

TOHOKU UNIVERSITY



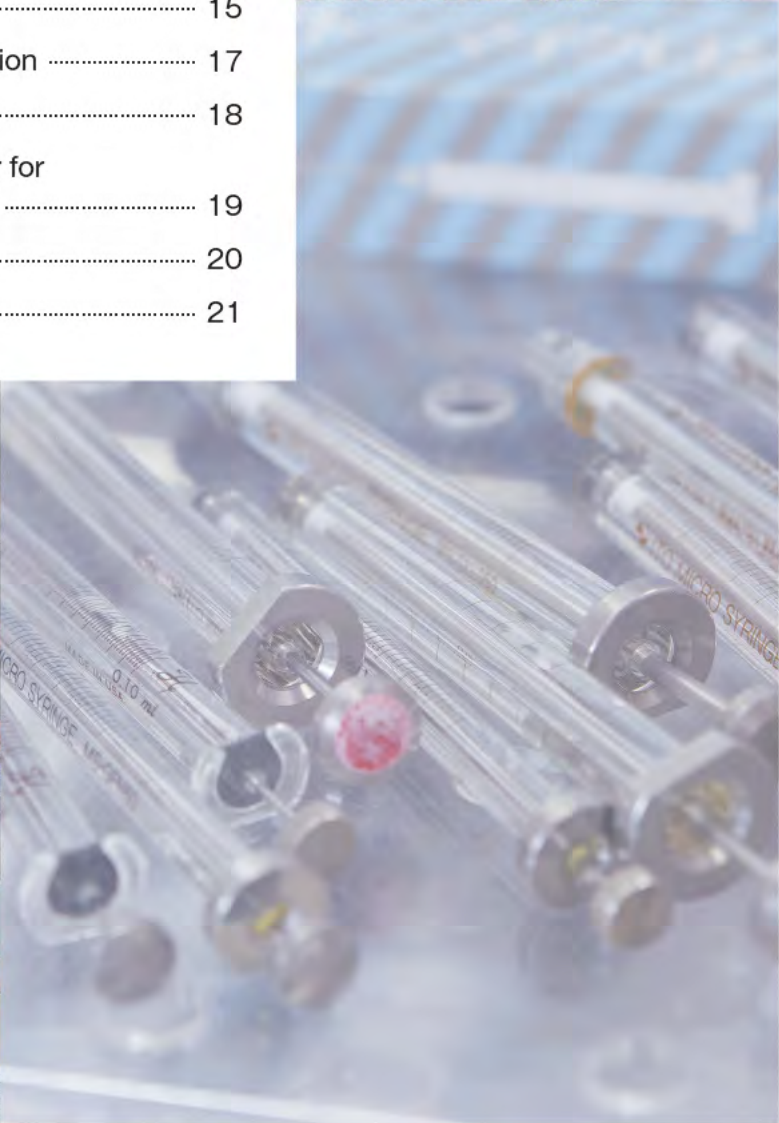
Graduate School of Pharmaceutical Sciences





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History

Tohoku University was established in 1907 as the third Imperial University following the University of Tokyo and Kyoto University. It was planned on the concept of a center of academic creation unlike the preceding universities, and has firmly maintained an academic tradition of emphasis on research until now. The open-door spirit to accept and work hard with people who wish to study, and the tradition of creative research to explore and elucidate unexplored academic areas rather than maturing/matured areas, have been Tohoku University's characteristics. It has now 10 undergraduate schools, 19 graduate schools, six research institutes, one hospital, and libraries, as well as many shared facilities and education/research facilities, with a staff of nearly 6,000, including about 3,000 teachers, and more than 10,000 undergraduate students, about 6,600 graduate students, and about 1,200 international students.

Among the organizations of Tohoku University as described above is the Graduate School of Pharmaceutical Sciences. The Graduate School has a long history of pharmaceutical education. It was started as the Department of Pharmaceutical Sciences of the Faculty of Medicine of the Second High School under the old education system (the predecessor of the current School of Medicine) in 1890, and lasted until 1918 as the School of Pharmaceutical Sciences of the College of Medicine of Tohoku University. Then, after a hiatus of 40 years, it was re-established as the Pharmaceutical Institute of Tohoku University in 1957, and re-organized as the Faculty of Pharmaceutical Sciences. In 1999 the Graduate School of Pharmaceutical Sciences as a graduate school was established. The Graduate School consists of three majors: Pharmaceutical Chemistry, Bio-Pharmaceutical Science, and Life Science, providing undergraduate education and graduate school education continuously. It has a 2-year Master's program and a 3-year Ph.D. program. In 1997 it opened the door of the Ph.D. program to working people with an aim to developing human resources in diverse areas. In 2012, The Graduate School was reorganized the three majors of Molecular Pharmaceutical Science, Life and Pharmaceutical Science, and Pharmacy. In addition to that, 4-year Ph.D. program started in the major of Pharmacy.

The building of the Graduate School of Pharmaceutical Sciences was constructed in the Aobayama area in 1969. The building is on a hill with refreshing air, endowed with green leaves and frequent blue skies, looking down the Hirose River, far over the Pacific Ocean to the east, the Zao Mountain Range to the west and the Ou Mountain Range including Mt. Izumigatake to the north. Its inside was remodeled in 1996-7, and the Applied Pharmacological Research building was completed in 2003. In that way facilities were provided for the areas of research added when the Graduate School of Pharmaceutical Sciences was reorganized as an independent major, and further emphasis was put on the graduate schools in 1999. There are also a Botanical Garden (an area of about 53,000 m²) for pharmacological herbs attached to the building, with comfortable landscapes. While the Graduate School of Pharmaceutical Sciences has gone through historical changes, the staff including teachers and students have overcome difficulties and further developed the School at every turn of time with a spirit of cooperation and a frontier spirit. Such spirits, together with the strict spirit of exploration of scientific truth in research, have been inherited by this School as characteristic academic traditions.





+ Mission Statement

The Educational idea of the Graduate School of Pharmaceutical Sciences is to develop human resources that can contribute to the welfare and development of human beings through drugs. The goal for education of the Graduate School of Pharmaceutical Science is to develop researchers/engineers in pharmacy who have acquired knowledge and skills in a wide pharmaceutical range and have the ability to produce original ideas and international competitiveness. Particularly, the first course in the Ph.D. program or Master's program endows students with sophisticated knowledge about creation through proper use of drugs, and the ability to apply the knowledge based on the basic knowledge and skills that they acquired through undergraduate education. The second course of the Ph.D. program develops their ability to do advanced research in the science of drug discovery by themselves to become excellent researchers. And 4-year Ph.D. program develops their ability to do advanced research in the science of clinical pharmacy by themselves to become excellent medical researchers.

+ Characteristics

On the basis of the University's traditional academic principle of creative research first, that is being wide open to society and developing unexplored academic areas, this Graduate School puts the greatest emphasis on developing human resources that are able to do future pharmaceutical research, responding to rapid developments of life and medical sciences, and everyday increasing pharmaceutical needs in society. It is also characteristic of this School in that it is located in an environment full of greenery with a panoramic view of Sendai, also known as the City of Trees. It has well-developed research facilities including a botanical garden for pharmaceutical herbs with the largest area in Japan to be proud of. The buildings for education and research have been remodeled. Accordingly, this Graduate School is in a good environment where the researchers/students can devote themselves to research work comfortably without disturbing stresses.

+ Education

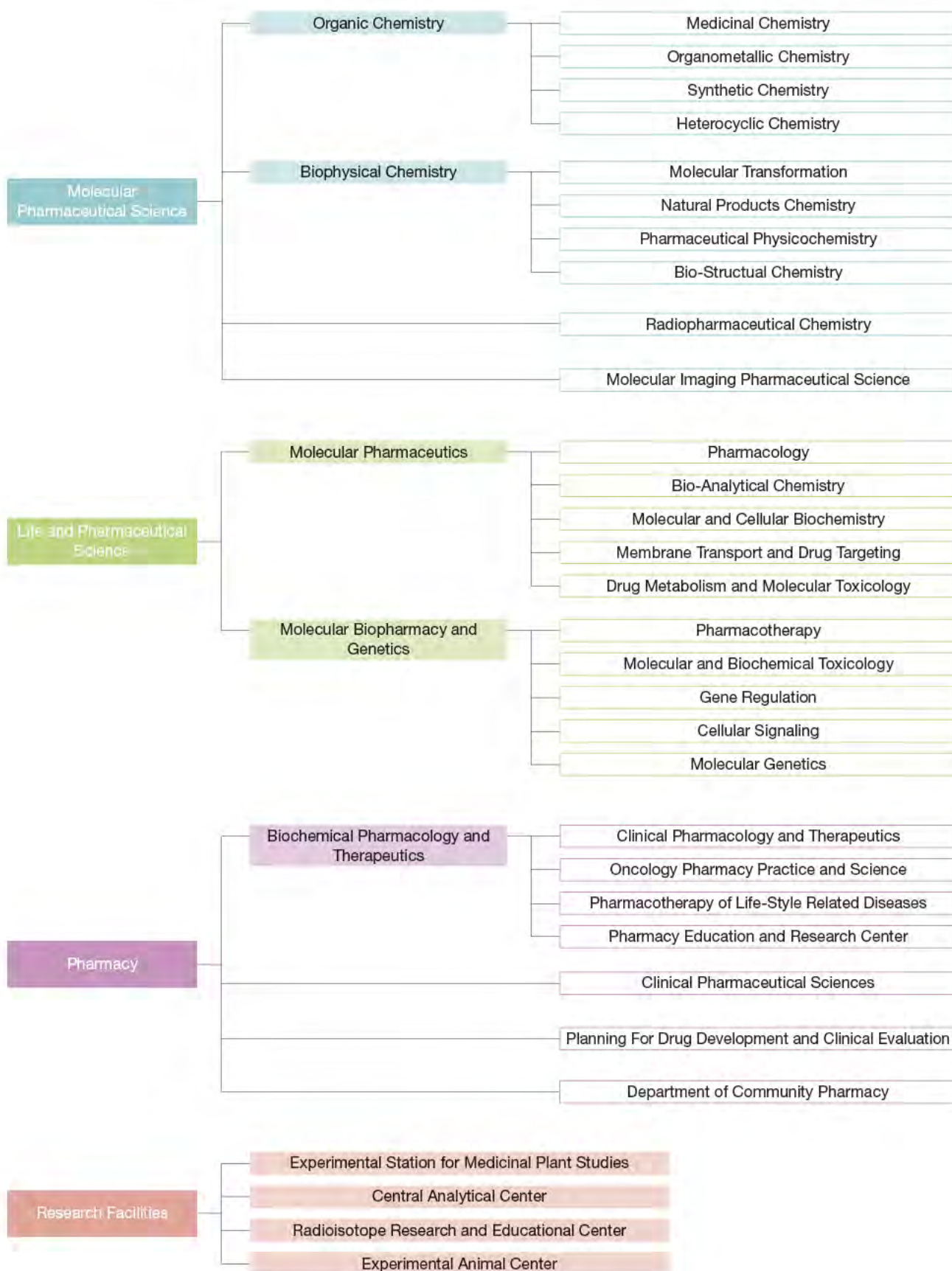
This Graduate School has set up an education system where students can acquire the basic knowledge required for doing pharmaceutical research and the ability to apply that knowledge to make effective use of it, aiming at developing researchers/engineers who are able to create original ideas and be internationally competitive in the academic field. In the first course (2 years) of the Ph.D. program or Master's Program (i.e., master's course), students are given knowledge in a wide range of areas from the creation of drugs through their proper use, and acquire a wide and deep knowledge of pharmacy as a total science of substances, life and medicine. They gain the ability to apply such knowledge, by participating in cutting-edge research in their respective specialized fields. In the second course (3 years) of the Ph.D. program (i.e., doctoral course) and 4-year Ph.D. program, they take the lead in doing cutting-edge research, so that they can establish themselves as pharmaceutical researchers.

+ Research

This Graduate School has produced many researchers who have been honored with esteemed awards such as the Japan Academy Prize, the Medal with Purple Ribbon and the Asahi Prize, thus contributing to the development of pharmaceutical sciences in Japan and in the world. This tradition continues now, and is reinforced. The amount of money per teacher provided for education and research of this School is conspicuously high in Tohoku University, which simply reflects the briskness of its research activities. In 1999 when the graduate schools were reorganized and improved, this School set up a flexible research organization able to swiftly respond to changes in the trend of research, so it was made more effective in conducting research. The Graduate School of Pharmaceutical Sciences is endowed with a good environment for doing very original research, yielding a lot of fruits of research everyday.



Organization Chart





Research Profile

Molecular Pharmaceutical Science

Organic Chemistry

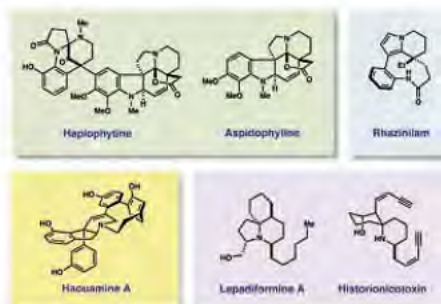
Medicinal Chemistry

Contact : TEL: +81-22-795-6887

URL : <http://www.pharm.tohoku.ac.jp/~seizou/index-e.html>

Research Project

- Development of Efficient Synthetic Transformations
- Development and Application of Novel Cascade Reactions
- Total Syntheses of Biologically Active Natural Products



Molecular Pharmaceutical Science

Organic Chemistry

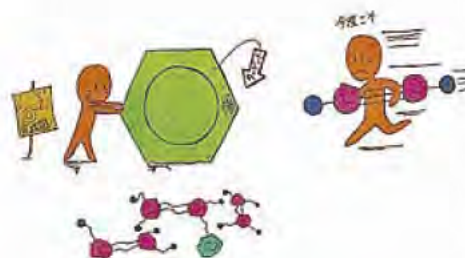
Organometallic Chemistry

Contact : TEL : +81-22-795-6812

URL : <http://www.pharm.tohoku.ac.jp/~sekkei/yakan-ehome.html>

Research Project

- Development of Extremely Efficient Chemical Processes
- Chemistry of Nano Organic Molecules
- Chemistry of Helical Molecules
- Organotransition Metal Chemistry



Molecular Pharmaceutical Science

Organic Chemistry

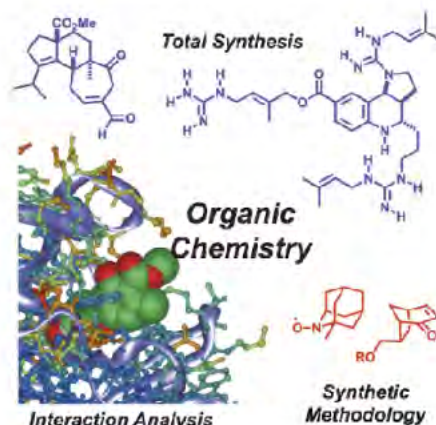
Synthetic Chemistry

Contact : TEL : +81-22-795-6846

URL : <http://www.pharm.tohoku.ac.jp/~gousei/synthetic/index.html>

Research Project

- Development of Novel Synthetic Methodologies
- Development of Efficient Asymmetric Reactions
- Total Synthesis of Biologically Active Compounds
- Design and Synthesis of Bioprobes
- Chemical Genetic Studies of Natural Products





Molecular Pharmaceutical Science

Organic Chemistry

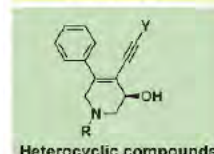
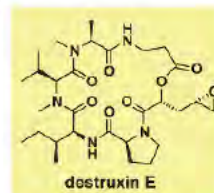
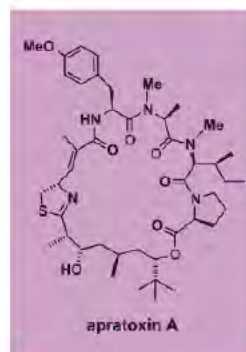
Heterocyclic Chemistry

Contact : TEL : +81-22-795-6865

URL : <http://www.pharm.tohoku.ac.jp/~hannou/index-e.html>

Research Project

- Total Synthesis of Biologically Active Natural Products
- Methodology for a Library Synthesis of Biologically Active Compounds
- Transition Metal Catalyzed Reaction Forming Heterocyclic Compounds
- Synthesis of Molecular Probes and Evaluation of Biological Characterization



Molecular Pharmaceutical Science

Biophysical Chemistry

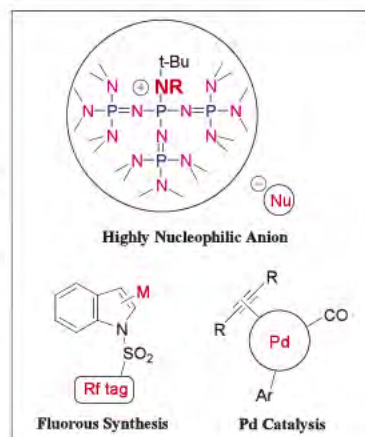
Molecular Transformation

Contact : TEL : +81-22-795-6804

URL : http://www.pharm.tohoku.ac.jp/~henkan/lab/henkan_top-e.html

Research Project

- High throughput organic synthesis of small biofunctional molecules using polymer supported multiphasic reaction system
- Development of efficient transforming reactions of biofunctional molecules using organometallic methodology
- Spectroscopic analyses of organic reactions
- Biological chemistry of non-natural biofunctional oligomeric molecules
- Structural biology and chemistry of functional RNA molecules



Molecular Pharmaceutical Science

Biophysical Chemistry

Natural Products Chemistry

Contact : TEL : +81-22-795-6822

URL : <http://www.pharm.tohoku.ac.jp/~shigen/lab/index.html>

Research Project

- Search for Biologically Active Substances of Medicinal Plants and Microorganisms
- Design and Synthesis of Lead Compounds Useful for Drug Development Based on Biologically Active Natural Products
- Secondary Metabolite Production from Silent Gene Clusters Activated by Chemical Epigenetics



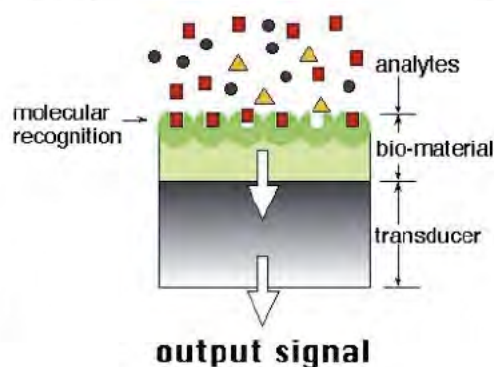
Pharmaceutical Physicochemistry

Contact : TEL : +81-22-795-6841

URL : <http://www.pharm.tohoku.ac.jp/~bussei/home.html>

Research Project

- This laboratory has been engaged in physicochemical studies in pharmaceutical sciences
- Research activities in this laboratory can be broadly categorized into the two focus areas: (1) bioelectronics or bioelectrochemistry based on supramolecular architectures of biomolecules, and (2) biocatalytic and biosensing systems using modified electrodes



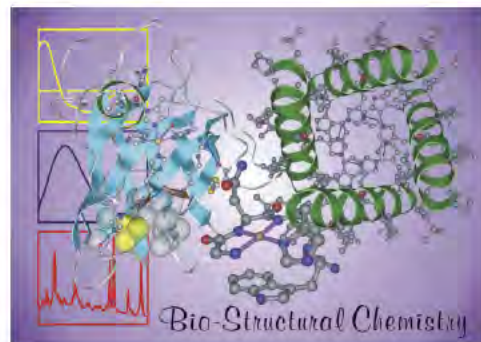
Bio-Structural Chemistry

Contact : TEL : +81-22-795-6858

URL : <http://www.pharm.tohoku.ac.jp/~kouzou/kouzou.html>

Research Project

- Structure-based mechanisms of enzyme and peptide functions
- Structure and function of virus protein
- Aggregation mechanism of neurodegenerative disease proteins and development of inhibitors
- Structure and function of sugar binding proteins
- Invention of new methods for structural analysis of biomolecules



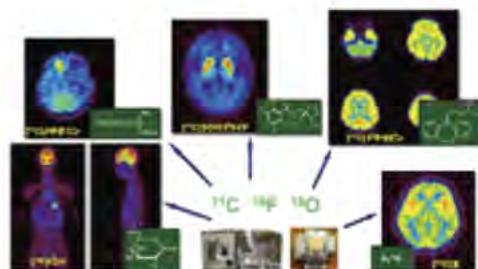
Radiopharmaceutical Chemistry

Contact : TEL : +81-22-795-7798

URL : <http://kakuyaku.cyric.tohoku.ac.jp/index-e.html>

Research Project

- Development of new imaging probes
- Kinetic analysis of biofunction and metabolism with radio-tracers
- Application of radioisotopes to life science
- Development of new technologies for automates radiosynthesis





Molecular Pharmaceutical Science

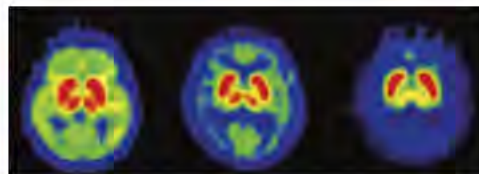
Molecular Imaging Pharmaceutical Science

Contact : TEL : +81-43-206-4039

URL : <http://www.pharm.tohoku.ac.jp/~renkel/renkel-j.shtml>

Research Project

- Development of radiopharmaceuticals with which to detect and/or image molecular functions of brain defense-system, and the evaluation/application research
- Preliminary study for radiopharmaceuticals with which to probe at functions of signal transduction in the cell
- Development of radiopharmaceuticals useful for judgment of malignancy and drug response of tumors



Life and Pharmaceutical Science

Molecular Pharmaceutics

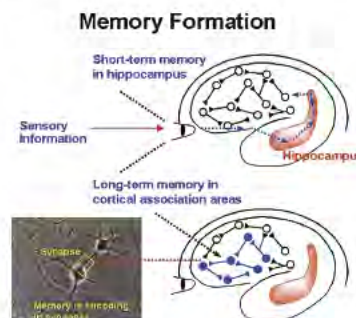
Pharmacology

Contact : TEL : +81-22-795-6836

URL : http://www.pharm.tohoku.ac.jp/~yakuri/yakuri_top.html

Research Project

- Molecular mechanisms underlying learning and memory in the brain
- Development of signal transduction therapy for brain ischemia and heart failure
- Epigenetic regulation of spine formation
- Sigma-1 receptor signaling in cell survival and neurogenesis
- Influence of environmental hormones and chemical substances on the brain function and development
- Molecular targeting therapy for neurogeneration in mental disorders
- Dopamine receptor signaling in the emotion



Life and Pharmaceutical Science

Molecular Pharmaceutics

Bio-Analytical Chemistry

Contact : TEL : +81-22-795-6817

URL : <http://www.pharm.tohoku.ac.jp/~bunseki/bunseki.html>

Research Project

- Systematic Analytical Approach for Protein/Peptide Modification
- Studies on Chemical Modifications on Disease Related Proteins/Peptides
- Analytical Studies on Chemically Modified Proteins/Peptides
- Development of Practical Analytical Methods from Clinical Needs
- Studies on Bio-Analytical Chemistry



Molecular and Cellular Biochemistry

Contact : TEL : +81-22-795-6860

URL : <http://www.pharm.tohoku.ac.jp/~seika/seika-j.shtml>

Research Project

- Patho-physiological role of lysophospholipid mediators
 - Lysophosphatidic acid and fibrosis
 - Lysophosphatidic acid and bone formation
 - Lysophosphatidic acid and hair growth
 - Lysophosphatidic acid and cancer
 - Lysophosphatidic acid and cardiovascular diseases
 - Lysophosphatidylserine and allergy
 - Lysophosphatidylserine and lymphocyte function



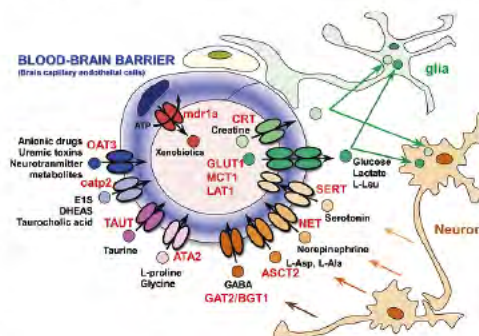
Membrane Transport and Drug Targeting

Contact : TEL : +81-22-795-6831

URL : <http://www.pharm.tohoku.ac.jp/~soutatsu/dds/index.htm>

Research Project

- Development of brain selective drug delivery system and drug design based on the brain barrier function
- Clarify molecular mechanism and functional regulation of transport system at the brain barrier
- Quantitative targeted absolute proteomics analysis of membrane transporters, receptors and channels
- LC-MS/MS-based biomarker discovery and absolute quantification for cancer diagnosis and personalized chemotherapy



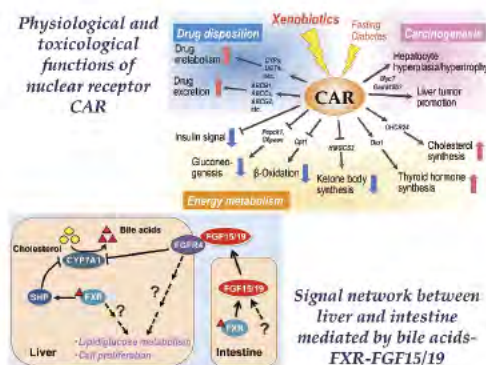
Drug Metabolism and Molecular Toxicology

Contact : TEL : +81-22-795-6828

URL : <http://www.pharm.tohoku.ac.jp/~doutal/doutal-j.shtml>

Research Project

- Gene regulation of drug metabolizing enzymes and transporters
- Physiological and toxicological roles of nuclear receptors
- Mechanistic analysis of drug/xenobiotic-induced hepatotoxicity
- Development of in vitro/in silico prediction system for drug metabolism and toxicity
- Functions and gene regulation of endocrine hormone FGF15/19
- Physiological roles of enterohepatic bile acid/FXR signaling





Life and Pharmaceutical Science

Molecular Biopharmacy and Genetics

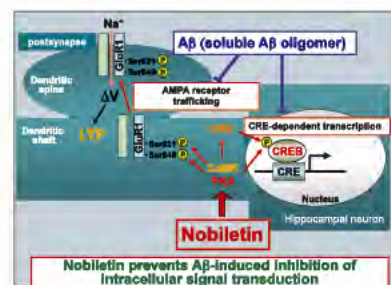
Pharmacotherapy

Contact : TEL : +81-22-795-6853

URL : <http://www.pharm.tohoku.ac.jp/~ryouhou/Index/?x=cat:1>

Research Project

- Development of novel therapeutic drugs for Alzheimer's disease and the clinical study
- Search for natural compounds with anti-dementia action and their application to drug development
- Application of V-1, a novel actin dynamics regulator with the activity to enhance the CNS dopaminergic function, to fundamental treatment of Parkinson's disease
- New approach to regeneration of brain function employing V-1 with the activity to induce neurogenesis
- Pharmaceutical demonstration of beneficial actions of Kampo medicines



Life and Pharmaceutical Science

Molecular Biopharmacy and Genetics

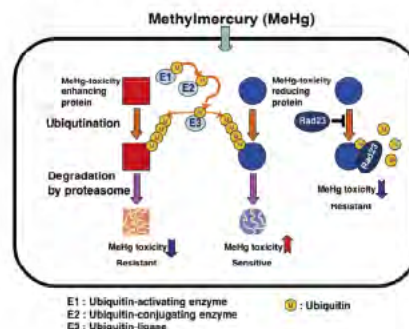
Molecular and Biochemical Toxicology

Contact : TEL : +81-22-795-6870

URL : <http://www.pharm.tohoku.ac.jp/~seital/seital-Index.html>

Research Project

- Biological defense mechanisms for toxic action of drugs and environmental pollutants
- Role of metallothionein as a biodefense protein
- Mechanisms for expression of heavy metal toxicity
- Mechanisms for cellular response to oxidative stress



Life and Pharmaceutical Science

Molecular Biopharmacy and Genetics

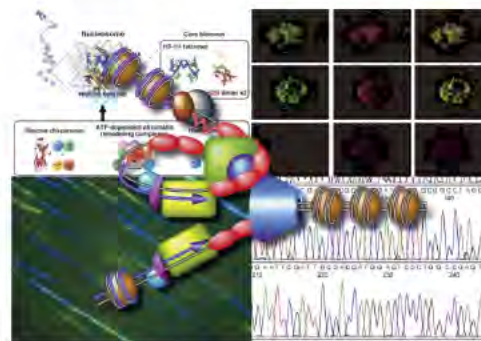
Gene Regulation

Contact : TEL : +81-22-795-6874

URL : <http://www.pharm.tohoku.ac.jp/~idenshi/idenshi-j.shtml>

Research Project

- Quality Control of Aberrant mRNAs
- Translation Control by Nascent peptide
- Co-translational Degradation of mRNA and Protein
- Mechanism of DNA replication, repair, and recombination
- Chromatin dynamics and DNA transactions



Life and Pharmaceutical Science

Molecular Biopharmacy and Genetics

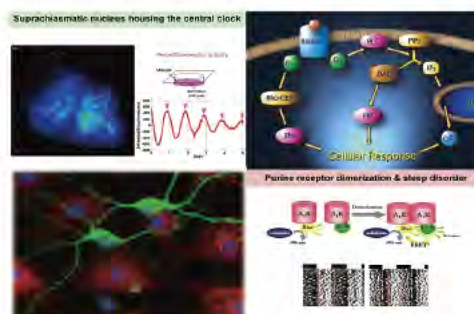
Cellular Signaling

Contact : TEL : +81-22-795-6822

URL : <http://www.pharm.tohoku.ac.jp/~saibou/index.html>

Research Project

- Physiological role of G protein-coupled receptor-mediated intracellular signaling
- Regulatory mechanism of sleep and circadian rhythm via G protein-coupled receptors
- Interaction between the sleep/biological clock and the adult neurogenesis
- Invention of new drugs for peripheral circulation disorder from natural product
- Regulatory mechanism of skin function



Life and Pharmaceutical Science

Molecular Biopharmacy and Genetics

Molecular Genetics

Contact : TEL : +81-22-795-5916

URL : http://www.pharm.tohoku.ac.jp/~seimel/seimel_original.html

Research Project

We are analyzing the molecular mechanisms of "development and regeneration" and "innate immunity". These studies utilize *Drosophila* as the model organism. We are also developing some compounds that act on insect immunity to control insect vector-borne diseases such as malaria and sleeping sickness, the transmission of which has expanded due to climatic changes.



Pharmacy

Biochemical Pharmacology and Therapeutics

Clinical Pharmacology and Therapeutics

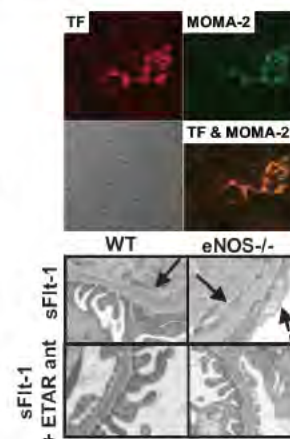
Contact : TEL : +81-22-795-6807

URL : <http://www.pharm.tohoku.ac.jp/~rinshou/rinyaku.html>

Research Project

Pathophysiology and treatments of CKD (Chronic Kidney Disease), pre-eclampsia and the metabolic syndrome

- Genetic influence on preeclampsia, diabetic nephropathy, and the metabolic syndrome
- Developing novel treatments of preeclampsia, diabetic nephropathy, and the metabolic syndrome
- Clinical and epidemiologic survey on CKD
- Clinical and basic research on various renal diseases including glomerulonephritis and nephrotic syndrome





Pharmacy

Biochemical Pharmacology and Therapeutics

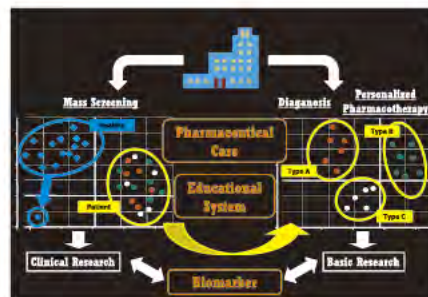
Oncology Pharmacy Practice and Science

Contact : TEL : +81-22-717-6851

URL : http://www.pharm.tohoku.ac.jp/~gankagak/Gann_Top.html

Research Project

- Information gathering and provision for optimization of cancer chemotherapy
- Pharmaceutical support for diagnosis and prescription planning for cancer chemotherapy
- Metabolomics to prevent and predict of adverse drug reaction in cancer chemotherapy
- Development of the graduate program to train students to become pharmacist specialist



Pharmacy

Biochemical Pharmacology and Therapeutics

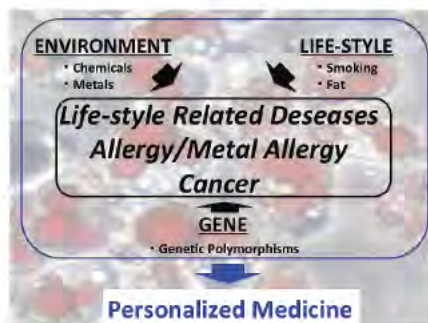
Pharmacotherapy of Life-Style Related Diseases

Contact : TEL : +81-22-717-5915

URL : <http://www.pharm.tohoku.ac.jp/~seikatsu/mysite1/index.html>

Research Project

- Pathophysiological analysis of allergy/metal allergy and diabetes
- Clinical research about the reasonable use of medicine
- Pharmacogenomics for personalized medicine
- Research of individual differences in effects and side-effects of medicine
- Regulatory sciences of drug development
- Development of educational program for next-generation-type Pharmacist



Pharmacy

Biochemical Pharmacology and Therapeutics

Pharmacy Education and Research Center

Contact : TEL : +81-22-795-6795

URL : <http://www.pharm.tohoku.ac.jp/~educntr/index-j.shtml>

Research Project

- Development of pharmacy-education programs
- Building the risk management system in pharmacotherapy
- Pharmaceutical research on health information and patient safety



Pharmacy

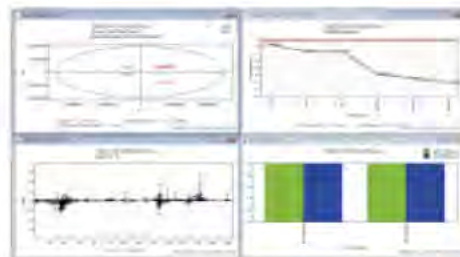
Clinical Pharmaceutical Sciences

Contact : TEL : +81-22-717-7525

URL : <http://www.pharm.hosp.tohoku.ac.jp/Study/Index.html>

Research Project

- Proteomics and metabolomics
- Functional analysis of bio-molecules and clinical applications
- Analysis of drug-binding proteins
- SNP analysis of drug metabolizing enzymes and transporters
- Functional analysis of drug metabolizing enzymes and transporters



Pharmacy

Planning For Drug Development and Clinical Evaluation

Contact : TEL : +81-22-717-7770

URL : <http://www.cpt.med.tohoku.ac.jp/>

Research Project

- HOMED-BP study (Hypertension Objective treatment based on Measurement by Electrical Devices of Blood Pressure); a randomized controlled trial based on home blood pressure (BP) monitoring.
- The Ohasama study ; a long-term cohort study based on ambulatory and home BP monitoring in the general population.
- J-HOME study (Japan Home vs. Office Measurement Evaluation study) ; a nationwide survey on home BP monitoring among patient under antihypertensive medication.
- Chronopharmacological assessment of antihypertensive drugs using home and ambulatory BP monitoring.
- Clinical study to assess antihypertensive drug compliance using a new device equipped with electronic pillbox.



Experimental Station for Medical Plant Studies

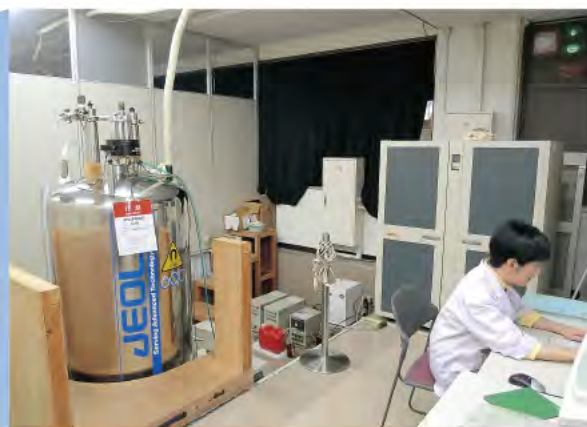


Medicine and plants are closely related to each other as mentioned below: Vegetable ingredients are often being used as medicine and new medicine is also developed by using vegetable ingredients as lead compound. Medicinal plant in itself is being used as a type of medicine such as the Chinese medicine etc.

Within the medicinal plant garden, we are proud to be the No.1 scale in Japan which includes important

medicinal plants. About 1200 types of plants are grown and conserved, and medicinal plants from the Torrid Zone grow within the greenhouse. These plants are utilized for the student's education and also used as research material for developing new medical supplies. Moreover, in order to discover new medical supplies from plants, research is being conducted in the experimental station.

Central Analytical Centre



In the Central Analytical Centre which has a complete set of top-of-the-line analysis apparatus, the technical staff analyzes samples requested from the laboratory. It also has equipments for researchers to make measurements.

It has more than 15 equipments such as Mass spectrometer, nuclear magnetic resonance apparatus, circular dichroism distribution meter and Raman spectrometer which can be used to make structure determination of complicated compound.

For research of gene, protein, and cell function, the center equipments supports of wide range research, such as DNA sequencer, DNA synthesizing apparatus, automatic nucleic acid extracting apparatus, amin-acid-analysis equipment, protein sequencer, peptide synthesis equipment, cell segregation analysis apparatus, image analyzer etc.

Experimental Animal Center



In recent years, Pharmaceutical Research has followed remarkable progress in Bioscience. The accumulation of knowledge about Bioscience is required for various animal experiments and high precision experimental data. Example: Animal experiment is indispensable for the development of new medicine or to evaluate the validity and safety of medicine. The Center is designed not only for general breeding of experimental animals such as rats

or mouse, but also for germ free conditions.

The animal experiments are conducted with consideration to the dignity of life which is based on the laboratory animals handling rule. We are also responsible for building the first animal cenotaph in Japan, holding experimental animal spirit consoling every year, since 1975.

Radioisotope Research and Educational Center



In order to observe the efficiency of substances as medicine, it is important to clarify from the living body to molecular level as to how the substance is being carried to each tissue within the body, to what kind of form it is being metabolized and if pharmacology or physiological functions are revealed etc. With this purpose, the method of labeling and tracing the substance with radioisotope is very effective.

The center is cooperative and has shared facilities which

are commonly used such as radioisotope and carries various researches such as the elucidation of the carrier mechanism of blood brain barrier and regulation of gene expression mechanism. The staff educates and trains individuals on how to deal with radioisotope or radiation aiming at research, and provides education about manufacturing control of the radioactive medicine for PET (Positron emission Tomography) inspection for future pharmacist.



Admission Information

Pharmaceutical sciences have been contributing to improvement of human welfare and are developing and changing rapidly. The strong commitment to research excellence in this area at Tohoku University is carried out by the Graduate School of Pharmaceutical Sciences and the Faculty of Pharmaceutical Sciences. The members of the Graduate School (and the Faculty) are at the leading edge of this research area.

Graduate Program

The aim of our graduate program is to provide the proper background for individuals to develop the required skills to become leaders in scientific research and development, capable of making original contributions to the advancement of pharmaceutical sciences and related disciplines. Programs leading to the M.S. and Ph.D. degrees are offered in wide research fields of pharmaceutical sciences. The research at our Graduate School is conducted in many interdisciplinary areas as shown in the Research Profile as well as in the Home Page (URL: <http://www.pharm.tohoku.ac.jp/index-e.html>).

Some graduate students receive the JASSO scholarships and the JSPS fellowships throughout their graduate study. Both the scholarships and the fellowships allow students to devote full-time efforts towards their degree programs.

International graduate students are admitted in April and October every year. Deadlines for submission of the application for the enrollment from April and October are in January and July, respectively. Every foreign applicant is expected to spend about half year as a Research Student in his/her prospective supervisor's laboratory before applying to the Graduate School.

Research Student Programs - Contact (Application)

Research students are admitted in April and October every year. Deadlines for submission of the application for the enrollment from April and October are in February and August, respectively. Applicants should at first make contact with at least one of the Professors of the Graduate School and elect a prospective supervisor through discussion on their research plans. The applicant who has decided his/her supervisor needs to submit the application form accompanied by the required documents and the non-refundable application fee to the Education Affairs Section. The application forms and details on the application procedure may be obtained from the Education Affairs Section. Entrance Examination of research students is selection based on the student's qualifications and recommendation from the prospective supervisor.

Special Selection Program for Foreign Students

Status	Duration	Degree	Enrollment	Application	Examination	Selection method
Master's Student	2years	Master of Pharmaceutical Sciences	April	Early January	Early February	Written Examination (Major Subjects) , TOEFL-ITP (without Listening Comprehension) and Interview
			October	Late July	Late August	
Doctoral Student	3years	Doctor of Philosophy (Pharmaceutical Sciences)	April	Early January	Early February	* Written Examination (Major Subjects) , * TOEFL-ITP (without Listening Comprehension) , Research Presentation and Interview
			October	Late July	Late August	
	4years	Doctor of Philosophy (Pharmacy)	April	Early November	Early December	Research Presentation and Interview
			October	Late July	Late August	

* Science Students, e.g., studied at school of Pharmacy, Medicine, Science, Agriculture, Engineer, are exempted from Written Examination and TOEFL-ITP in Doctoral Student's Selection

More Information: <http://www.pharm.tohoku.ac.jp/index-e.html>



Student Statistics

Undergraduate (As of May 2012)

Department	Admission Quota	1st year	2nd year	3rd year	4th year	5th year	6th year	Total
Pharmaceutical Science	60	87	82	91	57	-	-	378
Pharmacy	20				20	20	21	
Total	80	87	82	91	77	20	21	378

Graduate (As of May 2012)

Master's program

Department	Admission Quota	1st year	2nd year	Total
Molecular Pharmaceutical Science	22	36	33	69
Life and Pharmaceutical Science	32	29	38	67
* Life Science	-	0	1	1
Total	54	65	72	137

Doctoral program

Department	Admission Quota	1st year	2nd year	3rd year	4th year	Total
Molecular Pharmaceutical Science	8	8	0	0	-	8
Life and Pharmaceutical Science	10	10	0	0	-	10
Pharmacy	4	5	0	0	0	5
* Pharmaceutical Chemistry	-	0	13	8	-	21
* Bio-Pharmaceutical Science	-	0	13	10	-	23
* Life Science	-	2	8	5	-	15
Total	22	25	34	23	0	82

* Defunct Department

International Students (As of November 2012)

Countries	Undergraduate	Graduate	Research Student	Total
China	3	10	2	15
Korea		2		2
Taiwan		1		1
Malaysia		1		1
Viet Nam		2		2
Bangladesh	1	1		2
Cambodia	1			1
India		1		1
Canada		1		1
Total	5	19	2	26

University Fees

	Entrance Examination	Admission	Tuition
Graduate school	¥30,000	¥282,000	¥535,800/year
Research Student	¥ 9,800	¥ 84,600	¥ 29,709/month

Academic Staff Statistics (As of November 2012)

Major	Professor	Associate professor	Lecturer	Assistant professor	Assistant	Total
Molecular Pharmaceutical Science	9	4	1	13	4	31
Life and Pharmaceutical Science	7	6	3	12	1	29
Pharmacy	5	6	0	2	1	14
Total	21	16	4	27	6	74



Program Beginning in April

December

Entrance Examination of Doctoral program (4-year)

February

Entrance Examination of Master's / Doctoral program (3-year)

April

Orientation for New Students and Course Registration



October

Preliminary Application for Doctor's Degree (3rd /4th year students)

January

Application for Doctor's Degree (3rd /4th year students) / Submission of Master's Dissertation and Abstract for Review (2nd year students)

February

Oral Examination for Doctor's Degree and Submission of the Final Version of Doctor's Dissertation (3rd /4th year students) / Submission of the Final Version of Master's Dissertation and Oral Examination for Master's Degree (2nd year students)

March

Commencement Ceremony (3rd /4th year students of Doctoral Program) / (2nd year students of Master's Program)



Program Beginning in October

August

Entrance Examination of Master's / Doctoral program

October

Orientation for New Students and Course Registration



June

Preliminary Application for Doctor's Degree (3rd /4th year students)

July

Application for Doctor's Degree (3rd /4th year students) / Submission of Master's Dissertation and Abstract for Review (2nd year students)

August

Oral Examination for Doctor's Degree and Submission of the Final Version of Doctor's Dissertation (3rd /4th year students) / Submission of the Final Version of Master's Dissertation and Oral Examination for Master's Degree (2nd year students)

September

Commencement Ceremony (3rd /4th year students of Doctor Program) / (2nd year students of Master Program)



About Sendai

The Tohoku University Graduate School of Pharmaceutical Sciences is located in Sendai. It is located approximately 350 kilometers north of Tokyo.

The foundation of Sendai was established by Lord Masamune Date. In 1600, He began building his castle on the Aobayama mountain which is located near Tohoku University Aobayama Campus.

Sendai is the largest city of Japan's Tohoku Region. It is called "Mori no miyako" (which means the city of Trees), due to many beautiful trees in the center of the city. It is also known as "Gakuto" (which means an Academic City) since it boasts a large number of high-level educational institutes.



Information

Location: North-East 350km from Tokyo
(1hour 40minutes by Shinkansen)

Population: 1,060,877 (2012, October)

C l i m a t e: Moderate, humid subtropical
Averaging range from
1.5°C (34.7 °F) to 24.1°C (75.4 °F)

Food originated in Sendai

Gyutan (Cow tongue, usually grilled)

Sasakamaboko (Boiled fish paste shaped like bamboo leaves)

Zundamochi (mochi balls with sweet, bright green soy beans paste)
etc...

Festival & Events

May: Aoba Matsuri (Typical Japanese festival)

August: Tanabata Matsuri (The most famous Tanabata Festival in Japan)

September: Jozenji Street jazz Festival

October: Michinoku Yosakoi Matsuri (Dance festival)

December: Sendai Pageant of Starlights



Gyutan



Sasakamaboko



Jozenji Street jazz Festival



Michinoku Yosakoi Matsuri



Access Guide



For Miyagi University of Education

- | | |
|-----------------------|---------------------------------------|
| 1 Main Lecture Room | 5 Research Building D |
| 2 Research Building A | 6 Medical Plant Garden Administration |
| 3 Research Building B | 7 Green house |
| 4 Research Building C | |

Access Guide

From Sendai Airport to Sendai Station : You can take the Sendai Airport Line, or alternatively you can take an Airport Limousine Bus to JR Sendai Station.

From J R Sendai Station : Take a Sendai City bus. If you use a taxi, it will cost about ¥1,500.

Take a Sendai City bus of the "Dobutsu Koen" Loop route and get off at the Faculty of Science/ Museum of Natural History bus stop. The bus starts at the No. 9 bus stop in front of the West Exit of JR Sendai Station.

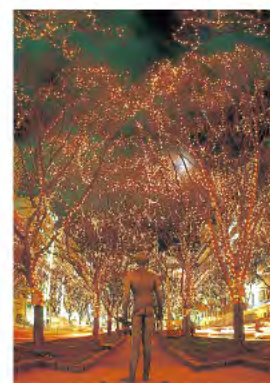
If you want more information, please look at our website URL: <http://www.pharm.tohoku.ac.jp/english/map-e.shtml>



Ruins of Sendai Castle



Sendai Tanabata Matsuri



Sendai Pageant Of Starlight

For Kawauchi
For Faculty of Engineering

For Miyagi University
of Education





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