiovascular diseases • Pharmacological research of various functional foods
	●Pharmacology Prof. Hisashi Shirakawa Assoc. Prof. Saki Shimizu	• Pathophysiological and pharmacological research on neurological diseases (e.g., , dementia, cerebrovascular disease, multiple sclerosis, chronic pain, Parkinson's disease, depression, schizophrenia, epilepsy, anxiety disorders) • Analysis of the neuron-glia interaction in the central nervous system • Pharmacological research on central nervous system drugs
	●Pharmacotherapeutics and Toxicology Prof. Ryuji Kato Assoc. Prof. Yuka Kohda	• Investigation of mechanisms underlying serious adverse effects and the associated predictive markers • Research on pathophysiology and prevention of oxidative stress-related diseases • Research on clinical usefulness of Therapeutic Drug Monitoring in home health care
	●Pharmacotherapeutics II Prof. Akio Fukumori	• Pathophysiological mechanisms of dementia and their application to diagnosis and treatment • Pathogenesis of autoimmune encephalitis and its application to diagnostic and therapeutic strategies • Comprehensive identification of orphan receptor ligands using genetically encoded noncanonical amino acids • (For intended for working graduate students) Analysis of clinically relevant drug information using electronic medical records and adverse event databases
	Analytical and Bioanalytical Chemistry Prof. Akira Kotani	• Design and development of electrochemical sensors to determine biologically important substances • Development of highly sensitive and selective analytical methods for determining drugs and biological molecules • Research on in vivo diagnostic technologies based on electrochemical and/or radiochemical Methods

Field	Department·Academic advisor	Research themes
Life and Environmental Sciences	●Pharmaceutics Prof. Junya Nagai Assoc. Prof. Hideyuki Motohashi	• Variation in pharmacokinetics in disease states and elucidation of the molecular mechanisms underlying its variation • Improvement of efficacy and safety of drugs by precise pharmacokinetic control and development of new administration method • Elucidation of factors responsible for tissue-protective potency of adipose-derived stem cells and application to cell medicine • Elucidation of biological factors to determine pharmacokinetics of anticancer agents and role in the factors for efficacy/safety of chemotherapy
	●Formulation Design and Pharmaceutical Technology Prof. Yuichi Tozuka Assoc. Prof. Hiromasa Uchiyama	• Development of novel solubilization techniques of poorly water soluble drugs • Particle design for dry powder inhalation and pulmonary delivery • Formulation design using self-emulsifying systems
	●Clinical Kampo Medicines Prof. Makio Shibano	• Research on anti-chronic inflammatory activities of traditional herbal medicines • Scientific evaluation for specific processing of traditional herbal medicines • Research on preventing medical side effects of Kampo medicines

Applicants must discuss the research details with the responsible faculty member at the laboratory they wish to join, prior to submitting an application.

Departments marked with * will not receive any applicants.

Professors marked with ★ will retire before the completion of their projects.

Departments with ● may be supervised concurrently as Pharmacy and Pharmaceutical Sciences major.

