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August 2026

THE INSTITUTE OF
MEDICAL SCIENCE
THE UNIVERSITY OF TOKYO

2026
Institute of Medical
University of Tokyo

Pioneering the Future of Medical Science

The Institute of Medical Science, The University of Tokyo (IMSUT), was founded in 1892 by Dr. Shibasaburo Kitasato as the Institute of Infectious Diseases. It was incorporated into the University of Tokyo in 1916 and restructured as IMSUT in 1967. Over its 130-year history, spanning from the Meiji to the Reiwa era, IMSUT has expanded its research focus beyond infectious diseases to a broad spectrum of medical sciences, including medicine, pharmacy, science, engineering, agriculture, information science, ethics, and public policy. Currently, approximately 1,000 faculty members, administrative, technical and hospital staff, and researchers, including more than 200 students affiliated with eight graduate schools, are actively engaged in research at IMSUT.

IMSUT has three core research departments that explore the principles of biology: the Department of Basic Medical Sciences, the Department of Cancer Biology, and the Department of Microbiology and Immunology. Moreover, to promote translational research that implements the diverse outcomes of our core research in society, we have established seven centers and five research facilities, including the Human Genome Center, which houses Japan's largest supercomputer dedicated to the life sciences (SHIROKANE). IMSUT Hospital, our affiliated hospital, is the only hospital affiliated with a national university research institute in Japan. It provides community-based medical services while conducting clinical trials and advanced treatments based on our research findings. This integration of research and clinical practice enables seamless progression from studies on basic life sciences to project-based translational research and, ultimately, the development of advanced medicine at our affiliated hospital.

IMSUT has been accredited by the Ministry of Education, Culture, Sports, Science and Technology as Japan's sole International Joint Usage/Research Center in life sciences. Serving as a collaborative research hub between Japan and other countries, the Institute is steadily fulfilling its mission of conducting international joint research projects. Other key initiatives we lead include the "Platforms for Advanced Technologies and Research Resources" project, which supports KAKENHI-funded life science research; the operation and management of BioBank Japan, one of the world's largest disease biobanks; and functioning as the University of Tokyo Core Center for the Translational Research Program in collaboration with the University of Tokyo Hospital.

IMSUT members conduct research at the verdant Shirokanedai campus, as well as at the Research Center for Asian Infectious Diseases (Beijing) and the Amami Laboratory of Medical Science (Amami Oshima). Dedicated to pioneering the future of medical science, we are committed to advancing a wide range of medical research fields.



Atsushi Iwama, M.D., Ph.D.
Dean



THE INSTITUTE
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OF TOKYO

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IMSUT Organization

Research Departments

Department of Microbiology and Immunology

Chair Professor Ken Ishii

- Division of Molecular Virology
- Division of Vaccine Science
- Division of Malaria Immunology
- Division of Systems Virology
- Division of Commensal Biology

Department of Cancer Biology

Chair Professor Emi Nishimura

- Division of Genetics
- Division of Aging and Regeneration
- Division of Biochemistry and Integrative Cancer Research

Department of Basic Medical Sciences

Chair Professor Toshifumi Inada

- Division of Cell Signaling and Molecular Medicine
- Division of RNA and Gene Regulation
- Division of Protein Metabolism

Research Facilities

Human Genome Center

Director Professor Seiya Imoto

- Laboratory of Genome Database
- Laboratory of Molecular Medicine
- Laboratory of Genome Technology
- Laboratory of Sequence Analysis
- Laboratory of Functional Analysis *in silico*
- Department of Public Policy
- Division of Medical Data Informatics
- Division of Health Medical Intelligence
- Division of Metagenome Medicine
- Division of Digital Genomics

Center for Experimental Medicine and Systems Biology

Director Professor Tomoji Mashimo

- Laboratory of Reproductive Systems Biology
- Division of Genome Engineering
- Division of Cell Regulation
- Core Laboratory for Developing Advanced Animal Models

Advanced Clinical Research Center

Director Professor Fumitaka Nagamura

- Division of Clinical Genome Research
- Division of Advanced Medicine Promotion
- Division of Advanced Genome Medicine
- Division of Frontier Surgery
- Division of Hematopoietic Disease Control
- Division of Advanced Gastroenterology and Endoscopy
- Division of Anesthesia and Surgical Homeostasis
- Division of Hematology and Tumor Biology
- Division of Bioethics and Medical Law

Center for Stem Cell Biology and Regenerative Medicine

Director Professor Hideki Taniguchi

- Division of Regenerative Medicine
- Division of Stem Cell and Molecular Medicine
- Division of Stem Cell Transplantation
- Division of Stem Cell Processing
- Division of Stem Cell Aging Medicine
- Division of Somatic Stem Cell Research
- Division of Cell Engineering
- Division of Stem Cell and Genome Biology
- FACS Core Laboratory
- Stem Cell Bank

IMSUT Distinguished Professor Units

- Division of Virology
- Division of Cancer Cell Biology

International Research Center for Infectious Diseases

Director Professor Yasushi Kawaguchi

- Department of Special Pathogens
- Department of Infectious Disease Control (Division of Viral Infection)
- Pathogenic Microbes Repository Unit

International Vaccine Design Center

Director Professor Ken Ishii

- Human Immune-Profiling Team (Division of Systems Immunology)(Division of Human Immunology)(Division of Infection Immunology)
- New Dimensional Vaccine Design Team (Division of Vaccine Engineering)(Division of Adjuvant Innovation)(Division of Mucosal Vaccines)(Division of Immunology and Genomics)

Center for Gene & Cell Therapy

Director Professor Takashi Okada

- Division of Molecular and Medical Genetics

Laboratory Animal Research Center

Director Professor Tomoji Mashimo

- Division of Animal Genetics
- Animal Center

Amami Laboratory of Medical Science

Director Professor Tomoji Mashimo

Medical Proteomics Laboratory

Director Professor Mutsuhiro Takekawa

Research Center for Asian Infectious Diseases

Director Professor Yasushi Kawaguchi

Laboratory of Molecular Genetics

Director Professor Atsushi Iwama

(Frontier Research Unit)

Dean

Professor Atsushi Iwama

Senior Faculty Meeting

General Faculty Meeting

Committees



Atsushi Iwama



Kenta Nakai



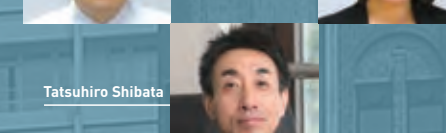
Yoichi Furukawa



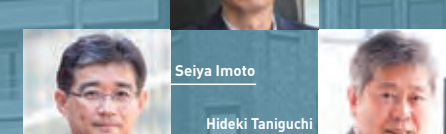
Yuji Yamanashi



Yasushi Kawaguchi



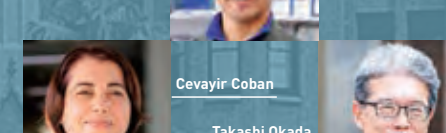
Fumitaka Nagamura



Mutsuhiro Takekawa



Kaori Muto



Tatsuhiko Shibata



Seiya Imoto



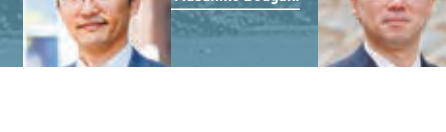
Hideki Taniguchi



Ken Ishii



Tomoji Mashimo



Cevayir Coban



Takashi Okada

Tetsuo Shibuya

Dai Shida

Toshifumi Inada

Emi Nishimura

Yasuhito Nannya

Narikazu Boku

Kei Sato

Yasushi Saeki

Satoshi Yamazaki

Hiroaki Ikematsu

Natsuhiko Kumasaka

Masahiko Bougaki

Hiroshi Suzuki

Koji Hase

Vice Dean for General Affairs
Professor Mutsuhiro Takekawa
Vice Dean for Research Support
Professor Tomoji Mashimo

Vice Dean for Finance
Professor Yasushi Kawaguchi

IMSUT Hospital

Director
Professor Narikazu Boku

Deputy Director
Professor Yasuhito Nannya
Deputy Director
Project Professor Minoru Tanaka

Medical Care Unit

Departments of Internal Medicine

- Department of Hematology/Oncology
- Department of Infectious Diseases and Applied Immunology
- Department of Rheumatology, Allergy and Clinical Immunology
- Department of Oncology and General Medicine
- Department of Cardiovascular Medicine
- Department of Radiology
- Department of Palliative Medicine and Advanced Clinical Oncology
- Department of Diagnostic Pathology
- Department of Gastroenterology
- Department of Applied Genomics

Departments of Surgery

- Department of Surgery
- Department of Anesthesia
- Department of Joint Surgery
- Department of Surgical Neuro-Oncology
- Department of Urology

Care Support Unit

- Department of Medical Informatics
- Department of Radiological Technology
- Department of Cell Processing and Transfusion
- Surgical Center
- Department of Medical Supply Center
- Department of Laboratory Medicine
- Department of Pathology
- Department of Clinical Genomics
- Department of Clinical Nutrition
- Radiation Control Office
- Regional Medical Liaison Office

Clinical Safety and Infection Control Unit

- Center for Clinical Safety and Infection Control (Department of Medical Safety Management) (Department of Infection Prevention and Control)

Clinical Research Support Unit

- Center for Translational Research
- Therapeutic Vector Development Center
- IMSUT CORD

Department of Nursing

Department of Pharmacy

Department of AIDS Vaccine Development

Corporate Sponsored Research Program, Social Cooperation Research Programs

- Project Division of Advanced Biopharmaceutical Science
- Project Division of Genomic Medicine and Disease Prevention
- Project Division of Oncolytic Virus Development
- Project Division of Generative AI Utilization Aging Cells
- Project Division of International Healthcare Innovation Research

Consortium

- Consortium for Gene Therapy and Regenerative Medicine

Common Research Facilities

Technical Office

Dean's Office

Administration Office

General Manager Noriko Yamamura

Administrative Affairs Division

Research Support Division

Hospital Division

Manager Kazutaka Kobayashi

Manager Kiichi Oura

Manager Masaaki Ozaki



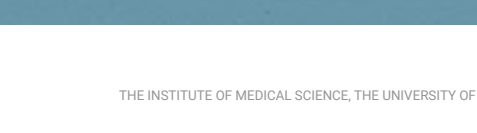
Narikazu Boku



Kei Sato



Natsuhiko Kumasaka



Masahiko Bougaki



Hiroshi Suzuki

Koji Hase

Yasuhito Nannya

Narikazu Boku

Kei Sato

Natsuhiko Kumasaka

Masahiko Bougaki

Hiroshi Suzuki

Koji Hase

Yasuhito Nannya

Narikazu Boku

Kei Sato

Natsuhiko Kumasaka

Masahiko Bougaki

Hiroshi Suzuki

Koji Hase

Yasuhito Nannya

Narikazu Boku

Kei Sato

Natsuhiko Kumasaka

Masahiko Bougaki

Hiroshi Suzuki

Koji Hase

Yasuhito Nannya

Narikazu Boku

Kei Sato

Natsuhiko Kumasaka

Masahiko Bougaki

Hiroshi Suzuki

Koji Hase

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Hiroshi Suzuki

Koji Hase

Yasuhito Nannya

Narikazu Boku

Kei Sato

Natsuhiko Kumasaka

Masahiko Bougaki

Hiroshi Suzuki

Koji Hase

Yasuhito Nannya

Institute for Infectious Diseases

1892

Foundation of the Institute for Infectious Diseases (IID), as a private institute by Dr. Shibasaburo Kitasato



1894

Relocation to Atagocho, Shiba-ku and opening of the affiliated hospital

1915

Discovery of Rat-bite Fever Spirochete by Dr. Kenzo Futaki

1906

Completion of the new building

1914

Reorganization under the Ministry of Education

1905

Relocation of the institute to Shirokane-dai, Minato-ku

1899

Reorganization as a national institute under the control of the Ministry of Internal Affairs

1897

Discovery of *Shigella* by Dr. Kiyoshi Shiga



*Photo courtesy of The Kitasato Institute

1934

Completion of the First Building



1947

Transfer of about half of IID personnel to the newly founded "National Institute of Health", under control of the Ministry of Public Health and Welfare

Name changed from Tokyo Imperial University to the University of Tokyo

1953

Discovery of the Blood Group Glycolipids by Dr. Tamio Yamakawa

1965

Establishment of the Laboratory Animal Research Center

1966

Establishment of the Amami Laboratory of Injurious Animals

1955

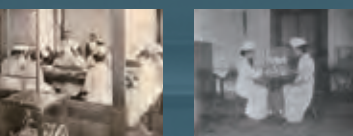
Isolation of Multidrug-resistant *Shigella* by Dr. Osamu Kitamoto

1954

Discovery of Interferon by Dr. Yasuichi Nagano

1952

Discovery of Trichomycin by Dr. Seigo Hosoya



Institute for Infectious Diseases in Meiji Period

1935

Elucidation of Mosquito-borne Japanese Encephalitis by Dr. Tokushiro Mitamura

Discovery of the Pathogen of Lymphogranuloma Urethritis (Chlamydia) by Dr. Yoneji Miyagawa

1930

Determination of the Etiology of Tsutsugamushi Disease (Rickettsia) by Dr. Mataro Nagayo

1916

Incorporation into Tokyo Imperial University



Institute of Medical Science

1967

Reorganization of the Institute of Infectious Diseases into the Institute of Medical Science

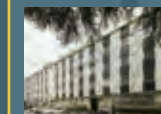
Completion of the Second Building



1980

Completion of the Third Building

Establishment of the Laboratory of Molecular Genetics



1991

Establishment of the Human Genome Center

1992

100th Founding Anniversary of the Institute

IMSUT

Landmark Achievements

Elucidation of Hereditary Hemolytic Anemia by Dr. Shiro Miwa

Contribution to the Eradication of Filariasis by Dr. Manabu Sassa

Elucidation of Synaptic Ultrastructure by Dr. Kiyoshi Hama

Elucidation of the Function of GTP-binding Proteins by Dr. Yoshito Kajiro

Discovery of the Src-family Oncogenes by Dr. Kumao Toyoshima

Start of Bone Marrow and Umbilical Cord Blood Transplantation Medicine by Dr. Shigetaka Asano

Start of HIV/AIDS Treatment in Japan by Dr. Kaoru Shimada

Determination of the Structure and Function of N-linked Oligosaccharides by Dr. Akira Kobata

Elucidation of the Genetic Information of HTLV Virus by Dr. Mitsuaki Yoshida

Elucidation of Protease-dependent Virus Pathogenicity by Dr. Yoshiyuki Nagai

Determination of the DNA Sequence of Human Chromosome 21 by Dr. Yoshiyuki Sakaki

1998

Establishment of the Center for Experimental Medicine (now "Center for Experimental Medicine and Systems Biology")

1995

Completion of the Fourth Building



2004

Reorganization of the University of Tokyo as a national university corporation

2003

Completion of new research facilities, the General Research Building and Hospital Building



2005

Establishment of the International Research Center for Infectious Diseases

2006

Establishment of the Research Center for Asian Infectious Diseases with collaborating sites in Beijing and Harbin
Establishment of the Medical Proteomics Laboratory

2008

Establishment of the Center for Stem Cell Biology and Regenerative Medicine

2009

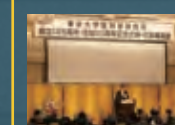
Official recognition as a Joint Usage/Research Center

2018

Official recognition as an International Joint Usage/Research Center

2017

125th Founding Anniversary and 50th Reorganization Anniversary of the Institute



2015

Establishment of the Health Intelligence Center

2014

Establishment of the Center for Gene & Cell Therapy

2011

Establishment of the International Research and Development Center for Mucosal Vaccines

2024

Renaming the Amami Laboratory of Injurious Animals to the Amami Laboratory of Medical Science

2022

Reorganization of the International Research and Development Center for Mucosal Vaccines into International Vaccine Design Center

2020

Integration of the Health Intelligence Center into the Human Genome Center

List of Deans

1st Shibasaburo Kitasato (1892-1914)	Acting Dean Ryojiro Fukuhara (1914-1915)	2nd Tanemichi Aoyama (1915-1916)	3rd Haruo Hayashi (1916-1919)	4th Mataro Nagayo (1919-1934)	5th Yoneji Miyagawa (1934-1940)	6th Tokushiro Mitamura (1940-1944)	7th Takeo Tamiya (1944-1949)	8th Shuji Hasegawa (1949-1956)	9th Yoshiharu Takeda (1956-1958)	10th Yasuichi Nagano (1958-1959)
11th Masashiro Kudo (1958-1965)	12th Ayao Yamamoto (1965-1968)	13th Manabu Sassa (1968-1971)	Acting Dean Yukinori Tsunematsu (1971-1971)	14th Manabu Sassa (1972-1973)	15th Tadashi Yamamoto (1973-1977)	16th Hirotoshi Shimojo (1977-1979)	17th Toru Tsumita (1979-1983)	18th Takeshi Odaka (1983-1987)	19th Kumao Toyoshima (1987-1990)	20th Akira Kobata (1990-1992)
21st Kazushige Hirose (1992-1996)	22nd Mitsunori Yoshida (1996-1998)	23rd Ken-ichi Arai (1998-2003)	24th Tadashi Yamamoto (2003-2007)	25th Motoharu Seiki (2007-2011)	26th Hiroshi Kiyono (2011-2015)	27th Yoshinori Murakami (2015-2019)	28th Yuji Yamanashi (2019-2023)	29th Makoto Nakanishi (2023-2025)	30th Atsushi Iwama (2025-)	

List of Directors of the Hospital

1st Tomoe Takagi (1895-1896)	2nd Gozou Moriya (1899-1901)	3rd Gorosaku Shibayama (1901-1914)	4th Kenzo Futaki (1914-1920)	5th Yoneji Miyagawa (1920-1945)	Acting Director Takeo Tamiya (1945-1946)	6th Yoshio Mikamo (1946-1951)	7th Osamu Kitamoto (1951-1969)	8th Yukio Ishibashi (1969-1971)
9th Tsunamasa Inou (1971-1974)	10th Keimei Mashimo (1974-1977)	11th Sugishi Ootani (1977-1981)	12th Genshitiro Fujii (1981-1985)	13th Shiro Miwa (1985-1987)	14th Nobuo Akiyama (1987-1991)	15th Kaoru Shimada (1991-1994)	16th Shigetaka Asano (1994-2003)	17th Aikichi Iwamoto (2003-2006)
18th Naohide Yamashita (2006-2010)	19th Kohzoh Imai (2010-2014)	20th Keiya Ozawa (2014-2018)	21st Arinobu Tojo (2018-2021)	22nd Hiroshi Yotsuyanagi (2021-2023)	23rd Tomoki Todo (2023-2025)	24th Narikazu Boku (2025-)		

Department of Microbiology and Immunology

Chair : Ken Ishii

●Division of Molecular Virology

Professor Yasushi Kawaguchi, D.V.M., Ph.D.
Visiting Professor Akihisa Kato, Ph.D.
Associate Professor Yuhei Maruzuru, Ph.D.
Visiting Associate Professor Jun Arii, Ph.D.

●Division of Vaccine Science

Professor Ken Ishii, M.D., Ph.D.
Associate Professor Hideo Negishi, Ph.D.
Project Associate Professor Misako Nakayama, M.D., Ph.D.

●Division of Malaria Immunology

Professor Cevayir Coban, M.D.

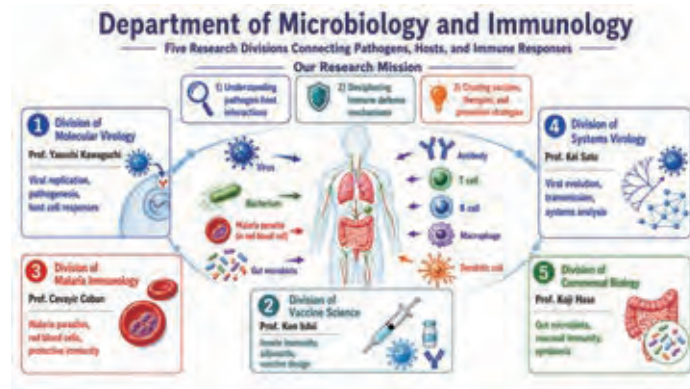
●Division of Systems Virology

Professor Kei Sato, Ph.D.

●Division of Commensal Biology

Professor Koji Hase, Ph.D.

The emergence of emerging and re-emerging infectious diseases in recent years has reaffirmed the importance of microbiology and immunology. The department of Microbiology and Immunology consists of four divisions: 'Division of Molecular Virology', 'Division of Vaccine Science', 'Division of Malaria Immunology' and 'Division of Systems Virology', 'Division of Commensal Biology' and aims to elucidate the etiology, pathogenesis and host defense mechanisms of various infectious and immune diseases at the molecular, cellular, individual and population levels, and to apply them to the control and prevention of infectious diseases through therapeutic drug and vaccine development. The department also aims to promote research exchange activities as the core of infectious diseases and immunology, and to foster the next generation of outstanding researchers and educators to the rest of the world. Each department actively promotes research that makes the most of the characteristics of each field and joint research between fields, including joint research with the IMSUT hospitals, the International Research Center for Infectious Diseases, the Research Center for Asian Infectious Diseases and the International Vaccine Design Center (vDESC), as well as joint research with other departments including the newly established UTOPIA, domestic and foreign academia, and the relevant industries. The department of Microbiology and Immunology has also expanded into joint research with the other institutions and schools at the U Tokyo, domestic and foreign academia, pharmaceutical companies and others. The results of the department's work have been presented at conferences in Japan and abroad, published in papers, patent, and have contributed to the acquisition of large-scale research funds and the development of human resources.



This figure shows 5 divisions in the Department of Microbiology and Immunology. Two divisions mainly focus on pathogens, whereas two divisions focus on host immune responses against pathogens. These divisions work together to understand the molecular bases underlying host-pathogen interaction and to develop novel vaccines or novel therapy for infectious diseases or related immune disorders.

Department of Cancer Biology

Chair : Emi Nishimura

●Division of Genetics

Professor Yuji Yamanashi, Ph.D.
Associate Professor Akane Yamauchi (Inoue), Ph.D.

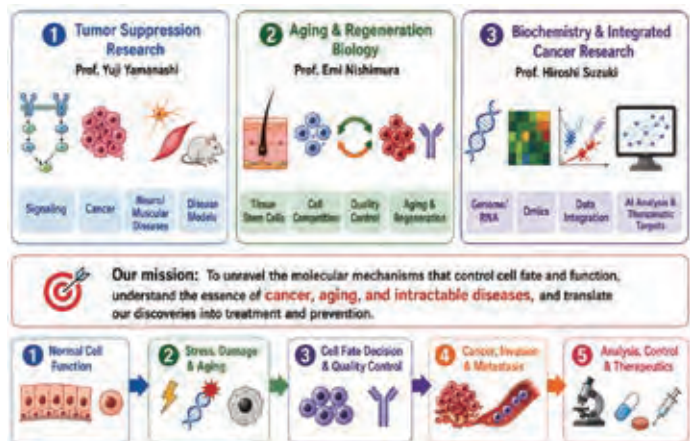
●Division of Aging and Regeneration

Professor Emi Nishimura, M.D., Ph.D.
Associate Professor Takuma Shibata, Ph.D.

●Division of Biochemistry and Integrative Cancer Research

Professor Hiroshi Suzuki, M.D., Ph.D.
Senior Assistant Professor Koichi Ogami, Ph.D.

Development and progression of cancer is a multi-step process associated with structural and functional alteration of various genes, including those involved in regulation of cell growth, differentiation, aging, regeneration, and cell-cell and cell-matrix interaction. In the Department of Cancer Biology, we aim to clarify the entire picture of tumor development and progression and aging based on these gene products. To do so, we apply various multidisciplinary approaches in addition to molecular and cellular biological techniques and mouse genetics, such as proteomics, molecular imaging, structural biology, physical chemistry, and mathematical sciences. Our goal is to understand the molecular bases of cell growth, differentiation and aging, malignant transformation, tumor invasion, metastasis, angiogenesis, and drug resistance, with regard to pathogenic mechanisms in human cancer. The findings of our research will provide innovative targets for translational research. Ongoing research investigations are as follows. Division of Genetics: 1) Studies on molecular signals that regulate a variety of cellular activities, aiming to address how deregulated cellular signals cause neoplastic, neuromuscular or other intractable disorders. 2) Pathophysiological analyses of animal models for the above-mentioned diseases, aiming to develop new therapeutic approaches. Division of Aging and Regeneration: Studies on the mechanisms of regeneration, aging, carcinogenesis, and autoimmunity with a focus on tissue stem cells of surface epithelial tissues such as the skin, and elucidation and control of inter-organ communication mechanisms. Division of Biochemistry and Integrative Cancer Research: Studies on gene regulation, genome biology, and RNA biology, and integrative large-scale data analyses for elucidating the mechanisms of cancer and intractable diseases and developing therapeutic strategies.



Department of Basic Medical Sciences

Chair : Toshifumi Inada

●Division of Cell Signaling and Molecular Medicine

Professor Mutsuhiro Takekawa, M.D., Ph.D.
Visiting Professor Naohiko Koshikawa, Ph.D.
Visiting Associate Professor Hiroshi Yasui, M.D., D.M.Sc.
Senior Assistant Professor Yuji Kubota, Ph.D.

●Division of RNA and Gene Regulation

Professor Toshifumi Inada, Ph.D.

●Division of Protein Metabolism

Professor Yasushi Saeki, Ph.D.
Associate Professor Taeko Kobayashi, Ph.D.

The Department of Basic Medical Sciences explores new fields in basic life science to understand life processes at deeper levels. Its goal is to develop fundamental bases for translational research across various diseases and research fields. The department consists of three groups: the Division of Cell Signaling and Molecular Medicine, the Division of RNA and Gene Regulation, and the Division of Protein Metabolism. Below is a summary of each division:

1. Division of Cell Signaling and Molecular Medicine: Aims to understand regulatory mechanisms of intracellular signal transduction systems critical for cell fate decisions and diseases. Also develops diagnostic and therapeutic tools for disorders involving these pathways.
2. Division of RNA and Gene Regulation: Seeks to understand the surveillance system preventing abnormal protein production in neurodegenerative diseases and aging. Focuses on ribosome collision and translation quality control, analyzing pathogenic mechanisms, and developing therapeutic and diagnostic agents.
3. Division of Protein Metabolism: Aims to understand biological phenomena regulated by intracellular proteolysis, particularly the ubiquitin-proteasome system. Investigates pathogenic mechanisms of diseases caused by abnormal proteolysis and contributes to ubiquitin drug discovery.

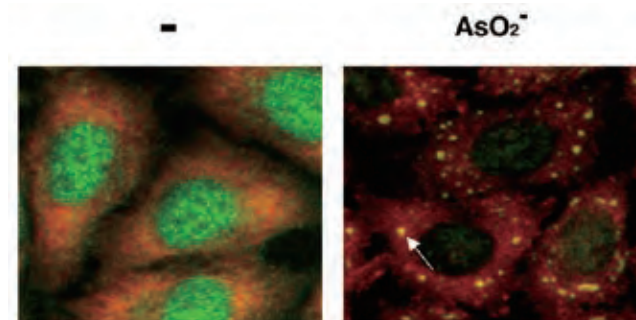


Fig.1 Arsenite induces the formation of cytoplasmic stress granules



Fig.2 Structure of collided ribosomes revealed by cryo-electron microscopy

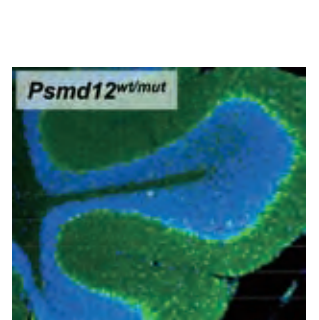


Fig.3 Ubiquitin staining of proteasome mutant mouse cerebellum



Human Genome Center

Director : Seiya Imoto

●Laboratory of Genome Database Professor Kenta Nakai, Ph.D.	●Laboratory of Functional Analysis in Silico Professor Kenta Nakai, Ph.D.	●Division of Health Medical Intelligence Professor Seiya Imoto, Ph.D. Associate Professor Yaozhong Zhang, Ph.D.
●Laboratory of Molecular Medicine Professor Tatsuhiro Shibata, M.D., Ph.D. Senior Assistant Professor Atsushi Niida, Ph.D.	●Department of Public Policy Professor Kaori Muto, Ph.D. Associate Professor Izen Ri, Ph.D.	●Division of Metagenome Medicine Project Professor Satoshi Uematsu, M.D., Ph.D. Project Associate Professor Kosuke Fujimoto, M.D., Ph.D.
●Laboratory of Genome Technology Project Professor Koichi Matsuda, M.D., Ph.D.	●Division of Medical Data Informatics Professor Tetsuo Shibuya, Ph.D. Project Associate Professor Akito Yamamoto, Ph.D.	●Division of Digital Genomics Professor Natsuhiko Kumasaka, Ph.D.
●Laboratory of Sequence Analysis Professor Seiya Imoto, Ph.D. Associate Professor Kotoe Katayama, Ph.D.		

We promote personalized genomic medicine based on whole genome information and healthcare information and make a significant contribution to human society through the establishment of innovative diagnosis, prevention, and treatments for diseases. For this purpose, we are conducting the following projects by utilizing supercomputers and artificial intelligence technologies optimized for medical and life science research.

1) Biomedical research for new-dimensional genomic medicine

We will conduct a new dimension of genome research by adding metagenomic information on bacteria and viruses that coexist with us as a new dimension to human multi-omics information, including individual genomes, epigenomes, transcriptomes, proteomes, and metabolomes, obtained by using state-of-the-art measurement technologies such as ultra high-speed sequencing technology. By elucidating the connection between these differences and diseases such as cancer and lifestyle-related diseases, as well as environmental factors, we will lead to the development of innovative diagnostic, preventive, and therapeutic methods.

2) Medical informatics and AI for personalized genomic medicine

We develop medical informatics that organizes health-medical knowledge/information, analyzes and translates personal genomic information and their health-medical data for personalized genomic medicine. By taking advantage of the artificial intelligence and the supercomputer, we develop big data analysis technologies by integrating large-scale human genome-related databases, drug adverse reaction database, clinical information, etc., and establish cutting-edge computational software that accelerates personalized genomic medicine.

3) Public policy science for ethical, legal and social issues (ELSI)

We study various issues that arise at the point of contact with society in advancing life science and medical research. To promote personalized genomic medicine and advanced medical care, public understanding and social consensus building on the use of personal genomes are essential. Therefore, by empirical methods or comparative policy studies, we conduct various research such as prevention of the misuse and abuse of personal genetic information, disease notification, sharing decision-making process between medical care providers and patients, access right to their clinical/genomic information, and affordable health care service. We propose policy statements based on these studies.



Shirokane7&8(31,180 cores)



Lustre File System (41PB)



Archive Disk (~210PB)

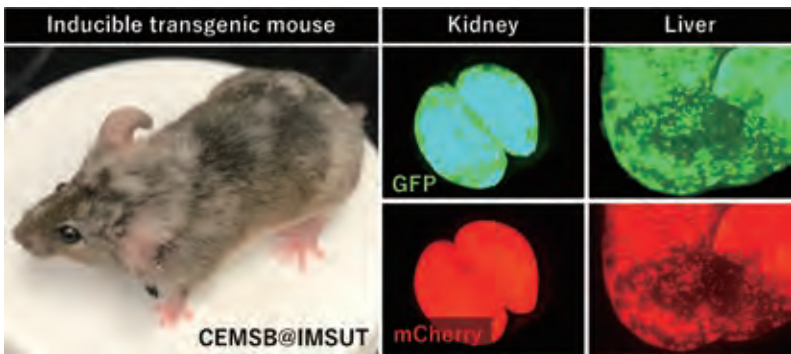
Human Genome Center
Supercomputer System
SHIROKANE

Center for Experimental Medicine and Systems Biology

Director : Tomoji Mashimo

●Laboratory of Reproductive Systems Biology Project Professor Masahito Ikawa, Ph.D. Associate Professor Manabu Ozawa, Ph.D.	●Division of Genome Engineering Professor Tomoji Mashimo, Ph.D.	●Core Laboratory for Developing Advanced Animal Models Professor Satoshi Yamazaki, Ph.D. Professor Tomoji Mashimo, Ph.D. Visiting Professor Kimi Araki, Ph.D. Associate Professor Manabu Ozawa, Ph.D.
	●Division of Cell Regulation Professor Satoshi Yamazaki, Ph.D. Associate Professor Yosuke Tanaka, Ph.D.	

The Center for Experimental Medicine and Systems Biology, which consists of 6 laboratories, i.e., Division of Cell Regulation, Division of Genome Engineering, Laboratory of Innate Immunity, Laboratory of Reproductive Systems Biology, Laboratory of Genetically Engineered Mouse Research, and Core Laboratory of Developing Advanced Animal Models, was established in 2007. Although complete genome sequences of various organisms have been made available, the function of genes, the epigenetic mechanisms that control gene expressions, and the role of genomic elements, including non-coding elements, are not fully understood, especially at an organismal level. From this point of view, the purposes of the center are to establish in vivo experimental platforms for various research fields and develop animal models for investigating human diseases. Genetically engineered mice have offered the opportunity to analyze complex gene functions in vivo and provide various human disease models where new therapeutic approaches can be explored. Moreover, the application of CRISPR/Cas system enables efficient and rapid genome editing in rodents. We take advantage of embryo engineering technologies and genome editing technologies to devise in vivo experimental systems that link both basic sciences and medicine applications. Our center also has a mission to provide scientists at IMSUT and other academic institutes with genetically engineered animal models for studying various aspects of biology or human diseases. From this aspect, our center is also developing novel technologies for establishing advanced animal models for biomedical research. We hope our effort promotes interdisciplinary research that connects a wide range of research fields, including stem cell biology, immunology, and cancer biology, eventually leading to the establishment of novel therapies for human diseases.



A chimeric mouse with an inducible transgenic system

Advanced Clinical Research Center

Director : Fumitaka Nagamura

●Division of Clinical Genome Research Professor Yoichi Furukawa, M.D., Ph.D. Associate Professor Kiyoshi Yamaguchi, Ph.D.	●Division of Frontier Surgery Professor Dai Shida, M.D., Ph.D. Senior Assistant Professor Naoki Sakuyama, M.D., Ph.D.	●Division of Anesthesia and Surgical Homeostasis Professor Masahiko Bougaki, M.D., Ph.D.
●Division of Advanced Medicine Promotion Professor Fumitaka Nagamura, M.D., D.M.Sc. Associate Professor Masanori Nojima, M.D., Ph.D., M.P.H. Visiting Associate Professor Hiroaki Taniguchi, M.D., D.M.Sc.	●Division of Hematopoietic Disease Control Professor Yasuhito Nannya, M.D., Ph.D. Associate Professor Takaaki Konuma, M.D., Ph.D.	●Division of Hematology and Tumor Biology Associate Professor Ayana Kon, M.D., Ph.D.
●Division of Advanced Genome Medicine Associate Professor Yoshihiro Hirata, M.D., Ph.D.	●Division of Advanced Gastroenterology and Endoscopy Professor Hiroaki Ikematsu, M.D., Ph.D.	●Division of Bioethics and Medical Law Associate Professor Waki Toya, Ph.D.

The mission of the Advanced Clinical Research Center (ACRC) is to promote translational research (TR) that applies the results of basic research to clinical practice, particularly in fields such as hematologic, gastrointestinal and brain malignancies, infectious diseases including HIV, and immune disorders, and to implement TR in IMSUT hospital. ACRC also promotes reverse TR, in which basic research is conducted using samples and information obtained from clinical practice. To achieve these missions, each division of ACRC has a close contact with basic scientists inside and outside IMSUT. ACRC is composed of nine divisions: Division of Hematopoietic Disease Control, which focuses on hematologic malignancies; Division of Clinical Genome Research, which researches colorectal-oncology; Division of Frontier Surgery, which implements advanced medical treatments such as robotic surgery for gastrointestinal cancers; Division of Advanced Medicine Promotion, responsible for regulatory science to support TR; Division of Advanced Genome Medicine, which aims to develop treatments for gastrointestinal diseases using biological models; Division of Advanced Gastroenterology and Endoscopy, which promotes endoscopic surgery for gastrointestinal tumors; Division of Anesthesia and Surgical Homeostasis, which provides advanced anesthetic care during surgery; Division of Hematology and Tumor Biology which seeks to elucidate cancer pathophysiology through omics analysis; and Division of Bioethics and Medical Law, which studies ethical and social issues in advanced medical science. Many of the staff members are physicians who support the clinical operations of IMSUT Hospital while also engaging in the development of new medical treatments.



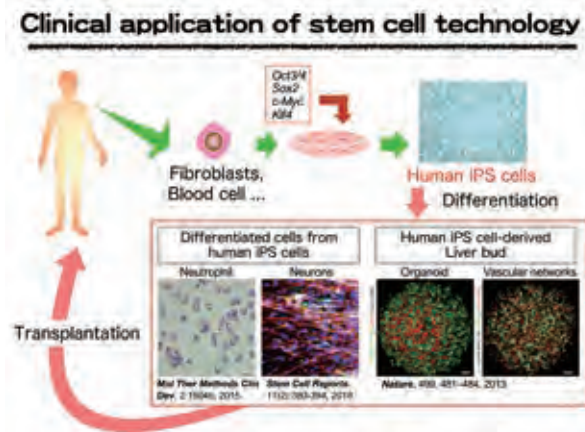
Position of ACRC in IMSUT

Center for Stem Cell Biology and Regenerative Medicine

Director : Hideki Taniguchi

●Division of Regenerative Medicine Professor Hideki Taniguchi, M.D., Ph.D. Associate Professor Naoki Tanimizu, Ph.D.	●Division of Stem Cell Processing Professor Hideki Taniguchi, M.D., Ph.D.	●Division of Cell Engineering Professor Satoshi Yamazaki, Ph.D.
●Division of Stem Cell and Molecular Medicine Professor Atsushi Iwama, M.D., Ph.D. Senior Assistant Professor Motohiko Oshima, Ph.D.	●Division of Stem Cell Aging Medicine Professor Emi Nishimura, M.D., Ph.D.	●Division of Stem Cell and Genome Biology Associate Professor Ayana Kon, M.D., Ph.D.
●Division of Stem Cell Transplantation Professor Yasuhito Nannya, M.D., Ph.D.	●Division of Somatic Stem Cell Research Associate Professor Tokiko Nagamura-Inoue, M.D., D.M.Sc. Associate Professor Hidekazu Nishikii, M.D., Ph.D.	●FACS Core Laboratory Professor Atsushi Iwama, M.D., Ph.D.
		●Stem Cell Bank Professor Hideki Taniguchi, M.D., Ph.D.

Stem cell research has been expected to provide alternatives to organ transplantation, and novel therapeutic approaches for cancer and other diseases. Center for Stem Cell and Regenerative Medicine was launched as a core research center for stem cell-based medicine. The center has 8 divisions, Division of Regenerative Medicine, Division of Stem Cell and Molecular Medicine, Division of Stem Cell Transplantation, Division of Stem Cell Processing, Division of Stem Cell Aging Medicine, Division of Somatic Stem Cell Research, Division of Cell Engineering and Division of Stem Cell and Genome Biology. The Center aims to translate research outcomes of stem cell biology into pre-clinical and clinical studies, and also to develop innovative therapeutic approaches to cancer stem cells and various diseases. It also serves to clarify various clinical problems using cutting-edge research tools such as patient-derived iPS cells. To support our research, we have FACS Core Laboratory and Stem Cell Bank and a service to generate patient-derived iPS cells.



International Research Center for Infectious Diseases

Director : Yasushi Kawaguchi

●Department of Special Pathogens

Professor Kei Sato, Ph.D.
Visiting Professor Masaki Imai, D.V.M., Ph.D.
Visiting Professor Seiya Yamayoshi, D.V.M., Ph.D.
Associate Professor Takeshi Ichinohe, Ph.D.

●Department of Infectious Disease Control

Professor Yasushi Kawaguchi, D.V.M., Ph.D.
Associate Professor Yuhei Maruzuru, Ph.D.
(Division of Viral Infection)
Associate Professor Takeshi Ichinohe, Ph.D.

●Pathogenic Microbes Repository Unit

Professor Yasushi Kawaguchi, D.V.M., Ph.D.

Outbreaks of emerging viruses such as influenza A(H1N1)pdm09 virus and SARS-CoV-2 have made us aware that the emergence of infectious diseases overseas can be a major threat to us living in Japan. To control such diseases, we need to develop methods for diagnosis, prevention, and treatment, including isolation and identification of the pathogen. For this purpose, basic research is essential to discovering the nature of the causative pathogen. Research institutions at universities must actively conduct basic research on such emerging infectious diseases and share their findings so that infectious control experts can respond promptly to emerging or re-emerging infectious diseases. Against this background, the International Research Center for Infectious Diseases was established in 2005 at the Institute of Medical Science, the University of Tokyo, and Research Institute for Microbial Diseases, the University of Osaka. The joint research system serves as a base for advanced medical and biological research on emerging and re-emerging infectious diseases and for training infectious disease researchers. The center consists of two research departments and the "Pathogen Microbes Repository Unit"

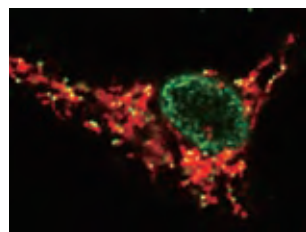


Fig. 1: Influenza virus-induced mitochondrial DNA (yellow) release

International Vaccine Design Center

Director : Ken Ishii

●Human Immune-Profiling Team

(Division of Systems Immunology)
Professor Kei Sato, Ph.D.
(Division of Human Immunology)
Professor Ken Ishii, M.D., Ph.D.
Concurrent Professor Noriko Sorimachi, Ph.D.
(Division of Infection Immunology)
Professor Cevayir Coban, M.D.
Visiting Professor Anavaj Sakuntabhai, M.D., Ph.D.

●New Dimensional Vaccine Design Team

(Division of Vaccine Engineering)
Professor Ken Ishii, M.D., Ph.D.
Concurrent Professor Kouhei Tsumoto, Ph.D.
(Division of Adjuvant Innovation)
Professor Ken Ishii, M.D., Ph.D.
Visiting Professor Jun Kunisawa, Ph.D.
Project Associate Professor Misako Nakayama, M.D., Ph.D.

(Division of Mucosal Vaccines)

Professor Koji Hase, Ph.D.
Project Professor Kohtaro Fujihashi, D.D.S., Ph.D.
Visiting Professor Tomonori Nochi, Ph.D.

(Division of Immunology and Genomics)

Professor Ken Ishii, M.D., Ph.D.
Visiting Professor Anavaj Sakuntabhai, M.D., Ph.D.

●International Vaccine Design Center

Invited Professor Tetsuro Matano, M.D., D.M.Sc.

Tuberculosis, AIDS, malaria, emerging and re-emerging infectious diseases such as COVID-19 and MPOX, neglected tropical diseases (NTDs), and antimicrobial-resistant (AMR) pathogens remain global threats, and there is a pressing need for effective and safe vaccines. The International Vaccine Design Center (vDESC) is composed of a group of experts with high-level capabilities in basic research and clinical development. To address the challenges mentioned above, vDESC promotes next-generation human immune profiling and vaccine design research through the interdisciplinary integration of mathematical immunology, human immunology, infectious immunology, vaccine engineering, adjuvant development, mucosal vaccines, and genomic immunology. Currently, centered on joint projects involving industry, government, and academia (such as the G7-100 Day Mission and AMED SCARDA), we are actively conducting collaborative research with researchers, research institutions, medical institutions, and international organizations both within and outside the institute, as well as domestically and internationally. By integrating the strengths of each field—from viral evolution to pathogen (resident microbiota)-host interactions, small molecules, immune operational systems utilizing antibodies and adjuvants, and single-particle biology—we expect to create the capability to design vaccines for the prevention and treatment of cancer, allergies, aging, and lifestyle-related diseases. The institute also serves as a hub for training the next generation of researchers.



Center for Gene & Cell Therapy

Director : Takashi Okada

●Division of Molecular and Medical Genetics

Professor Takashi Okada, M.D., Ph.D.
Project Associate Professor Yasushi Soda, M.D., Ph.D.
Project Senior Assistant Professor Yuko Kasahara, Ph.D.

●Center for Gene & Cell Therapy

Professor Fumitaka Nagamura, M.D., D.M.Sc.
Associate Professor Tokiko Nagamura-Inoue, M.D., Ph.D.

IMSUT has been a leader in gene therapy and hematopoietic stem cell transplantation in Japan. To further promote clinical development, the Center for Gene & Cell Therapy (CGCT) was established in 2014 and is working on development of gene and cell therapies for intractable cancers and chronic diseases. We are focusing on mesenchymal stromal cell therapy, gene therapy for neurodegenerative diseases and Ehlers-Danlos syndrome, and vaccine for lethal infectious diseases such as rabies using adeno-associated virus vectors, and next-generation vaccines using vesosomes. In addition, we are developing next-generation genetically engineered immune cell therapies that exploit the tumor microenvironment using lentiviral vectors, as well as anti-tumor vector-producing cells and tumor vaccines.



Laboratory Animal Research Center

Director : Tomoji Mashimo

●Division of Animal Genetics

Professor Tomoji Mashimo, Ph.D.

Visiting Professor

Associate Professor

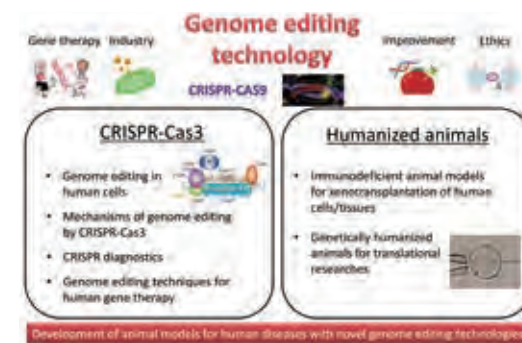
Kazuto Yoshimi, Ph.D.

Saeko Ishida, D.V.M., Ph.D.

●Animal Center

Professor Tomoji Mashimo, Ph.D.
Associate Professor Saeko Ishida, D.V.M., Ph.D.

The Laboratory Animal Research Center (LARC) was founded in 1965 as the first modern animal facility in Japan. Mice and rats are strictly maintained in the SPF condition for many scientific experiments. We also provide several services for mouse embryo manipulation and generating genetically modified animals with genome editing technologies. In addition to such supports, we are developing useful genome editing tools such as CRISPR-Cas3 and knock-in strategies in mice and rats. We are now focusing on generating "humanized animals" or "immunodeficient animals". These valuable animals can be used for xenotransplantation of human cells/tissues including human iPS cells.



Amami Laboratory of Medical Science

Director : Tomoji Mashimo

Professor Tomoji Mashimo, Ph.D. Visiting Associate Professor Takeshi Annoura, Ph.D.

This laboratory is the southernmost facility of the University of Tokyo, and has long history nearly 120 years in Amami Oshima. We have made great achievements in filariasis eradication from this island and also prevention of Habu bites. From 2005, the experimental environment that can handle BSL-2 and BSL-3 pathogens has been established as a primate experimental base of the International Research Center for Infectious Diseases, and became international joint usage and research center capable of infection experiment in non-human primates. Currently, we keep colonies of New World Monkeys adapted to the climate of Amami Oshima, and are conducting research in collaboration with various institutions in Japan and overseas.



Fig.1. (a) Main gate of facility.
(b) Animal experiment room for monkeys (ABSL3)

Laboratory of Molecular Genetics

Director : Atsushi Iwama

(Frontier Research Unit)

Associate Professor Kazuo Tatebayashi, Ph.D.

The faculty members of the Frontier Research Unit advance cutting-edge medical research based on their independent ideas.

Medical Proteomics Laboratory

Director : Mutsuhiro Takekawa

Professor Mutsuhiro Takekawa, M.D., Ph.D. Concurrent Professor Kouhei Tsumoto, Ph.D. Associate Professor Masaaki Oyama, Ph.D.

Proteins play important roles in regulating complex biological events and their functional disorders often lead to a variety of diseases such as cancer and infection. The mission of our laboratory is to develop advanced technologies for antibody engineering, high-throughput screening, mass spectrometry and data-driven informatics to perform an integrative proteomic analysis of disease-related protein-protein interaction networks not only from a physicochemical, structural biology point of view but also from a bioinformatical, systems biology point of view. We are also widely involved in many collaborative research projects to facilitate the utilization of these medical proteomics technologies inside and outside the institute.

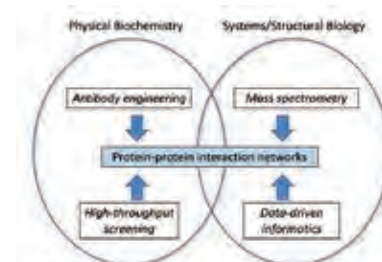


Fig.1. Protein interaction network analysis in medical proteomics research

Research Center for Asian Infectious Diseases

Director : Yasushi Kawaguchi

Professor	Yasushi Kawaguchi, D.V.M., Ph.D.	Visiting Professor	Masaki Imai, D.V.M., Ph.D.	Project Associate Professor	Mizuki Yamamoto, Ph.D.
Project Professor	Xuenan Xuan, D.V.M., Ph.D.	Visiting Professor	Seiya Yamayoshi, D.V.M., Ph.D.		
Project Professor	Mitsue Hayashi, Ph.D.	Associate Professor	Yuhei Maruzuru, Ph.D.		

Research Center for Asian Infectious Diseases is conducting collaborative research with three institutes, supported by the Japan Agency of Medical Research and Development (AMED). Collaborating institutes are: the Institute of Microbiology of Chinese Academy of Sciences (Beijing); the Harbin Veterinary Research Institute of Chinese Academy of Agricultural Sciences; the National Institute of Infectious Diseases (Tokyo). Center's research focuses on basic and translational studies, targeting SARS-CoV-2, MERS-CoV, Herpes simplex virus, avian and human influenza viruses, and drug-resistant bacteria. In Beijing, IMSUT scientists are working with Chinese scientists mainly on the surveillance and epidemiological characterization of zoonotic tick-borne infections.



Fig. Organization chart of Research Center for Asian Infectious Diseases. The center was established in 2005 under the auspices of the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and has been supported by the Japan Agency for Medical Research and Development (AMED) since 2015 to the present.

IMSUT Distinguished Professor Units

● Division of Virology	Project Professor	Yoshihiro Kawaoka, D.V.M., Ph.D.	Visiting Professor	Takeshi Noda, D.V.M., Ph.D.
			Visiting Professor	Tokiko Watanabe, D.V.M., Ph.D.

Viruses can cause devastating diseases. The long-term goal of our research is to understand the molecular pathogenesis of viral diseases by using influenza virus, Ebola virus, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), and enterovirus infections as models. Interactions between viral and host gene products during viral replication determine the consequences of infection (i.e., the characteristics of disease manifestation, whether limited or widespread); hence, our research has centered on such interactions during these viral infections.

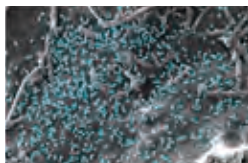


Fig. Scanning electron micrograph of virions (blue) being released from SARS-CoV-2 Omicron variant-infected cells

● Division of Cancer Cell Biology	Project Professor	Makoto Nakanishi, M.D., Ph.D.
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Aging is a major risk factor for many diseases. Chronic inflammation in multiple organs is now recognized as a key driver of the aging process. Our department aims to identify and characterize the cells that cause age-related chronic inflammation. Our ultimate goal is to develop innovative treatments for age-related diseases such as cancer. We focus on pulmonary fibrosis, pulmonary hypertension, and chronic kidney disease, as these conditions lack effective therapies. At the single-cell level, we study the characteristics and spatial distribution of epithelial and mesenchymal cells that activate tissue-resident immune cells in the lungs and kidneys. This process sustains chronic inflammation. In parallel, we are developing technologies and therapeutic agents to selectively eliminate these harmful cells.

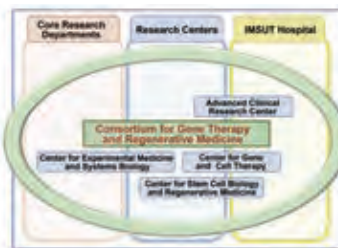


Fig. Chronic inflammation is a primary driver of age-related diseases. Targeting and eliminating the cell populations that trigger chronic inflammation holds promise for preventing these diseases and extending healthy life expectancy.

Consortium

● Consortium for Gene Therapy and Regenerative Medicine	Professor	Atsushi Iwama, M.D., Ph.D.	Professor	Takashi Okada, M.D., Ph.D.	Professor	Satoshi Yamazaki, Ph.D.
	Professor	Fumitaka Nagamura, M.D., D.M.Sc.	Professor	Hideki Taniguchi, M.D., Ph.D.	Associate Professor	Tokiko Nagamura-Inoue, M.D., D.M.Sc.
	Professor	Kaori Muto, Ph.D.	Professor	Tomoji Mashimo, Ph.D.		

To address the growing societal demand for gene and cell therapy and regenerative medicine, the Institute of Medical Science established the Consortium for Gene Therapy and Regenerative Medicine in 2022 by bringing together researchers from related fields. The consortium was launched with the goal of establishing an international research hub for gene and cell therapy and regenerative medicine through interdisciplinary collaboration. The consortium promotes cutting-edge research by integrating the Institute's human resources and technological infrastructure, encompassing not only research in gene and cell therapy and regenerative medicine, but also studies on ELSI (ethical, legal, and social issues) and regulatory science. As part of these activities, consortium members have served as principal investigators for four projects adopted under the AMED "Program for Acceleration of Realization of Regenerative Medicine, Cellular and Gene Therapies" since 2023. These projects include "Development of infrastructure for viral vector production and distribution", "Pilot manufacturing support project (vector)", "Pilot manufacturing support project (cell)", and "Commercialization strategy support". Through these initiatives, the consortium is currently advancing multifaceted efforts toward the clinical implementation and social deployment of gene and cell therapy and regenerative medicine.



IMSUT Hospital

● Director	Narikazu Boku, M.D., D.M.Sc.	● Department of Surgery	Professor Dai Shida, M.D., Ph.D. Senior Assistant Professor Naoki Sakuyama, M.D., Ph.D.	● Department of Clinical Genomics	Professor Yoichi Furukawa, M.D., Ph.D.
● Deputy Director	Yasuhito Nannya, M.D., Ph.D. Minoru Tanaka, M.D., Ph.D.	● Department of Anesthesia	Professor Masahiko Bougaki, M.D., Ph.D.	● Department of Clinical Nutrition	Professor Hiroaki Ikematsu, M.D., Ph.D.
● Department of Hematology/Oncology	Professor Yasuhito Nannya, M.D., Ph.D. Clinical Professor Tokiko Nagamura-Inoue, M.D., D.M.Sc. Associate Professor Takaaki Konuma, M.D., Ph.D. Associate Professor Kazuaki Yokoyama, M.D., D.M.Sc. Project Associate Professor Koichiro Yuji, M.D., Ph.D.	● Department of Joint Surgery	Professor Narikazu Boku, M.D., D.M.Sc.	● Radiation Control Office	Associate Professor Hiroyuki Akai, M.D., Ph.D.
● Department of Infectious Diseases and Applied Immunology	Senior Assistant Professor Eisuke Adachi, M.D., D.M.Sc. Project Professor Michiko Koga, M.D., D.M.Sc.	● Department of Surgical Neuro-Oncology	Project Professor Minoru Tanaka, M.D., Ph.D. Associate Professor Hirotaka Ito, M.D., Ph.D.	● Regional Medical Liaison Office	Clinical Professor Tokiko Nagamura-Inoue, M.D., D.M.Sc.
● Department of Rheumatology, Allergy and Clinical Immunology	Associate Professor Motohisa Yamamoto, M.D., D.M.Sc.	● Department of Urology	Project Associate Professor Sayuri Takahashi, M.D., Ph.D. Concurrent Professor Haruki Kume, M.D., Ph.D.	● Center for Clinical Safety and Infection Control	Professor Yasuhito Nannya, M.D., Ph.D. (Department of Medical Safety Management) Project Associate Professor Sayuri Takahashi, M.D., Ph.D. Associate Professor Motohisa Yamamoto, M.D., D.M.Sc. Associate Professor Waki Toya, Ph.D. (Department of Infection Prevention and Control) Senior Assistant Professor Eisuke Adachi, M.D., D.M.Sc.
● Department of Oncology and General Medicine	Professor Narikazu Boku, M.D., D.M.Sc.	● Department of Medical Informatics	Associate Professor Hiroyuki Akai, M.D., Ph.D.	● Center for Translational Research	Professor Fumitaka Nagamura, M.D., D.M.Sc. Associate Professor Masanori Nojima, M.D., Ph.D.
● Department of Gastroenterology	Professor Hiroaki Ikematsu, M.D., Ph.D. Associate Professor Yoshihiro Hirata, M.D., Ph.D.	● Department of Radiological Technology	Associate Professor Hiroyuki Akai, M.D., Ph.D. Senior Assistant Professor Koichiro Yasaka, M.D., D.M.Sc.	● Therapeutic Vector Development Center	Professor Takashi Okada, M.D., Ph.D. Project Professor Minoru Tanaka, M.D., Ph.D.
● Department of Cardiovascular Medicine	Senior Assistant Professor Norifumi Takeda, M.D., Ph.D. Project Senior Assistant Professor Koichi Kimura, M.D., D.M.Sc.	● Department of Cell Processing and Transfusion	Clinical Professor Tokiko Nagamura-Inoue, M.D., D.M.Sc. Associate Professor Kazuaki Yokoyama, M.D., D.M.Sc. Associate Professor Hidekazu Nishikii, M.D., Ph.D.	● IMSUT CORD	Clinical Professor Tokiko Nagamura-Inoue, M.D., D.M.Sc. Professor Fumitaka Nagamura, M.D., D.M.Sc.
● Department of Applied Genomics	Professor Yoichi Furukawa, M.D., Ph.D.	● Surgical Center	Project Professor Minoru Tanaka, M.D., Ph.D.	● Department of Nursing	Director Mika Kogayu, RN. MSN.
● Department of Radiology	Associate Professor Hiroyuki Akai, M.D., Ph.D. Senior Assistant Professor Koichiro Yasaka, M.D., D.M.Sc.	● Department of Medical Supply Center	Project Professor Minoru Tanaka, M.D., Ph.D.	● Department of Pharmacy	Director Seichiro Kuroda
● Department of Palliative Medicine and Advanced Clinical Oncology	Project Senior Assistant Professor Tetsuya Ito, M.D., Ph.D. Visiting Professor Mieko Chinzei, M.D., D.M.Sc.	● Department of Laboratory Medicine	Clinical Professor Tokiko Nagamura-Inoue, M.D., D.M.Sc. Project Associate Professor Koichiro Yuji, M.D., Ph.D. Project Senior Assistants Professor Koichi Kimura, M.D., D.M.Sc.	● Department of AIDS Vaccine Development	Invited Professor Tetsuro Matano, M.D., D.M.Sc. Visiting Associate Professor Ai Tachikawa, D.M.Sc.
● Department of Diagnostic Pathology	Associate Professor Akiko Maeshima, M.D., D.M.Sc.	● Department of Pathology	Associate Professor Akiko Maeshima, M.D., D.M.Sc.		

At present, the Hospital in the Institute of Medical Science, University of Tokyo (IMSUT Hospital) is the only one research hospital affiliated with a research institute of a national university in Japan. The 8-story hospital building has 122 beds in 4 wards, outpatient clinic, operation room, radiation therapy room, various examination rooms and laboratory. Focusing on 3 major fields (malignant disease such as brain tumors, hematological malignancies, gastrointestinal tumors, urological tumors, other solid tumors), infectious disease, auto-immune disease, 15 clinical departments provide a wide range of medical treatments. Together with Advanced Clinical Research Center, the IMSUT Hospital is conducting clinical trials and translational research for development of not only new drug but also new types of treatment such as oncolytic virus therapy, gene and cell therapy, novel vaccine. The organization of the IMSUT Hospital consists of 4 units; (1) medical care unit, (2) medical support unit, (3) clinical safety and infection control unit, and (4) clinical research support unit. Holistic comprehensive and advanced medical care are provided as team medicine, consisting of specialized doctors, nurses, pharmacists, technicians, and staff of the administration office. These clinical activities are supported by various departments in the medical support unit such as Medical Information, Radiological Technology, Cell Processing and Transfusion, Surgery Center, etc. The clinical safety and infection control unit surveys the whole hospital for promoting safety. The clinical research support unit consisting of Center for Translational Research, Therapeutic Vector Development Center, IMSUT CORD helps translational research and early phase clinical trials not only with the researchers in the IMSUT but also with those in other institutions. Center for Translational Research supports researchers to conduct clinical trials appropriately, helps to plan clinical trials, and provides advices from the regulatory point of view. The IMSUT Hospital aims to be a core facility for clinical application of promising preclinical outcomes by domestic and international collaborative research. The IMSUT Hospital has been supported by a series of external funding such as grants from Japan Agency for Medical Research and Development (AMED), those from public sectors as well as pharmaceutical companies. In recent years, the IMSUT Hospital is expanding its organization. In 2011 Department of Surgical Neuro-Oncology was established to promote oncolytic virus therapy. Department of Palliative Medicine (currently Department of Palliative Medicine and Advanced Clinical Oncology) opened in 2012, and Center for Gene & Cell Therapy was founded in 2014. System for robotic surgery was introduced in 2020, and Departments of Surgery and Urology are conducting minimal invasive surgery. In 2021, Department of Oncology and General Medicine opened to conduct chemotherapy for treatment of solid tumors. Departments of Gastroenterology and Anesthesiology welcomed two professors in 2023 and 2024, respectively. Department of Cardiovascular Medicine started in 2025.



Corporate Sponsored Research Program/Social Cooperation Research Programs

- **Project Division of Advanced Biopharmaceutical Science**
Project Associate Professor Susana de Vega, Ph.D.
- **Project Division of Genomic Medicine and Disease Prevention**
Project Professor Toru Suzuki, M.D., Ph.D.
- **Project Division of Oncolytic Virus Development**
Project Professor Minoru Tanaka, M.D., Ph.D.

- **Project Division of Generative AI Utilization Aging Cells**
Project Associate Professor Teh-Wei Wang, Ph.D.
- **Project Division of International Healthcare Innovation Research**
Project Associate Professor Koichiro Yuji, M.D., Ph.D.

In addition to the three core departments and affiliated centers, IMSUT has set up corporate sponsored research program(s), of which the costs are paid by donations from supporting companies to extend educational and research activities. Social cooperation research programs have also been set up, aimed at collaborative research initiatives with private organizations through their funding of shared interest that can contribute to social benefit. The corporate sponsored research program(s) and social cooperation research programs are led by IMSUT project professors and contribute to evolving the educational and research activities of IMSUT, and to the expansion of the institute's diverse research.

Common Research Facilities

- | | | | |
|--|--------------------|---|-----------------------|
| ● Culture Media Section | | ● Office of Intellectual Property | |
| Head | Mutsuhiro Takekawa | Head | Mutsuhiro Takekawa |
| ● Library | | ● Advisory Room for Conflict of Interest | |
| Head | Mutsuhiro Takekawa | Head | Tomoji Mashimo |
| ● Radioisotope Center | | ● Pathology Core Laboratory | |
| Head | Toshifumi Inada | Laboratory I Head | Akiko Maeshima |
| ● IT Service Room | | Laboratory II Head | Akiko Maeshima |
| Head | Mutsuhiro Takekawa | ● Imaging Core Laboratory | |
| ● Genetically Modified Microorganism Support Office | | Head | Mutsuhiro Takekawa |
| Head | Yasushi Kawaguchi | ● IMSUT Clinical Flow Cytometry Laboratory | |
| ● Office of Research Ethics | | Head | Tokiko Nagamura-Inoue |
| Head | Kaori Muto | ● IMSUT-HLC Cell Processing Facility | |
| ● Office of Health and Safety | | Head | Tokiko Nagamura-Inoue |
| Head | Natsuhiko Kumasaka | | |



IMSUT Clinical Flow Cytometry Laboratory



Imaging Core Laboratory



Library

Technical Office

- | | |
|------|-----------------|
| Head | Toshifumi Inada |
|------|-----------------|

Dean's Office

- | | | | |
|--------------------------------------|--------------------|------------------------|-------------------|
| ● Dean's Advisor Office | | ● BioBank Japan | |
| Project Professor | Michiko Koga | Head | Atsushi Iwama |
| ● Project Coordination Office | | Project Head | Koichi Matsuda |
| Head | Mutsuhiro Takekawa | Project Professor | Yoichiro Kamatani |
| ● Research Platforms Office | | Visiting Professor | Takayuki Morisaki |
| Head | Mutsuhiro Takekawa | | |
| Project Professor | Yataro Daigo | | |
| Project Associate Professor | Atsushi Takano | | |

Education Activities

The Institute of Medical Science, The University of Tokyo (IMSUT), is prominent as an institution for graduate education. It provides an ideal environment for young people interested in pursuing a career in scientific research. Drawing upon a wide range of graduate schools such as medicine, science, agricultural and life sciences, pharmaceutical sciences, engineering, information science and technology, frontier sciences and interdisciplinary information studies, the faculties of the various divisions teach a wide range of courses to a similarly diverse array of elite graduate students. In order to pursue transdisciplinary approaches within the Graduate School of Frontier Sciences, the University of Tokyo has now established the new Department of Computational Biology and Medical Science. Through IMSUT's strenuous efforts, this department was established in fiscal year 2015, with the Shirokanedai campus housing many participating laboratories as well as some courses that make up the department's core curriculum. Thus, through strong links to IMSUT, cross-disciplinary education and research are expanding. The distinguishing features of our educational program are that it targets mainly graduate students aiming to become researchers, and that the professors and staff members can concentrate on guiding students in their laboratory research. The departments and divisions frequently collaborate and interact closely with each other, making interdisciplinary research yet one more of our distinguishing features.

The programs provided by the institute include a graduate seminar series and clinical courses for non-physician graduate students at

IMSUT Hospital. The graduate seminar series consists of weekly seminars, provided by first-class researchers from around Japan, on a theme freshly chosen each year. Those courses are deemed to be credits for the graduate school of medicine. Our Institute's affiliated hospital provides clinical courses for non-physician graduate students, which include in-depth consideration of ethical issues and translational research.

IMSUT also has a rich educational environment for information science. At the Human Genome Center, there are faculty members with deep computing expertise, and workshops are frequently held there. Lectures offered by the Department of Computational Biology and Medical Science, Graduate School of Frontier Sciences, are open to IMSUT students outside this research area. Further, many other seminars are given by researchers from inside and outside Japan, providing a window onto the latest research progress.

Our library is available 24 hours a day including weekends and holidays.

IMSUT encourages students to conduct research enthusiastically, and works to motivate them. We honor exceptional graduate students every year with our Outstanding Student Publication Awards.

Medical Science Museum

The Medical Science Museum preserves and introduces to the public the valuable historical materials of the Institute of Medical Science (IMS), the University of Tokyo. Founded by Dr. Shibasaburo Kitasato in 1892 as the Institute of Infectious Diseases (IID), for more than half a century following its inception the institute served as a key player in infectious disease research in Japan. The IID at the time not only acted as the largest manufacturer of bacteriological products such as vaccines and antisera, but also became involved in all aspects of research and medical care related to infectious disease: educating doctors and public sanitation officials on matters related to infectious disease, evaluating/approving bacteriological products, and so on. With the ongoing development of antibiotics and improvements in public sanitation, the importance of infectious disease research receded, and the IID was reborn as the Institute of

Medical Science with its focus reset to cutting-edge research into medical science in 1967. And today, with the aim of clarifying the principles of infectious diseases, cancer and other specified diseases, and establishing practical treatments based on such insights, the institute carries out research and development in the most advanced areas of medicine such as genomic medicine and gene and cell therapies.

Surrounded by greenery, the museum beckons with its contrasting facets: a brick-style wing evoking a stable from the era of the IID and a glass-paneled wing heralding the future. Please contemplate the past and future of medical science during your visit.

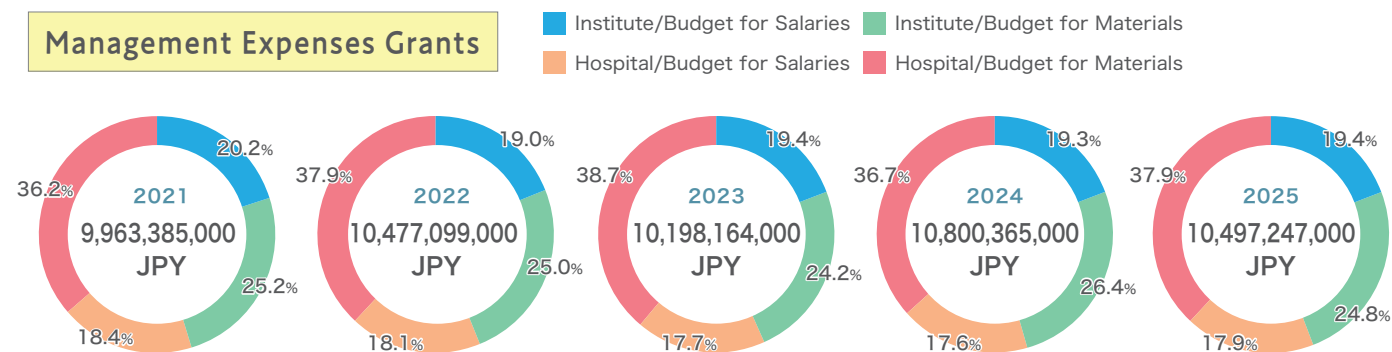


Dr. Shibasaburo Kitasato
Founding Dean of the Institute for Infectious Diseases
September, 1910 (Meiji period)
Preserved in the Medical Science Museum of the Institute of Medical Science, The University of Tokyo

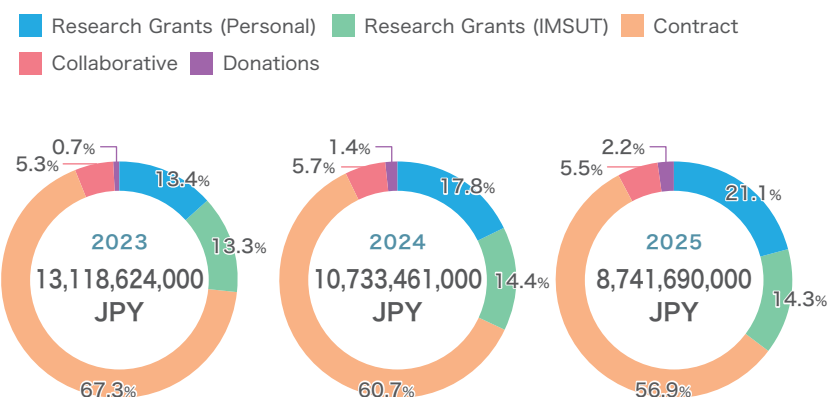


Budget

Management Expenses Grants



Income from External Sources※



※Figures from FY2022 onwards are based on data from the Survey on the Status of University-Industry Collaboration.

Projects

(As of July 1, 2026)

Research and Education Projects by External Funds

Translational Research Program
Serving as a Center for Advancing Translational Research (CATR)

Project Head in IMSUT IMSUT Hospital Director/
Professor Narikazu Boku

FY 2020-2026

Japan Program for Infectious Diseases
Research and Infrastructure
"Studies to Control Emerging, Re-emerging
and Imported Infectious Diseases to Be
Conducted in International Collaboration
Sites in China"

Project Head Professor Yasushi Kawaguchi

FY 2023-2027

Biobank - Construction and Utilization
Biobank for Genomic Medicine Realization
(B-Cure)
"Management of Disease-oriented Biobank
in Japan for Utilization"

Project Head Project Professor Koichi Matsuda

Research and Education Projects by Management Expenses Grants

FY 2022-2027

International Joint Research
Project on Promotion of Basic and
Applied Medical Sciences

FY 2022-2026

International Joint Research Center
for Promoting Basic and Applied
Research and Implementing
Translational Research

FY 2022-2027

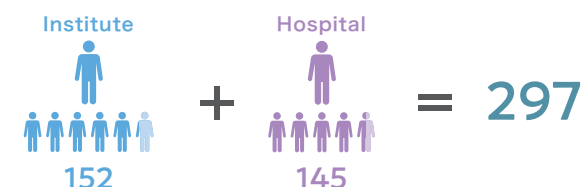
Cutting-edge Research and
Next-generation Human Resource
Development for the Control of
Infectious Diseases Using
Collaborative Infrastructure

Members

(As of July 1, 2026)

Staff

	Institute	Hospital	Total
Professor	28	1	29
Associate Professor	21	7	28
Senior Assistant Professor	4	4	8
Assistant Professor	27	14	41
Official	46	11	57
Technical Official	26	108	134



Fixed-term Project Staff

	Institute	Hospital	Total
Project Professor	6	0	6
Project Associate Professor	8	1	9
Project Senior Assistant Professor	1	1	2
Project Assistant Professor	12	3	15
Project Researcher	54	1	55
Project Academic Specialist	30	14	44
Project Specialist	12	2	14
Project Medical Staff	0	27	27
Project Nursing Staff	0	10	10

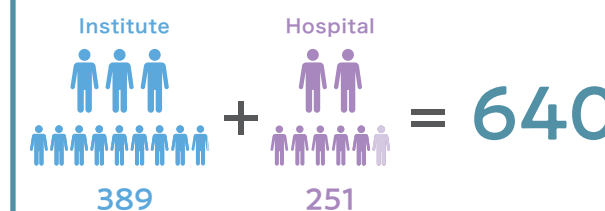


Fixed-term Part-time (Project) Staff

	Institute	Hospital	Total
Project Professor	7	0	7
Project Associate Professor	1	0	1
Project Senior Assistant Professor	0	1	1
Project Researcher	13	0	13
Project Academic Specialist	36	9	45
Project Specialist	16	3	19
Assistant Clerk	19	6	25
Technical Assistant	20	4	24
Part-time Academic Affairs Staff	1	0	1
Skilled Assistant	1	8	9
Member of the Medical Staff	0	7	7
Special Medical Intern	0	2	2
Assistant Medical Technician	0	5	5
Assistant Nurse	0	2	2

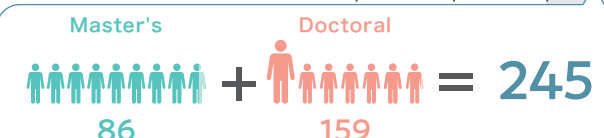


Total Number of Staff



Graduate School Students

Graduate School	Master's	Doctoral	Total
Graduate School of Medicine	2	42	44
Graduate School of Science	11	8	19
Graduate School of Agricultural and Life Sciences	0	0	0
Graduate School of Pharmaceutical Sciences	0	5	5
Graduate School of Information Science and Technology	3	10	13
Graduate School of Frontier Sciences	61	76	137
Graduate School of Interdisciplinary Information Studies	1	3	4
Graduate School of Engineering	8	15	23



JSPS Research Fellow

	Total
JSPS Research Fellow (SPD)	1
JSPS Research Fellow (PD)	5
JSPS Research Fellow (RPD)	2
JSPS Research Fellow (DC)	12
JSPS Foreign Research Fellow	1

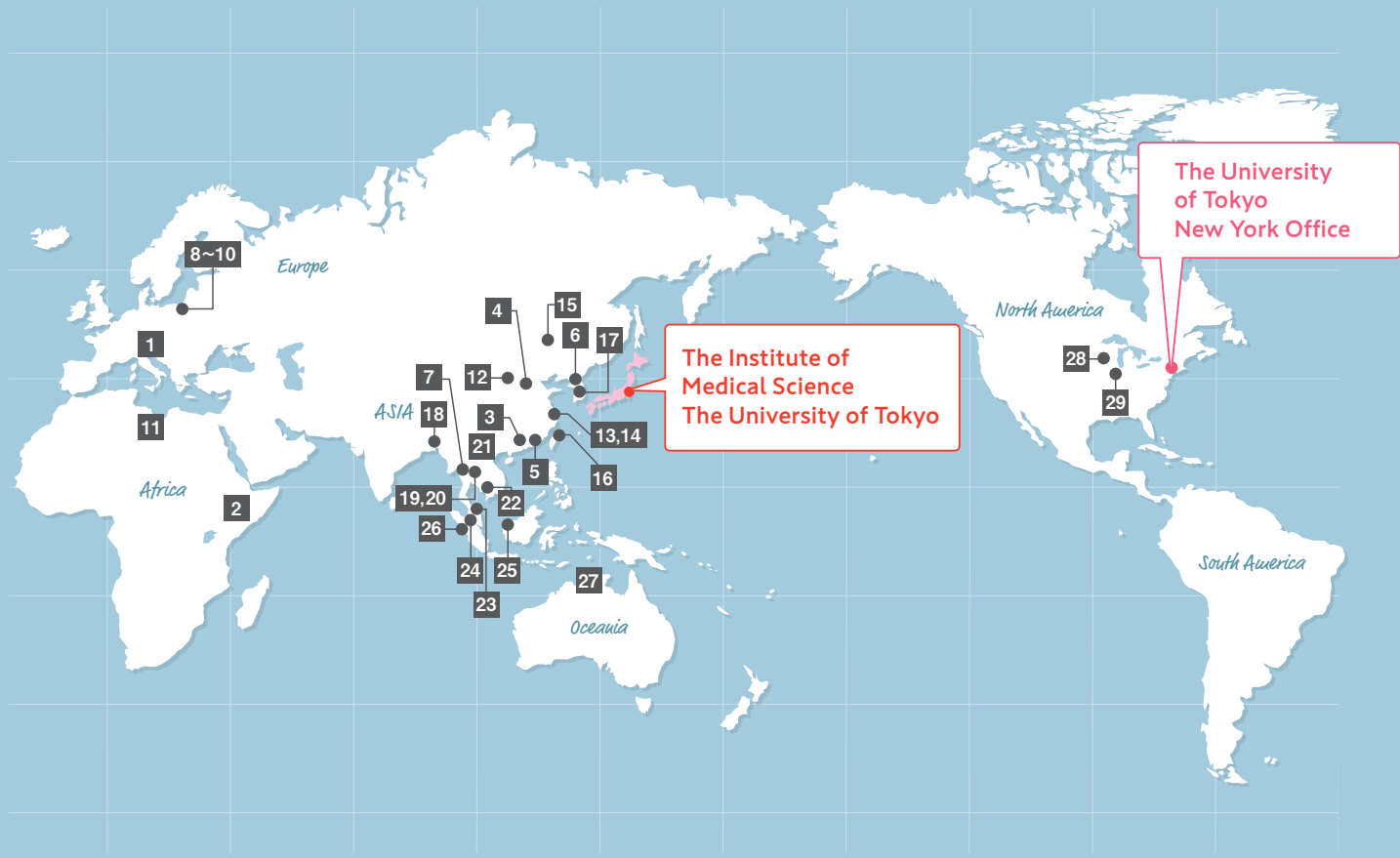
21

Research Students

	Total
Graduate Research Student	2
Graduate International Research Student	2
IMSUT Research Student	4

8

International Academic Exchange



International Academic Exchange Agreements	Partner Universities / Institutes
1 Institut Pasteur, France *	5 Zhejiang University School of Medicine, China *
2 Addis Ababa University and Animal Health Institute, Ethiopia *	6 Soonchunhyang University, Korea *
3 Sun Yat-sen University, China **	7 Khon Kaen University, School of Medicine, Thailand *
4 Chinese Academy of Sciences, China **	

* Departmental
** University Wide

International Academic Exchange	Universities / Institutes
8 Collège de France	19 Mahidol University, Thailand
9 École Normale Supérieure de Lyon	20 Thai Red Cross Emerging Infectious Diseases Clinical Center
10 Université de Lyon	21 Institute of Ecology and Biological Resources, Vietnam Academy of Science and Technology
11 Institut Pasteur d'Algérie	22 Institut Pasteur du Cambodge
12 Institute of Microbiology, Chinese Academy of Sciences	23 Universiti Malaysia Kelantan
13 Center for Excellence in Molecular Cell Science, Chinese Academy of Sciences	24 University of Nottingham Malaysia
14 ShanghaiTech University	25 Universiti Malaysia Sarawak
15 Harbin Veterinary Research Institute, Chinese Academy of Agricultural Sciences	26 Faculty of Mathmatics and Natural Sciences, Universitas Andalas, Indonesia
16 National Taiwan University	27 Menzies School of Health Research
17 Seoul National University	28 University of Wisconsin-Madison
18 International Centre for Diarrhoeal Disease Research, Bangladesh	29 The University of Chicago

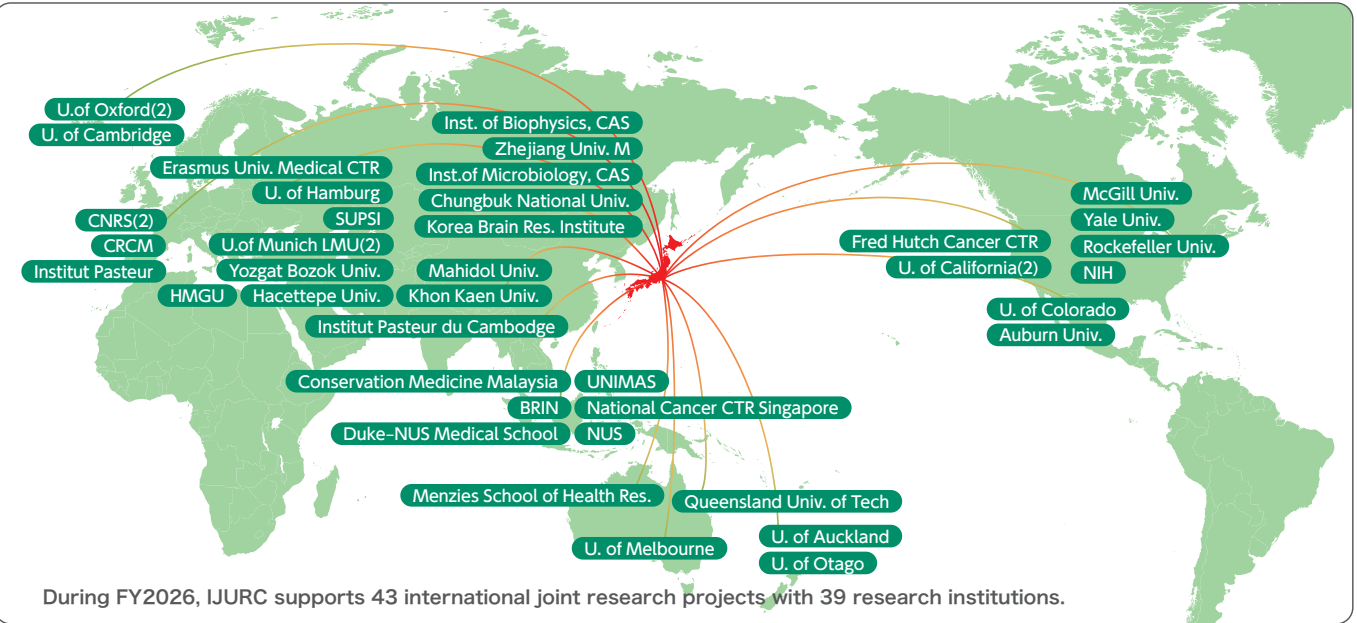
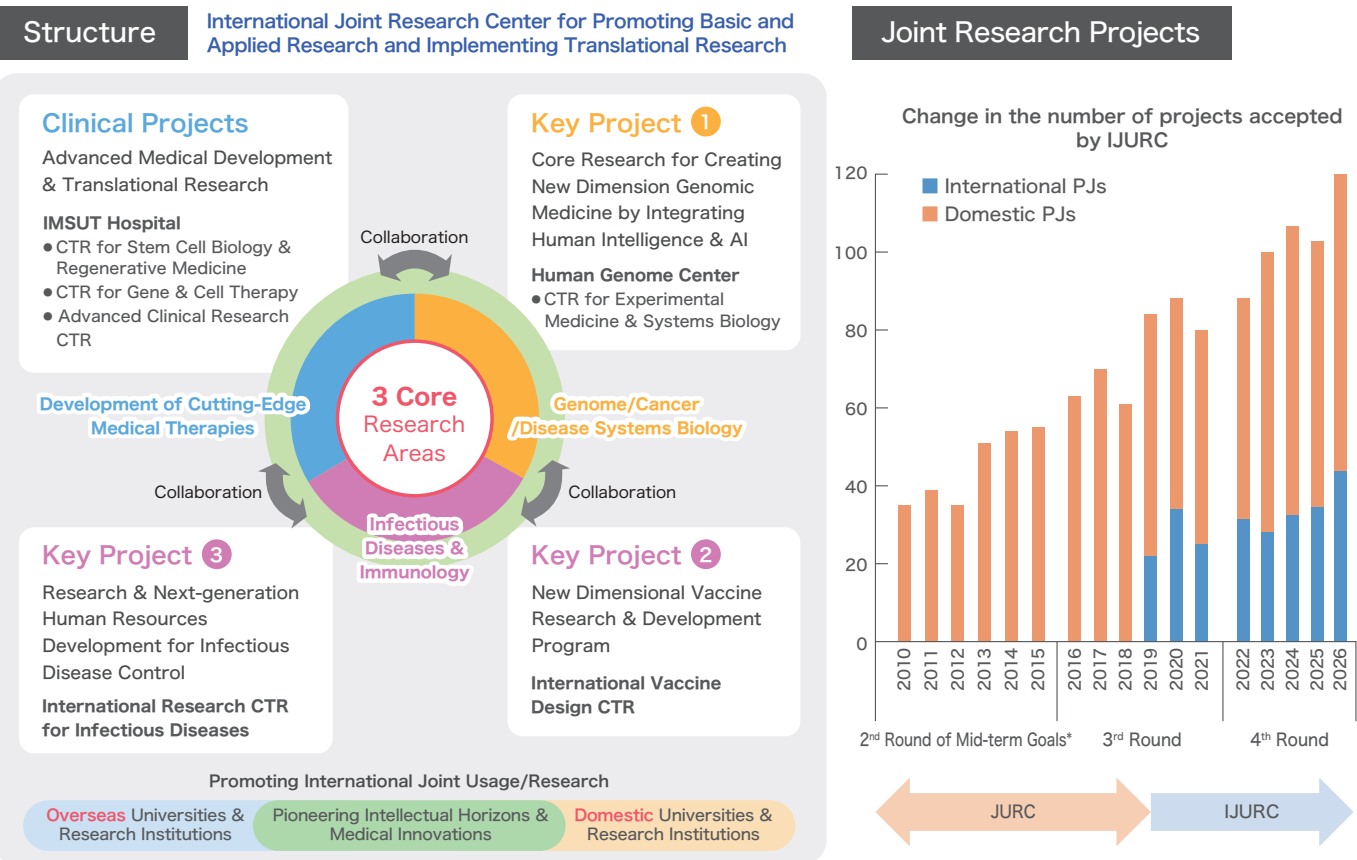
International Joint Usage / Research Center

International Joint Usage/Research Center

The Joint Usage/Research Center (JURC) was established by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) to enable researchers across Japan both to share access to large-scale research facilities, materials, and data beyond the boundaries of individual universities and to conduct joint research.

IMSUT was accredited by MEXT as a Joint Usage/Research Center in 2010, and in 2018 it was recognized as the only International Joint Usage/Research Center among university-affiliated research institutes in the field of life sciences in Japan. In line with MEXT's policy, IMSUT aims to advance basic and applied medical science and to realize advanced medical treatments in pursuit of global welfare.

Based on the network that we have established with domestic and overseas research institutions, IMSUT serves as a hub to help researchers work together organically and to promote long-term stable international collaborative research.



*Mid-term goals are set by MEXT.
Each national university formulates its own plans to achieve those goals within the next 6 years.

Campus Map



IMSUT Hospital

- Hospital Reception for Outpatients
- Hospital Bldg. A
- Hospital Bldg. B
- Hospital Bldg. C

University Facilities

1 Bldg. 1	7 General Research Bldg.	12 Human Genome Center
2 Bldg. 2	8 Clinical Research Bldg. A	13 Medical Science Museum
3 Bldg. 3	9 Core Facility for Therapeutic Vectors	14 Shirokane Hall
4 Bldg. 4	10 Research Bldg. Annex	15 BioBank
5 Animal Center	11 Open Laboratory Bldg.	16 Tennis Courts
6 Amgen Hall		

Hospital Information

Station

Rest Area

Bus Stop

Restaurant

Parking

Shop

Parking for Patients

Grounds/Buildings	Land Space	Buildings
		Floor Space Total Space
Shirokanedai	Institute	11,598 53,219
	Hospital	2,495 21,703
	Subtotal	68,907 74,922
Amami	8,834 821 806	
Total	77,741	14,914 75,728

Locations:

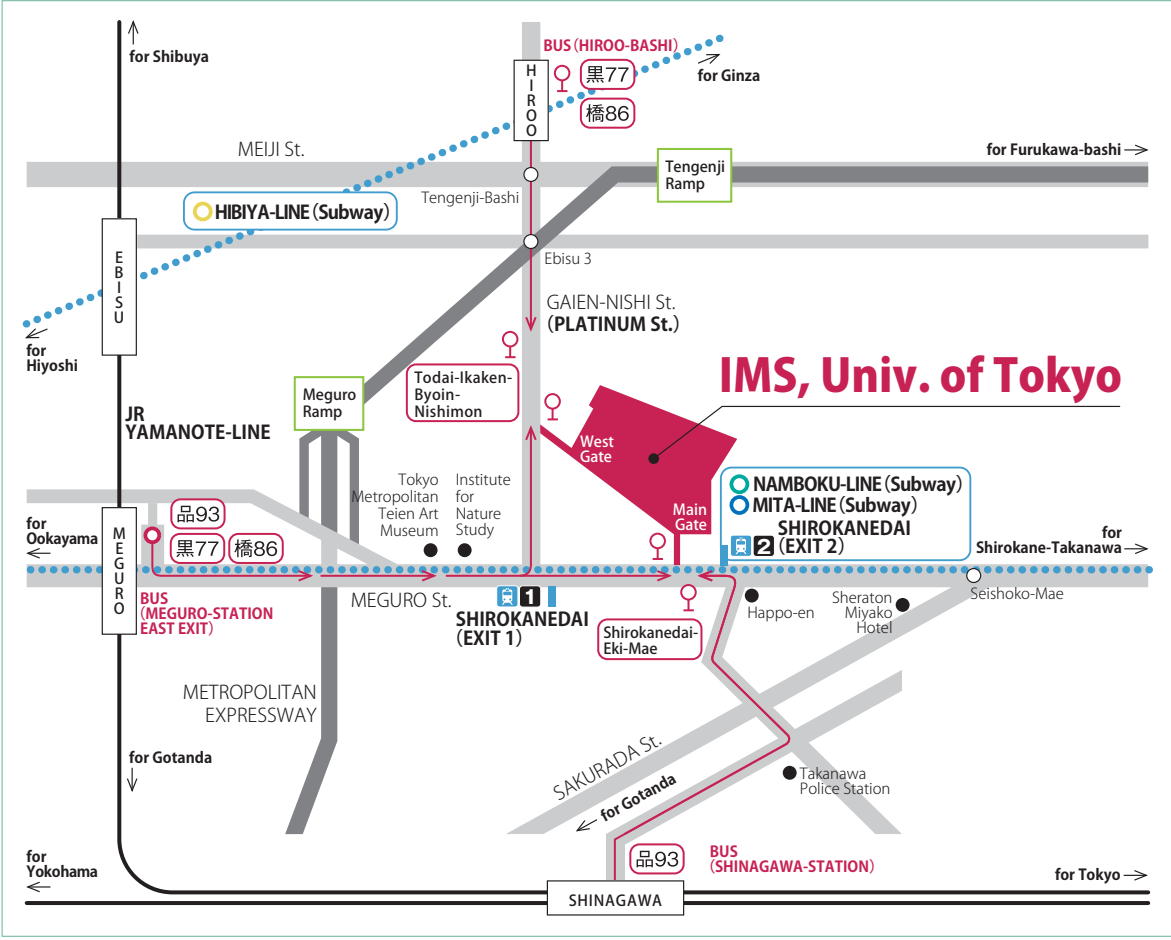
IMSUT

Amami Laboratory of Medical Science

4-6-1 Shirokanedai, Minato-ku, Tokyo

802 Tean-sude, Setouchi-cho, Oshima-gun, Kagoshima

Access Map



By WALK FROM STATION

SHIROKANEDAI SHIROKANEDAI-STATION on the Metro NAMBOKU or MITA LINE (EXIT 2)

MEGURO 15 min. walk from JR-MEGURO-STATION EAST EXIT

By BUS FROM STATION

MEGURO From JR-MEGURO-STATION EAST EXIT (MEGURO-EKI-MAE bus stop)
* take (品93) metropolitan bus bound for OHI-KEIBAJI
>> get off at SHIROKANEDAI-EKI-MAE
* take (黒77) metropolitan bus bound for SENDAGAYA-EKI-MAE
(or take (橋86) metropolitan bus bound for AKABANEHASHI-EKI-MAE or SHINBASHI-EKI-MAE)
>> get off at TODAI-IKAKENBYOIN-NISHIMON

SHINAGAWA From JR-SHINAGAWA-STATION (SHINAGAWA-EKI-MAE bus stop)
* take (品93) metropolitan bus bound for MEGURO-EKI-MAE
>> get off at SHIROKANEDAI-EKI-MAE

HIROO From HIROO-STATION on the Metro HIBIYA LINE (HIROO-BASHI bus stop)
* take (黒77) or (橋86) metropolitan bus bound for MEGURO-EKI-MAE
>> get off at TODAI-IKAKENBYOIN-NISHIMON

<https://www.ims.u-tokyo.ac.jp/imsut/en/access/access/>

<https://www.ims.u-tokyo.ac.jp/imsut/en/>

4-6-1, Shirokanedai, Minato-ku, Tokyo, 108-8639, Japan TEL / (+81) -3-3443-8111



The Institute of Medical Science
The University of Tokyo