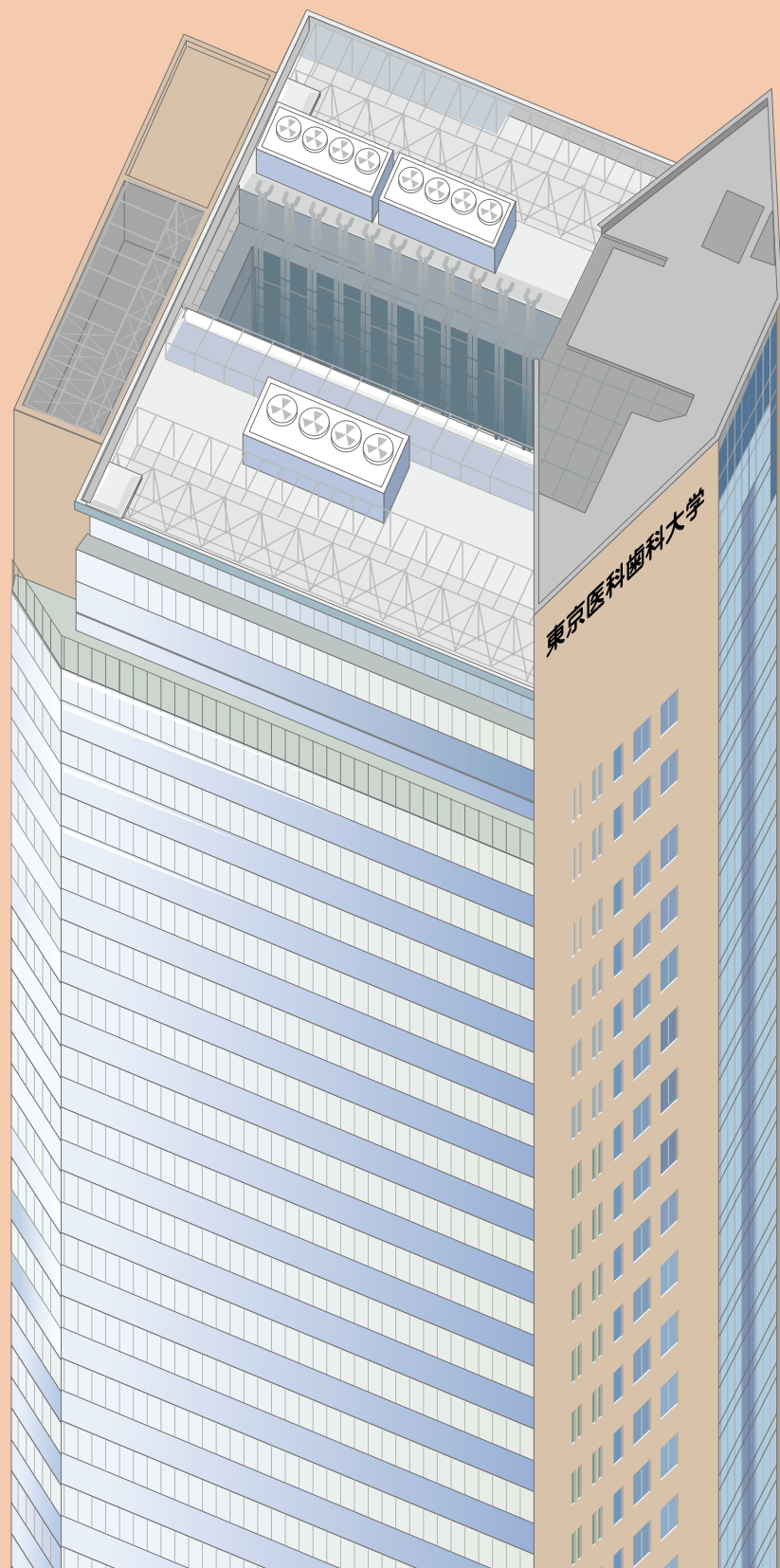


# TMDU OVERVIEW 2008

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Tokyo Medical and Dental University



Medical-Dental Building II

OVERVIEW 2008

Tokyo Medical and Dental University

TMDU OVERVIEW 2008



## TMDU OVERVIEW 2008 Tokyo Medical and Dental University



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# Tokyo Medical and Dental University

## Educational Philosophies

- To provide students with a broad education and a rich sensibility
- To educate creative people capable of diagnosing and solving problems independently
- To train medical professionals with a rich international quality

## contents

### P.02 Message from the President

### P.04 Overview 2008

- 06 Principals and Presidents
- 07 Historical Sketch
- 10 Management Structure
- 12 Organizational Chart
- 14 Administration Officers

### P.18 Graduate Schools, Faculties

- 20 Graduate School of Medical and Dental Sciences
- 24 Graduate School of Health Care Sciences
- 25 Biomedical Science PhD Program and School of Biomedical Science
- 26 Faculty of Medicine
- 27 Faculty of Dentistry
- 28 College of Liberal Arts and Sciences
- 29 Institute of Biomaterials and Bioengineering
- 30 Medical Research Institute
- 31 University Library
- 32 Nationwide Joint Institute
- 32 Joint Institutes for Education and Research
- 32 Health Service Center
- 33 University Hospitals

### P.36 Current Projects

- 38 Newly Funded Projects
- 40 Global COE Program
- 41 Human Resource Development Plan for Cancer
- 42 Support Program for Contemporary Educational Needs
- 43 University Hospitals Collaborative Project to Develop Advanced Medical Specialists
- 44 Support Program for the Internationalization of University Education
- 45 Remedial Training Programs
- 48 Support Program for Distinctive University Education
- 49 Support Programs for Improving Graduate School Education
- 51 Special Coordination Funds for Promoting Science and Technology
- 55 Program of Founding Research Centers for Emerging and Reemerging Infectious Diseases
- 56 Japan Science and Technology Agency Project to Develop "Innovative Seeds" Supporting Program for Creating University Ventures
- 57 Molecular Imaging Research Program
- 58 The Integrated Database Project
- 59 JSPS Core to Core Program
- 60 Program for Accelerating Internationalization of Higher (University) Education
- 61 Project for the Strategic Development of Industry-University-Government (I-U-G) Collaboration (Strategic Development Program)
- 62 Special Funds for Education and Research
- 67 Funds for Subjects Related to Policies
- 69 Medical and Dental Sciences, Master of Medical Administration Course
- 69 Intellectual Property Division · Technology Licensing Organization (TLO)

### P.70 International Exchange

- 72 Tokyo Medical and Dental University and Partners Harvard Medical International, Inc. Alliance for Medical Education
- 74 Overseas Affiliated Universities, Inter-Faculty Agreements
- 76 Number of International Students

### P.78 Statistics 2008

- 80 Number of Staff Members
- 81 Number of Graduate Students
- 82 Number of Undergraduate Students
- 83 Number of Applicants and Students Admitted (Fiscal Year 2008) (Graduate Schools)
- 84 Number of Applicants and Students Admitted (Fiscal Year 2008) (Faculties)
- 85 Number of Graduates · Career Prospects after Graduation (Graduate Schools · Faculties)
- 86 Degrees Conferred
- 87 Educational Facilities
- 88 Grants-in-Aid for Scientific Research (Fiscal Year 2008)
- 88 Entrusted Research Funds (Fiscal Year 2007)
- 88 Grants-in-Aid for Scientific Research from Ministry of Health, Labour and Welfare
- 89 Endowed Departments, Finances (2008 Fiscal Year Budget)
- 90 TMDU Campuses
- 92 Location of University Campuses, Buildings and Addresses · Location



# Message from the President

## Toward Educating Internationally Active Members of Society

Tokyo Medical and Dental University is unique among medical and dental universities in Japan in that we have four divisions dedicated to graduate education and research: Medical and Dental Sciences, Health Care Sciences, the Biomedical Sciences Education Division, and the Biomedical Sciences Research Division. TMDU comprises four faculties (Medicine, Dentistry, Health Care Sciences and Oral Health Care Sciences), an undergraduate College of Liberal Arts and Sciences, two research institutes (the Institute of Biomaterials and Bioengineering and the Medical Research Institute), a university hospital attached to the Faculty of Medicine, a university hospital attached to the Faculty of Dentistry, and a dental technologist school.

At TMDU we strive to produce scientists who expend every possible effort in seeking the truth, and who have the courage and ability to explore new areas, the tolerance and humility to respect diversity and accept new ideas, and the intellectual curiosity born of a broad education. These qualities are necessary for successfully engaging in clinical practice or research, and, indeed, are required for the future of mankind. Meeting the challenging standards expected of a TMDU student will lead you to a satisfying and fulfilling scientific career, one that will completely reward the hard work you will invest in your studies.

Our university aims not only to train you as a medical or dental doctor or other medical professional who can meet the critical needs of society, but to also enable you to become a researcher who can take a leadership role at the forefront of our increasingly internationalized world. At every opportunity we inculcate students with the understanding that the university is not a place to study, but is rather a place where one can learn how to study and how to think independently.

In pursuit of the goal stated above, TMDU manifests three educational philosophies:

### 1 To provide students with a broad education and a rich sensibility

In the Discourses of Confucius we can find the statement, "A scholar is not a vessel." In this context a "vessel" is a device with a single or specific purpose. In other words, a scholar is not merely a specialist who has been trained

for one purpose. Instead, a scholar is one who has broad knowledge, wide experience, and rich sensibility. Health care providers should not impose artificial limits on themselves.

As a further example, when one of Confucius's disciples asked, "Is there any single word which can be a guide to conduct throughout one's life?" the great thinker responded, "It is perhaps the word 'shu.' Do not impose on others what you do not desire for yourself." Confucius meant that one had to be true to oneself while, at the same time, having the intellectual sympathy to be considerate of other people. The concept of "intellectual sympathy" is very important here, as it means that the sympathy is not merely composed of kindness or pity, but is rather a refined sympathy that is based on a broad education. The ability to provide intellectual sympathy is the mark of a true health care professional.

Certainly, as health care providers, we treat our patients to the utmost of our abilities. Our work, by itself, thus brings some sense of satisfaction. However, the satisfaction we get from our work itself may be nothing more than self-satisfaction. It is not possible for us to fulfill our responsibilities by merely doing our best. We can only experience a real sense of fulfillment when we hear appropriate words of appreciation, such as "Thank you very much," from a patient or a member of a patient's family.

Thus, those who engage in the medical professions should continuously refine their philosophical nature by paying special attention to the concepts of aging and death, subjects which are conventionally explored by philosophers. As emerging trends in medicine such as regenerative treatment and genetic treatment attract the attention of practicing physicians and dentists, the making of ethical decisions is becoming increasingly important.

To prepare our students to make such decisions, we thus offer a broad education in liberal arts with the aim of learning to think critically and the cultivation of a deep insight into human nature.

### 2 To educate creative people capable of diagnosing and solving problems independently

Those in the health care professions must accumulate sufficient knowledge and techniques in order to have the ability to discover and solve problems. Our educational process is thus rigorous, as a well-prepared professional

will always have knowledge and techniques in reserve. In addition, the ideal health care provider will always have health and energy in reserve so that continuous efforts in independent problem discovery and resolution are possible.

The Master said, in the Discourses of Confucius, "If one learns from others but does not think, one will be bewildered. If, on the other hand, one thinks but does not learn from others, one will be in peril." When you pursue academic training, try to learn as many things as possible. Endeavor to thoroughly digest what you have learned, and then make efforts to apply what you have learned to solve problems around you. If you can do all these things, you will be able to understand the spirit of the Discourses. In short, as a person who pursues science, you must build your character to the point where you will be able to identify and solve problems independently.

Regardless of how much knowledge and information you acquire, unless you think about how it can be utilized in your life, that hard-won knowledge and information may turn out to be useless. At the other extreme, if you base your judgment only on cold reasoning, you may become self-righteous and make mistakes due to hubris or narrow-mindedness. The teachings of Confucius are echoed in the critical philosophy of Kant, who said that knowledge can start with experience, but without the use of thoughtful reflection, knowledge may become blind. I thus expect you to appreciate the utility of each subject presented to you in class, to learn to identify problems and ask questions, and to then formulate your own thought process to discover and evaluate solutions to the problems.

### 3 To train medical professionals with a rich international quality

Society expects graduates of our university to take international leadership in clinical work and research. We thus give our students the opportunity to acquire a broad education and the ability to produce work that is bound to Japanese spiritual culture and which has an international outlook.

In the Faculty of Medicine, 40 students to date have had clinical clerkships at Harvard University. A similar curriculum is being implemented by the Faculty of Dentistry. These programs were not designed to rely on or duplicate overseas educational systems, but rather to help us enrich our own educational systems and contribute to the

systems at our partner institutions.

In addition, students who have acquired high grades and who have demonstrated an exemplary ability to learn are eligible for a scholarship to study overseas. I would hope that each TMDU student zealously pursues this opportunity to gain knowledge and experience in a different culture.

In closing, I would like to note that in the Discourses of Confucius we find the saying, "Virtue never stands alone. It is bound to have neighbors." The virtuous person may feel isolated at times, but there will in fact always be another person close at hand who recognizes and understands virtue. While you are attending our university, please take every opportunity to get to know your senior students, your professors and your other teachers. The relationships you create and nurture at school will be of incalculable value to you in your professional career and your development as an internationally active member of society.

Reference: The Analects, by Confucius



Takashi OHYAMA, DDS, PhD  
President

A handwritten signature in black ink that reads "Takashi Ohyama". The signature is written in a cursive, flowing style.



# Overview 2008

Principals and Presidents

Historical Sketch

Management Structure

Organizational Chart

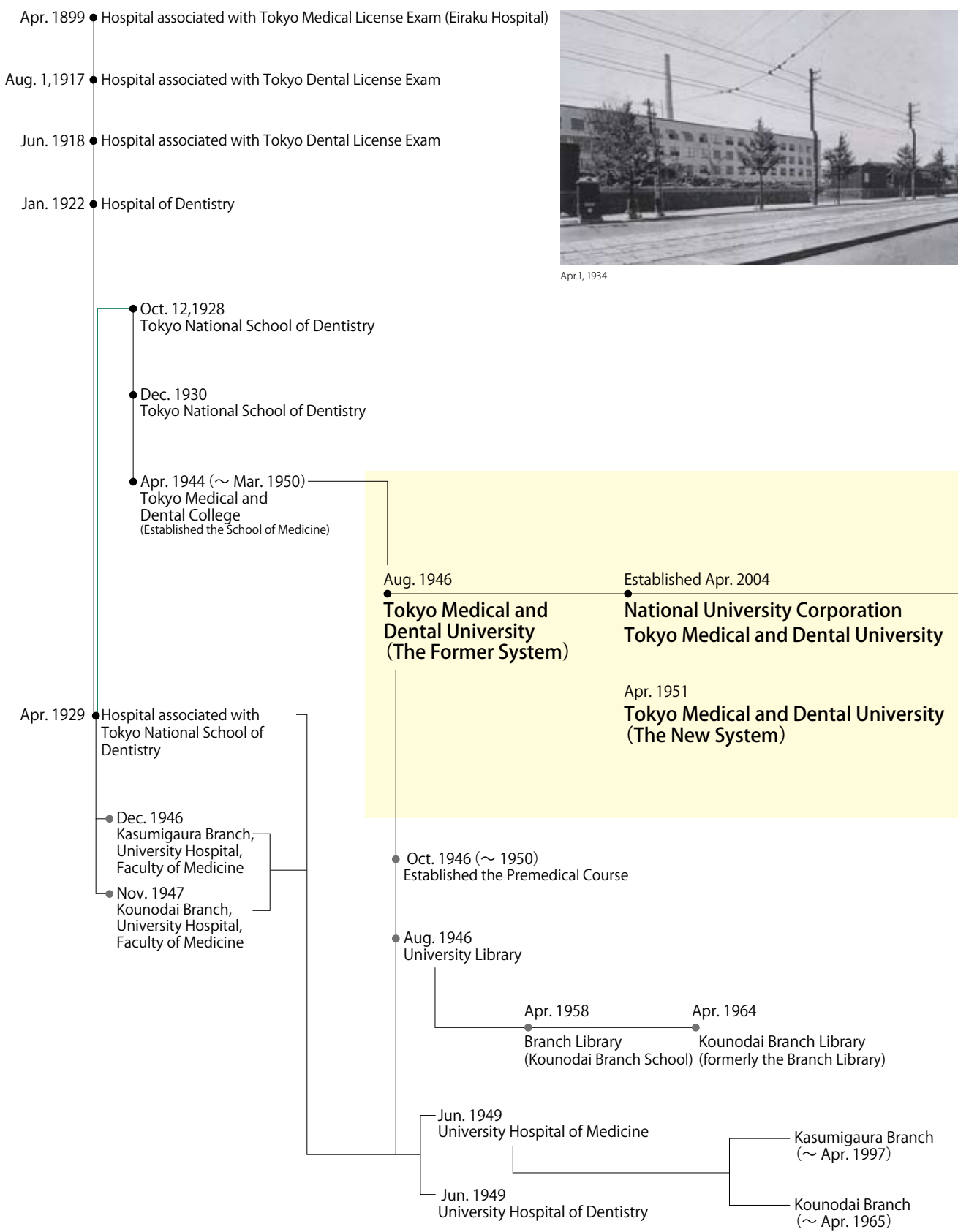
Administration Officers



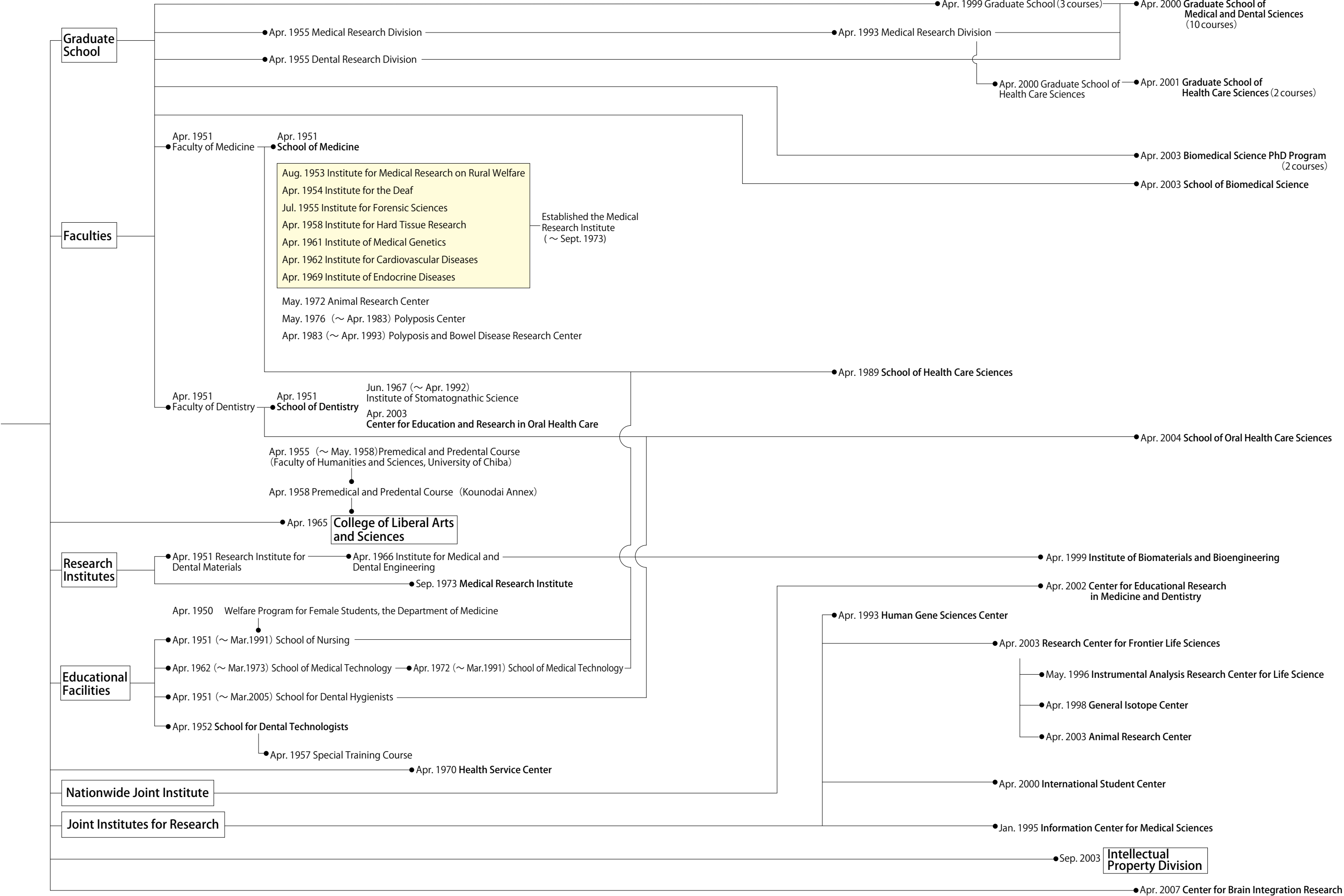
Principals and Presidents

Tokyo National School of Dentistry	Oct.13,1928 ~ Mar.31,1944	Toru SHIMAMINE
Tokyo Medical and Dental College	Apr.1,1944 ~ Feb.9,1945	Toru SHIMAMINE
Tokyo Medical and Dental College	Feb.10,1945 ~ Feb.19,1945	Masaru NAGAO
Tokyo Medical and Dental College	Feb.20,1945 ~ Mar.31,1950	Masaru NAGAO
Tokyo Medical and Dental University	Aug.27,1946 ~ Oct.4,1946	Masaru NAGAO
Tokyo Medical and Dental University (The Former System)	Oct.5,1946 ~ Mar.31,1951	Masaru NAGAO
Tokyo Medical and Dental University (The New System)	Apr.1,1951 ~ Jun.30,1961	Masaru NAGAO
	Jul.1,1961 ~ Feb.29,1968	Masahiro OKADA
Tokyo Medical and Dental University	Mar.1,1968 ~ Mar.15,1968	Keizo OTA
Tokyo Medical and Dental University	Mar.16,1968 ~ Oct.8,1969	Keizo OTA
Tokyo Medical and Dental University	Oct.9,1969 ~ Sep.17,1970	Fumihiko SHIMIZU
Tokyo Medical and Dental University	Sep.18,1970 ~ Sep.17,1974	Fumihiko SHIMIZU
	Sep.18,1974 ~ Jul.31,1977	Yasuji KATSUKI
	Aug.1,1977 ~ Jul.31,1985	Hisashi YOSHIDA
	Aug.1,1985 ~ Jul.31,1991	Rokuro KANO
	Aug.1,1991 ~ Jul.31,1995	Hajime YAMAMOTO
	Aug.1,1995 ~ Mar.31,2004	Akio SUZUKI
National University Corporation Tokyo Medical and Dental University	Apr.1, 2004 ~ Mar.31, 2008	Akio SUZUKI
	Apr.1, 2008 ~	Takashi OHYAMA

Historical Sketch



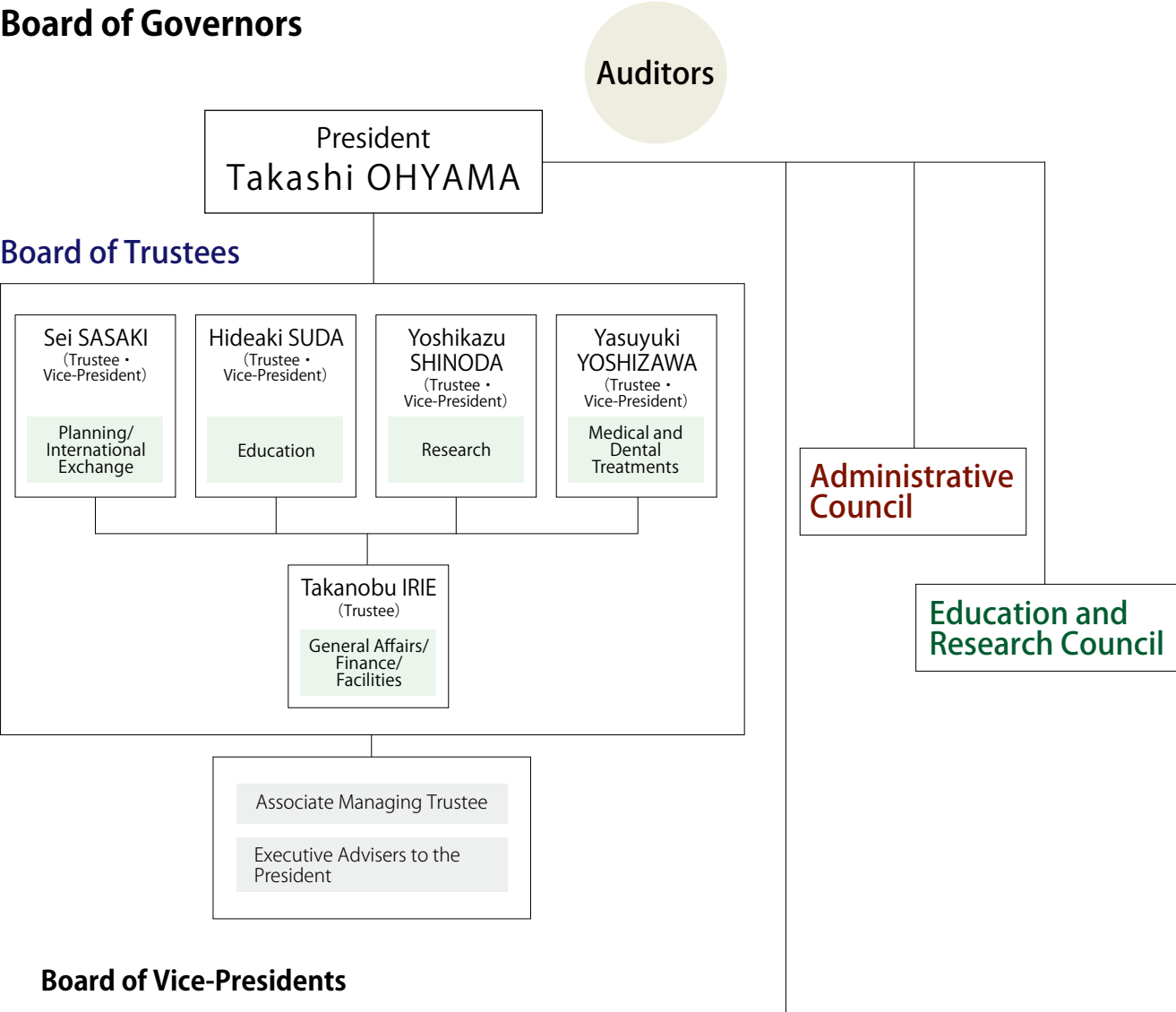






Management Structure

Board of Governors



Board of Vice-Presidents

Board of Trustees

Vote on important items

President	Takashi OHYAMA
Trustee (Planning/International Exchange)	Sei SASAKI
Trustee (General Affairs/Finance/Facilities)	Takanobu IRIE
Trustee (Education)	Hideaki SUDA
Trustee (Research)	Yoshikazu SHINODA
Trustee (Medical and Dental Treatments)	Yasuyuki YOSHIZAWA

Administrative Council

Deliberate on management issues

【 Internal Committee 】

President	Takashi OHYAMA
Trustee (Planning/International Exchange)	Sei SASAKI
Trustee (General Affairs/Finance/Facilities)	Takanobu IRIE
Trustee (Education)	Hideaki SUDA
Trustee (Research)	Yoshikazu SHINODA
Trustee (Medical and Dental Treatments)	Yasuyuki YOSHIZAWA

【 External Committee 】

Chief Executive Officer, Quantum Leaps Corporation	Nobuyuki IDEI
Chairperson, Society for the Promotion of the University of the Air	Takayoshi INOUE
Dean, Faculty of Health Science Technology Bunkyo Gakuin University, Professor	Morio KOIKE
Aioi Insurance Co., Ltd, Special Adviser	Akira SESHIMO
Director, Takahashi Orthodontic Office, Professors Emeritus	Fujio MIURA
Chairman, Board of Trustees, Editor-in-Chief, Tsuneo WATANABE The Yomiuri Shimbun Holdings	

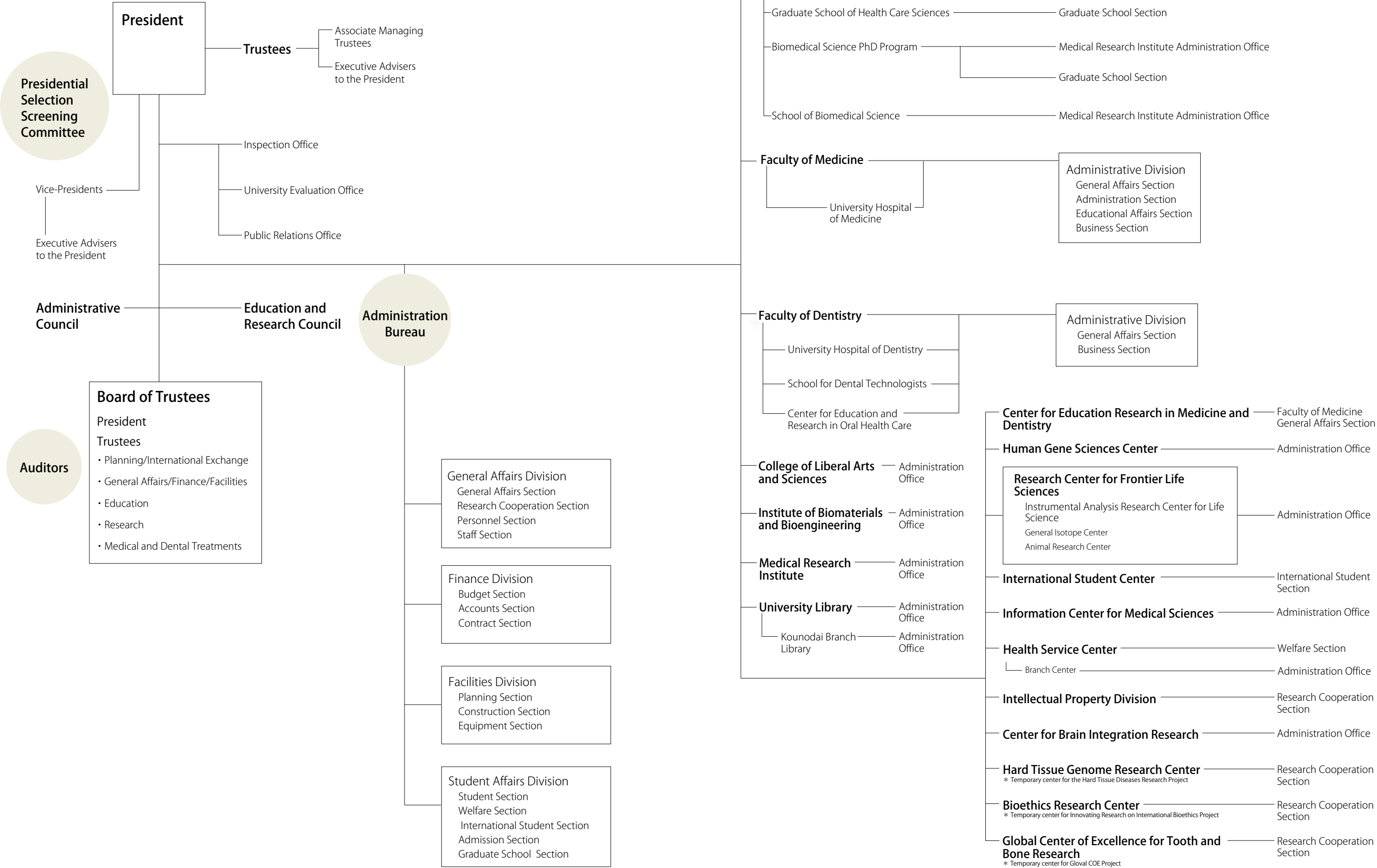
Education and Research Council

Deliberate on educational and research issues

President	Takashi OHYAMA	Director, Institute of Biomaterials and Bioengineering	Kimihiro YAMASHITA
Trustee (Planning/International Exchange)	Sei SASAKI	Director, Medical Research Institute	Masaki NODA
Trustee (General Affairs/Finance/Facilities)	Takanobu IRIE	Director, University Library	Teruo AMAGASA
Trustee (Education)	Hideaki SUDA	Director, University Hospital of Medicine	Tohru SAKAMOTO
Trustee (Research)	Yoshikazu SHINODA	Director, University Hospital of Dentistry	Masahiko SHIMADA
Trustee (Medical and Dental Treatments)	Yasuyuki YOSHIZAWA	Professor, Graduate School of Medical and Dental Sciences (Medical Division)	Yasuhito YUASA
Dean, Graduate School of Medical and Dental Sciences	Junji TAGAMI	Professor, Graduate School of Medical and Dental Sciences (Dental Division)	Ikuo MORITA
Dean, Faculty of Dentistry		Professor, Graduate School of Health Care Sciences	Tomoko INOUE
Dean, Graduate School of Health Care Sciences	Kenji SATO	Professor, College of Liberal Arts and Sciences	Tsukasa CHIBA
Dean, Biomedical Science PhD Program	Hiroshi TANAKA	Professor, Institute of Biomaterials and Bioengineering	Koji MITSUBAYASHI
Dean, School of Biomedical Science	Takeshi TSUBATA	Professor, Medical Research Institute	Shigetaka KITAJIMA
Dean, Faculty of Medicine	Kikuo OHNO		
Dean, College of Liberal Arts and Sciences	Masaru WADA		



# Organizational Chart



Administration Officers

President

Takashi OHYAMA

Trustees

Planning/International Exchange	Sei SASAKI
General Affairs/Finance/Facilities	Takanobu IRIE
Education	Hideaki SUDA
Research	Yoshikazu SHINODA
Medical and Dental Treatments	Yasuyuki YOSHIZAWA

Auditors

Toru KOBAYASHI  
Shigeki TAKAHASHI

Vice-Presidents

Overall Management	Kikuo OHNO
Entrance Exam	Ken KITAMURA
Evaluation	Akinori KIMURA
Information management	Kozo TAKASE
Complaint Consultation and Student support	Hisashi TANIGUCHI
Public Relations	Setsuo TAKATANI
Industrial Collaboration	Nobuyuki MIYASAKA
	Sei SASAKI
	Hideaki SUDA
	Yoshikazu SHINODA
	Yasuyuki YOSHIZAWA

Associate Managing Trustees

Planning/International Exchange	Hajime KARASUYAMA
Education	Masaru WADA
Research	Masaki NODA
Research	Hidehiro MIZUSAWA
Medical Treatment	Tohru SAKAMOTO
Dental Treatment	Masahiko SHIMADA

Executive Advisers to the President

Planning/International Exchange	Yoko KAWAGUCHI
Education	Yujiro TANAKA
Education	Ken OMURA
Research	Ikuo MORITA
Entrance Exam	Miyuki AZUMA
Entrance Exam	Tomohiro MORIO
Evaluation	Shuki MIZUTANI
Evaluation	Masaki YANAGISHITA
Complaint Consultation and Student support	Masato MATSUURA
Complaint Consultation and Student support	Yoshinobu EISHI
Public Relations	Kazuo TAKAKUDA
Industrial Collaboration	Noboru MIZUSHIMA

Inspection Office

Head, Inspection Office	Hideaki SUDA
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Public Relations Office

Head, Public Relations Office	Setsuo TAKATANI
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University Evaluation Office

Head, University Evaluation Office	Akinori KIMURA
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Administration Bureau

Director General	Takanobu IRIE
Director, General Affairs Division	Tomio SHIMAMURA
Head, General Affairs Section	Koichi DOI
Head, Research Cooperation Section	Shoichi MURATA
Head, Personnel Section	Hiromasa GOTO
Head, Staff Section	Katsumi TOKIWA
Director, Finance Division	Kousuke ABE
Head, Budget Section	Tsuyoshi SHIMAI
Head, Accounts Section	Katsuo SAITOU
Head, Contract Section	Manabu SUGASE
Director, Facilities Division	Toshio TANAKA
Head, Planning Section	Yoshimi SAITOU
Head, Construction Section	Kazuhiro KUSA
Head, Equipment Section	Michitaka SAITOU
Director, Student Affairs Division	Hiroshi TANIDA
Head, Student Section	Suguru YAMATO
Head, Welfare Section	Suguru YAMATO
Head, International Student Section	Atsushi NAGAOKA
Head, Admission Section	Tomohiro HAYAKAWA
Head, Graduate School	Yoshio SAITOU



Graduate Schools

Dean, Graduate School of Medical and Dental Sciences	Junji TAGAMI
Vice Dean, Graduate School of Medical and Dental Sciences	Kikuo OHNO
Dean, Graduate School of Health Care Sciences	Kenji SATO
Dean, Biomedical Science PhD Program	Hiroshi TANAKA
Dean, School of Biomedical Science	Takeshi TSUBATA

Faculty of Medicine

Dean, Faculty of Medicine	Kikuo OHNO
Director, School of Medicine	Kenichi SHINOMIYA
Director, School of Health Care Sciences	Tomoko INOUE
Director, University Hospital of Medicine	Tohru SAKAMOTO
Director, Administrative Division	Ken KATO
Head, General Affairs Section	Yuichi TOMITA
Head, Administration Section	Ichiro HIROSE
Head, Educational Affairs Section	Shigeru NISHIYAMA
Head, Business Section	Kazuhisa MARUYAMA

Faculty of Dentistry

Dean, Faculty of Dentistry	Junji TAGAMI
Director, School of Dentistry	Keiichi OHYA
Director, School of Oral Health Care Sciences	Hidemi YOSHIMASU
Director, University Hospital of Dentistry	Masahiko SHIMADA
Principal, School for Dental Technologists	Hiroyuki MIURA
Director, Center for Education and Research in Oral Health Care	Yuzo TAKAGI
Director, Administrative Division	Tsuneo NAKAJIMA
Head, General Affairs Section	Hideaki ISHIBASHI
Head, Business Section	Katsumi ISHIKAWA

College of Liberal Arts and Sciences

Dean, College of Liberal Arts and Sciences	Masaru WADA
Office Head	Kazumasa FURUICHI

Institute of Biomaterials and Bioengineering

Director	Kimihiro YAMASHITA
Office Head	Tsutomu TAKEUCHI

Medical Research Institute

Director	Masaki NODA
Office Head	Narumi KAWAYANAGI

University Library

Director	Teruo AMAGASA
Director, Kounodai Branch Library	Tadashi SUZUKI
Office Head	Tadashi NAKANO

Center for Education Research in Medicine and Dentistry

Head, Inspection Office	Nobuo NARA
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Human Gene Sciences Center

Director	Masataka NAKAMURA
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Research Center for Frontier Life Sciences

Director	Tsutomu TANABE
Director, Instrumental Analysis Research Center for Life Sciences	Tsutomu TANABE
Director, General Isotope Center	Ikuo MORITA
Director, Animal Research Center	Yasuhito YUASA

International Student Center

Office Head	Masaru WADA
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Information Center for Medical Sciences

Director	Hiroshi TANAKA
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Joint Institutes for Education and Research Administration Office

Director	Takayuki TANAKA
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Health Service Center

Director	Shuji MIYAKE
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Intellectual Property Division

Director, Intellectual Property Division	Nobuyuki MIYASAKA
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Center for Brain Integration Research

Director	Hidehiro MIZUSAWA
----------	-------------------

Hard Tissue Genome Research Center

\* Temporary center for the Hard Tissue Diseases Research Project

Director	Masaki NODA
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Bioethics Research Center

\* Temporary center for Innovating Research on International Bioethics Project

Director	Shuki MIZUTANI
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Global Center of Excellence for Tooth and Bone Research

\* Temporary center for Gloval COE Project

Director	Masaki NODA
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# Graduate Schools, Faculties

- Graduate School of Medical and Dental Sciences
  - Graduate School of Health Care Sciences
    - Biomedical Science PhD Program
      - School of Biomedical Science
        - Faculty of Medicine
          - Faculty of Dentistry
            - College of Liberal Arts and Sciences
              - Institute of Biomaterials and Bioengineering
                - Medical Research Institute
                  - University Library
                    - Nationwide Joint Institute
                      - Joint Institutes for Education and Research
                        - Health Service Center
                          - University Hospitals



Graduate School of Medical and Dental Sciences

The Mission

Recent development of science and technology has brought about greater sophistication and more interdisciplinary characteristics in research in the area of health care sciences. With the advancement of aging society and changes in the disease structure, people’s needs for medical and dental services are getting more and more diversified. How can we play a leading role in the development of medicine and dentistry in the 21st century? To better serve our society and the world, we reorganized our graduate school with the aim of promoting international interdisciplinary research projects and of educating health care professionals with aspirations for research. We are keenly aware of the importance of promoting clinically oriented research on a varied topics ranging from pathogenesis and pathological conditions to diagnosis, treatment, rehabilitation and maintaining good quality of life (QOL) of the patients. In order to respond to various issues facing medicine and dentistry today in a highly effective manner, we have established Graduate School of Medical and Dental Sciences, integrating the former medical and dental graduate schools. In Graduate School of Medical and Dental Sciences, where education and research in medicine reinforce education and research in dentistry and vice versa, we can expect to educate dental researchers and clinicians with a wide range of knowledge in medicine as well as medical researchers and clinicians with knowledge in dentistry. Improvement of the quality of research through a close coordination between medicine

and dentistry will further expand the possibility of interdisciplinary and multidisciplinary research in medicine and dentistry. Research achievements thus gained at Graduate School of Medical and Dental Sciences can lead to the improvement of the quality of medical and dental care, which people really expect from us. We will do our best to contribute to a better medical/dental care system through fostering those who can implement comprehensive care with knowledge and skills in each field. At every division of Graduate School of Medical and Dental Sciences, we strive to coordinate more closely medicine and dentistry, and basic and clinical sciences. In a milieu of such cooperation, we educate clinically oriented world-class researchers and highly competent clinicians in medicine, dentistry, and other areas related to health sciences. Some of the features of Graduate School of Medical and Dental Sciences are:

- 1. Reintegrated divisions with an emphasis of close liaison between medicine and dentistry as well as between basic and clinical sciences
- 2. Diversified courses
  - (1) newly established courses aiming at educating clinically oriented researchers and highly skilled clinicians with research mind.
  - (2) expansion and improvement of courses for international students
  - (3) variety of courses offered to medical/dental practitioners and part-time students

Master’s Program

Medical and Dental Sciences  
Medical and Dental Sciences, Master of Medical Administration Course

Doctor’s Program

Oral Health Sciences

| Departments                         | Sections                                           | Head of Section                                                                                       |
|-------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Oral Restitution                    | Oral Pathology                                     | Akira YAMAGUCHI                                                                                       |
|                                     | Molecular Cellular Oncology and Microbiology       |                                                                                                       |
|                                     | Molecular Immunology                               |                                                                                                       |
|                                     | Oral Radiation Oncology                            |                                                                                                       |
|                                     | Oral and Maxillofacial Surgery                     |                                                                                                       |
|                                     | Oral and Maxillofacial Radiology                   |                                                                                                       |
|                                     | Anesthesiology and Clinical Physiology             |                                                                                                       |
|                                     | Orofacial Pain Management                          |                                                                                                       |
|                                     | Diagnostic Oral Pathology                          | Miyuki AZUMA<br>Masahiko MIURA<br>Ken OMURA<br>Toru KURABAYASHI<br>Masahiro UMINO<br>Masahiko SHIMADA |
|                                     |                                                    |                                                                                                       |
|                                     |                                                    |                                                                                                       |
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|                                     |                                                    |                                                                                                       |
|                                     |                                                    |                                                                                                       |
|                                     |                                                    |                                                                                                       |
| Orofacial Development and Function  | Developmental Oral Health Sciences                 | Yuzo TAKAGI                                                                                           |
|                                     | Orthodontic Science                                |                                                                                                       |
| Restorative Sciences                | Cariology and Operative Dentistry                  | Junji TAGAMI<br>Hiroyuki MIURA<br>Hideaki SUDA                                                        |
|                                     | Fixed Prosthodontics                               |                                                                                                       |
|                                     | Pulp Biology and Endodontics                       |                                                                                                       |
|                                     | Advanced Biomaterials                              |                                                                                                       |
|                                     | Organic Biomaterials                               |                                                                                                       |
|                                     | Functional Biomaterials                            |                                                                                                       |
| Masticatory Function Rehabilitation | Removable Prosthodontics                           | Yoshimasa IGARASHI<br>Shohei KASUGAI<br>Shunsuke MINAKUCHI                                            |
|                                     | Oral Implantology and Regenerative Dental Medicine |                                                                                                       |
|                                     | Complete Denture Prosthodontics                    |                                                                                                       |

Maxillofacial/Neck Reconstruction

| Departments                               | Sections                                     | Head of Section                                      |
|-------------------------------------------|----------------------------------------------|------------------------------------------------------|
| Maxillofacial Biology                     | Maxillofacial Anatomy                        | Yasuo YAMASHITA                                      |
|                                           | Cognitive Neurobiology                       |                                                      |
|                                           | Molecular Craniofacial Embryology            |                                                      |
|                                           | Cellular Physiological Chemistry             |                                                      |
|                                           | Molecular Neurobiology                       |                                                      |
| Maxillofacial Reconstruction and Function | Maxillofacial Surgery                        | Teruo AMAGASA<br>Keiji MORIYAMA<br>Hisashi TANIGUCHI |
|                                           | Maxillofacial Orthognathics                  |                                                      |
|                                           | Maxillofacial Prosthetics                    |                                                      |
|                                           | Dentistry for Persons with Disabilities      |                                                      |
|                                           | Metallic Biomaterials                        |                                                      |
| Head and Neck Reconstruction              | Biomechanics                                 | Seiji KISHIMOTO<br>Hitoshi SHIBUYA                   |
|                                           | Clinical Anatomy                             |                                                      |
|                                           | Plastic, Reconstructive and Cosmetic Surgery |                                                      |
|                                           | Head and Neck Surgery                        |                                                      |
|                                           | Diagnostic Radiology and Oncology            |                                                      |

Bio-Matrix

| Departments                               | Sections              | Head of Section                                          |
|-------------------------------------------|-----------------------|----------------------------------------------------------|
| Hard Tissue Engineering                   | Biostructural Science | Yoshiro TAKANO<br>Keiichi OHYA                           |
|                                           | Pharmacology          |                                                          |
|                                           | Tissue Regeneration   |                                                          |
|                                           | Biochemistry          |                                                          |
|                                           | Cell Signaling        |                                                          |
|                                           | Periodontology        |                                                          |
|                                           | Bioceramics           |                                                          |
|                                           |                       |                                                          |
| Molecular Regulation of Supportive Tissue | Cell Biology          | Masaki YANAGISHITA<br>Hiroshi TAKAYANAGI<br>Yuichi IZUMI |
|                                           | Medical Biochemistry  |                                                          |
|                                           | Orthopedic Surgery    |                                                          |
|                                           |                       | Takao NAKATA<br>Yutaka HATA<br>Takeshi MUNETA            |
|                                           |                       |                                                          |
|                                           |                       |                                                          |

Public Health

| Departments                      | Sections                                  | Head of Section                                                  |
|----------------------------------|-------------------------------------------|------------------------------------------------------------------|
| International Health Development | Health Promotion                          | Takehito TAKANO<br>Nobuo OHTA<br>Koichi UEMURA                   |
|                                  | Environmental Parasitology                |                                                                  |
|                                  | Forensic Medicine                         |                                                                  |
|                                  | International Health                      |                                                                  |
|                                  | Oral Health Promotion                     |                                                                  |
|                                  | Sports Medicine/Dentistry                 |                                                                  |
|                                  | Forensic Dentistry                        |                                                                  |
|                                  | Social Psychiatry                         |                                                                  |
|                                  | Molecular Epidemiology                    |                                                                  |
|                                  |                                           |                                                                  |
| Health Science Policies          | Health Care Management and Planning       | Yoko KAWAGUCHI                                                   |
|                                  | Health Care Economics                     |                                                                  |
|                                  | Dental Education Development              |                                                                  |
|                                  | Research Development                      |                                                                  |
|                                  | Health Care Informatics                   |                                                                  |
|                                  | Health Policy and Management in Dentistry |                                                                  |
|                                  | Educational System Dentistry              |                                                                  |
|                                  |                                           |                                                                  |
|                                  |                                           | Kazuo KAWAHARA<br>Koichi KAWABUCHI<br>Ikuko MORIO<br>Kozo TAKASE |
|                                  |                                           |                                                                  |
|                                  |                                           |                                                                  |
|                                  |                                           |                                                                  |
|                                  |                                           |                                                                  |

Gerontology and Gerodontology

| Departments            | Sections                                                                                                                                         | Head of Section                                              |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|
| Gerodontology          | Gerodontology                                                                                                                                    | Hiroshi UEMATSU                                              |
| Aging Control Medicine | Comprehensive Pathology<br>Integrated Pulmonology<br>Geriatrics and Vascular Medicine<br>Vascular and Applied Surgery<br>Rehabilitation Medicine | Masanobu KITAGAWA<br>Yasuyuki YOSHIKAWA<br>Kentaro SHIMOKADO |

Comprehensive Patient Care

| Departments                              | Sections                                                                                                                                                                                                                        | Head of Section                                      |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| Comprehensive Oral Health Care           | General Dentistry<br>Head and Neck Psychosomatic Medicine<br>Behavioral Dentistry<br>Temporomandibular Joint and Occlusion                                                                                                      | Akira TOYOFUKU<br>Shiro MATAKI                       |
| Comprehensive Diagnosis and Therapeutics | Laboratory Medicine<br>Critical Care Medicine<br>Liaison Psychiatry and Palliative Medicine<br>Pharmacokinetics and Pharmacodynamics<br>Medical Education Research and Development<br>Acute Critical Care and Disaster Medicine | Takasuke IMAI<br><br>Yujiro TANAKA<br>Yasuhiro OTOMO |

Cognitive and Behavioral Medicine

| Departments           | Sections                                                                                                                                                                                | Head of Section                                                     |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Systems Neuroscience  | Neuroanatomy and Cellular Neurobiology<br>Systems Neurophysiology<br>Ophthalmology and Visual Science<br>Otolaryngology<br>Molecular and Cognitive Neuroscience<br>Biosystem Regulation | Sumio TERADA<br><br>Manabu MOCHIZUKI<br>Ken KITAMURA                |
| Brain Medical Science | Neurobiology and Cell Pharmacology<br>Neurology and Neurological Science<br>Psychiatry and Behavioral Sciences<br>Neurosurgery<br>Neuropathology                                        | Tsutomu TANABE<br>Hidehiro MIZUSAWA<br>Toru NISHIKAWA<br>Kikuo OHNO |

Bio-Environmental Response

| Departments               | Sections                                                                                                                                             | Head of Section                                       |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| Infection and Bioresponse | Immunology Allergology<br>Molecular Virology<br>Immunotherapeutics<br>Cell Regulation<br>Pathological Cell Biology                                   | Hajime KARASUYAMA<br>Shoji YAMAOKA<br>Mari KANNAGI    |
| Bioregulation             | Pediatrics and Developmental Biology<br>Rheumatology<br>Dermatology<br>Pathological Biochemistry<br>Immunology<br>Cellular and Environmental Biology | Shuki MIZUTANI<br>Nobuyuki MIYASAKA<br>Hiroo YOKOZEKI |

Systemic Organ Regulation

| Departments                                         | Sections                                                                                                                                                                                                                            | Head of Section                                                     |
|-----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| Digestive and Metabolic Diseases                    | Human Pathology<br>Gastroenterology and Hepatology<br>Surgical Oncology                                                                                                                                                             | Yoshinobu EISHI<br>Mamoru WATANABE<br>Kenichi SUGIHARA              |
| Cardio-Pulmonary Diseases                           | Physiology and Cell Biology<br>Cardiovascular Medicine<br>Anesthesiology<br>Thoracic-Cardiovascular Surgery<br>Cardiovascular Physiology and Pathophysiology<br>Bio-informational Pharmacology<br>Molecular Medicine and Metabolism | Noboru MIZUSHIMA<br>Mitsuaki ISOBE<br>Koshi MAKITA<br>Hirokuni ARAI |
| Regulation of Internal Environment and Reproduction | Nephrology<br>Comprehensive Reproductive Medicine<br>Urology<br>Autonomic Physiology<br>Molecular Pharmacology<br>Molecular Cell Biology<br>Functional Genomics<br>Epigenetics<br>Developmental and Regenerative Biology            | Sei SASAKI<br>Toshiro KUBOTA<br>Kazunori KIHARA                     |

Advanced Therapeutic Sciences

| Departments                    | Sections                                                                                                                                                                                                                                                                              | Head of Section                                    |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| Gene and Molecular Medicine    | Molecular Oncology<br>Hematology and Oncology<br>Clinical and Molecular Endocrinology<br>Signal Gene Regulation<br>Drug Design Chemistry<br>Medicinal-Chemical Biology<br>Genetic Regulation<br>Bio-informatics<br>Applied Genetics<br>Molecular Cytogenetics<br>Biochemical Genetics | Yasuhito YUASA<br>Osamu MIURA<br>Yukio HIRATA      |
| Advanced Surgical Therapeutics | Hepato-Biliary-Pancreatic Surgery<br>Thoracic Organ Replacement<br>Orthopaedic and Spinal Surger<br>Investigative Radiology and Endoscopy<br>Surgical Pathology<br>Medical Technology<br>Medical Instruments<br>Artificial Organ Engineering                                          | Shigeki ARII<br>Toru SAKAMOTO<br>Kenichi SHINOMIYA |

Endowed Departments

|                                                                   |                                                    |                                                     |
|-------------------------------------------------------------------|----------------------------------------------------|-----------------------------------------------------|
| Department of Clinical Informatics                                | Department of Translational Oncology               | Department for Hepatitis Control                    |
| Department of Pharmacovigilance                                   | Department of Sleep-Related Respiratory Disorders  | Department of Cartilage Regeneration                |
| Department of Nanomedicine                                        | Development of Natural Bioproducts                 | Department of Advanced Therapeutics for GI Diseases |
| Department of Regenerative Therapeutics for Spine and Spinal Cord | Department of Advanced Regulatory Vascular Surgery |                                                     |



Graduate School of Health Care Sciences

The Mission

Graduate School of Health Care Sciences was established in 2001 April as the first national graduate school of nursing and laboratory sciences in Japan. The school comprises the Division of Comprehensive Health Nursing Sciences and the Division of Biomedical Laboratory Sciences, to manage many complex issues in health care science area in this century. In order to respond to these challenges and to assume international and multidisciplinary leadership roles, it is the primary philosophy of this school to prepare advanced professionals and leading international scholars through the development of an advanced educational research system and the promotion of clinical-oriented research activities in graduate school.

As our basic philosophy, we aim for each student to be a scholar as well as international leader and a leading advanced professional in clinical-oriented research. Students become advanced professionals who can take a leadership role in clinical fields and at the same time, international leading scholars who can solve problems in diverse clinical settings including communities.

Clinical competency in nursing includes skills in such professional areas as prevention of health and related living problems, recovery of good health, rehabilitation, palliative care, advanced nursing techniques, and establishment of care systems. Clinical competency in laboratory science includes accurate clinical laboratory analysis in response advances in health care. By repeating a developmental cycle from clarifying clinical problems, exploring research for problem-solving, applying research outcome to practice, confirming its validity, to clarifying new research questions, focus and methods, students can acquire the foundation for international research leadership with clinical competency.

**Features of Our Graduate School**

The educational research divisions in the graduate school have been organized to respond to the present and future needs of society for developing nursing and laboratory sciences. There are three departments and eleven educational research divisions in comprehensive health nursing sciences. There are two departments and ten educational research divisions in biomedical laboratory sciences. The educational research divisions are composed of advanced professional programs.

Health and related living problems are diverse and complicated. The program of The Division of Comprehensive Health Nursing Sciences is designed to prepare professional nurses with organizational problem-solving skills to engage in a variety of advanced nursing practices. The goal of this advanced nursing practice is to achieve individual health, greater independence of living and quality of life for clients of all ages and families from a holistic view of disease prevention, health recovery, rehabilitation, and terminal care.

Medicine and health care techniques have become increasingly advanced, influenced by the rapid progress of molecular biology in particular. Laboratory science is no exception. The program of The Division of Biomedical Laboratory Sciences prepares students to develop accurate and highly functional clinical laboratory methodologies and biomedical support systems, including home clinical laboratory system and rehabilitation tools. The course of study is based on analysis of biomedical information from molecular and cell levels to organ and individual levels, and exploration of etiology and pathophysiological analysis.

Doctor’s Program (Master’s Course • Doctor’s Course)

Comprehensive Health Nursing Sciences

| Departments                            | Sections                                      | Head of Section |
|----------------------------------------|-----------------------------------------------|-----------------|
| Community Health and Home Care Nursing | Community Health Nursing                      | Akiko SASAKI    |
|                                        | Home Care Nursing                             | Akiko HONDA     |
|                                        | Reproductive Health Nursing                   | Noriko OHKUBO   |
|                                        | Mental Health and Psychiatric Nursing         | Masami MIYAMOTO |
| Nursing Function and Care Management   | Fundamental Nursing and Life Support          | Yayoi SAITO     |
|                                        | Child and Family Nursing                      | Taiko HIROSE    |
|                                        | Critical and Invasive-palliated Care Nursing  | Tomoko INOUE    |
|                                        | Gerontological Nursing and Health Care System | Noriko YAMAMOTO |
|                                        | Nursing System Management                     |                 |
| Health Education                       | Analytical Health Science                     | Chifumi SATO    |
|                                        | Occupational Health Education                 |                 |

Biomedical Laboratory Sciences

| Departments                       | Sections                          | Head of Section     |
|-----------------------------------|-----------------------------------|---------------------|
| Life Sciences and Bio-informatics | Biochemistry and Biophysics       | Yukichi HARA        |
|                                   | Anatomy and physiological Science | Kenji SATO          |
|                                   | Biofunctional Informatics         | Masato MATSUURA     |
|                                   | Biophysical System Engineering    | Hidetoshi WAKAMATSU |
|                                   | Laboratory Animal Science         |                     |
| Moleculo-genetic Sciences         | Analytical Laboratory Chemistry   | Minoru TOZUKA       |
|                                   | Microbiology and Immunology       | Noboru OKAMURA      |
|                                   | Molecular Pathophysiology         | Toichiro TAKIZAWA   |
|                                   | Laboratory Molecular Genetics     |                     |
|                                   | Advanced Analytical Chemistry     |                     |

Biomedical Science PhD Program and School of Biomedical Science

The Mission

As Japan is growing into a unique country with a low birthrate and large elderly population — post-genome research stemming from the decoded genome information and a better understanding of phenomena such as molecular structures, together with the development of the technology to control them, are expected to lower the cost burden on society as well as contribute to a higher quality of life through materialization of a healthy elderly society devoid of diseases and in which revolutionary therapies and medicines are developed and the burden on the environment is reduced. The 21st century is becoming a century of life science. Now that academic fields and social and industrial structures are changing, it is necessary to promote practical research in fusing the interdisciplinary fields related to complex disease research with leading-edge life science, and to foster human resources who have the managerial ability to realize innovations based on life science analysis and the ability to resolve practical problems. The aim of this PhD program is to nurture such human resources.

In order to conduct graduate school education that correctly meets the social needs and trends in scientific research and progress, this Graduate School promotes cooperation with various national and private research institutes staffed with superior researchers in the field of life science. Unlike the orthodox degree program education in which a student is

mentored by single instructor of the area of expertise, our program allows students to be mentored by multiple instructors with various areas of research. Students are required to write a thesis (in English for the doctorate students) that is to be openly reviewed for approval. Such unorthodox education will cultivate our graduates to be true PhDs holders of global standard.

Since the academic year 2005, we have been making many attempts to globalize our educational program. We prepared courses taught in English, which is the international language in the world of science, enabling students from overseas to receive one of the highest levels of graduate school education and obtain the PhD degree in Japan without the knowledge of Japanese language. Upon achieving our goal of globalization, we will then move on to adopting our high-level performance internationally, strengthening cooperation and relations with global business industries, and encourage our students to form their career paths worldwide. Furthermore, we aim to form a global alliance of higher education institutes in Europe, the United States, and Asia, to share the philosophy of interdisciplinary disease science upon which we reconstruct our educational systems, and to develop international cooperation education of the Double-degree Program so as to maintain the quality of our education up with the global standards.

Biomedical Science PhD Program

Doctor’s Program (Master’s Course • Doctor’s Course)

Bioinformatics  
Functional Biology

School of Biomedical Science

| Research Divisions         | Sections                              | Head of Section                                                          |
|----------------------------|---------------------------------------|--------------------------------------------------------------------------|
| Medical Bioinformatics     | Genome Diversity                      | Hiroshi TANAKA                                                           |
|                            | Computational Biology                 |                                                                          |
|                            | Proteome Informatics                  |                                                                          |
|                            | Disease Information Management        |                                                                          |
|                            | Genome Informatics                    |                                                                          |
| Functional Biology         | Gene Expression                       | Masatoshi HAGIWARA<br>Koichi TANAKA<br>Takeshi TSUBATA<br>Tadashi MASUDA |
|                            | Molecular Neuroscience                |                                                                          |
|                            | Immunology                            |                                                                          |
|                            | Biosystem Modeling                    |                                                                          |
|                            | Immune Recognition                    |                                                                          |
|                            | Development and Regenerative Medicine |                                                                          |
| Applied Structural Biology | Structural Biology                    | Nobutoshi ITO<br>Hiroyuki KAGECHIKA                                      |
|                            | Medicinal Chemistry                   |                                                                          |

# Faculty of Medicine

## The Mission

Faculty of Medicine was established in 1951 and now consists of School of Medicine and School of Health Care Sciences. Subjects of School of Medicine include Functional Morphology, Physiology and Pharmacology, Molecular Genetics, Infectious Immunology, Pathology, Environmental Social Medicine, Comprehensive Diagnostics, Internal Medicine, Pediatric Medicine, Neurology and Psychiatry, Surgery, Sensory Organ Sciences, Dermatology and Plastic Surgery, Female Medicine and Urology and Reproductive Medicine. School of Health Care Sciences includes two courses of Nursing Science and Medical Technology. Subjects of the former are Fundamental and Clinical Nursing and Community Health Nursing. Subjects of the latter are Laboratory Science and Laboratory Technology. School of Medicine and School of Health Care Sciences welcome talented students who will become leaders in the medical science and treatment not only in the future Japan but also in the future world. Furthermore, we seek students of lively imagination, with deep consideration for others and with strong spirit for contribution to people's welfare. Based on three fundamentals of educational philosophy in Tokyo Medical and Dental University (TMDU), all staff in the School of Medicine concentrate on training students to obtain academic and medical knowledge, high professional skills in clinical medicine, research mind, the heart of humanity, and excellent insights, hoping that many of our students will contribute to our and international societies.

School of Medicine has been improving its educational curriculum for these years, introducing tutor system in problem-based medicine, MD-PhD course, TMDU-Imperial College (London) Student Exchange Program and other international exchange programs, the Harvard Medical School Externship program for 8 ~ 11 selected students every year, the project semester program for learning basic research for the 4th-year students, and clinical clerkship for the 5th- and 6th-year students. The philosophy of the School of Health Care Sciences is based on sound knowledge and a high moral and ethical standard. We aspire to the development and personal training of health care professionals who possess originality and creativity in their ideas. The school offers professional education in nursing science and laboratory science based on an interdisciplinary approach. Currently running projects in the Faculty of Medicine includes "Human Resource Development Plan for Cancer" which is a training program for specialists in cancer in collaboration with Graduate School, "Program to Create an Infectious Diseases Research Center" which is extensive research of emerging and re-emerging infectious diseases at the research center (Noguchi Memorial Institute for Medical Research) in Ghana, West Africa, and "Special Funds for Education and Research" which offers students medical education that meets the highest global standards.

## School of Medicine

| Subjects |                             |                               |                                   |
|----------|-----------------------------|-------------------------------|-----------------------------------|
|          | Functional Morphology       | Environmental Social Medicine | Surgery                           |
|          | Physiology and Pharmacology | Comprehensive Diagnostics     | Sensory Organ Sciences            |
|          | Molecular Genetics          | Internal Medicine             | Dermatology and Plastic Surgery   |
|          | Infectious Immunology       | Pediatric Medicine            | Female Medicine                   |
|          | Pathology                   | Neurology and Psychiatry      | Urology and Reproductive Medicine |

## School of Health Care Sciences

| Course             | Subjects                         |                          |
|--------------------|----------------------------------|--------------------------|
| Nursing Science    | Fundamental and Clinical Nursing | Community Health Nursing |
| Medical Technology | Laboratory Science               | Laboratory Technology    |



Medical-Dental Building I

# Faculty of Dentistry

## The Mission

Faculty of Dentistry consists of two schools: School of Dentistry and School of Oral Health Care Sciences. We aim to educate future leaders in dentistry and oral health care sciences.

**[School of Dentistry]**

Education philosophy at School of Dentistry is primarily to foster dentists who can promote and maintain health of the people by faithfully providing comprehensive dental care and can contribute to the development of dental medicine and service from a global perspective. We deem it our mission to educate dental students who have attained the following goals at the time of graduation:

1. acquire a broad range of general knowledge and have wide experience to become a dentist with a rich sense of humanity
2. understand scientific principles and concepts and acquire knowledge in bioscience
3. have an inquiring mind to enable them to find out problems themselves and the solutions thereof
4. acquire knowledge and basic skills necessary for the prevention, diagnosis and treatment of diseases in the oral and maxillofacial regions based on the understanding of normal and pathologic general conditions
5. fully understand the importance of the role of dental medicine and dental care in society

**[School of Oral Health Care Sciences]**

Education philosophy at School of Oral Health Care Sciences is to nurture the future leaders who have rich and warm humanity and contribute for the society to realize healthy happy life of the people, based on knowledge and technology of oral health care sciences and welfare.

Our graduates will

1. understand the dignity of the life and scientific principles and concepts and acquire knowledge in bioscience.
2. respect fundamental human rights and acquire ability to associate with the person with understanding the other person's feeling and behavior.
3. understand the role and the importance of oral health care sciences and welfare in the society.
4. understand various condition of mind and body and learn knowledge and technology about oral health care sciences.
5. acquire an inquiring mind and problem solution ability and have the will to lifelong learning.
6. acquire the ability to act with the specialists of health, medical treatment and welfare.
7. learn the ability for international contribution from the point of view of oral health care sciences.

## School of Dentistry

| Subjects |                                            |                                 |                                                |
|----------|--------------------------------------------|---------------------------------|------------------------------------------------|
|          | Oral and Maxillofacial Structure           | Comprehensive Oral Health Care  | Gerodontology                                  |
|          | Oral and Maxillofacial Function            | Restorative Dentistry/Cariology | Orofacial Development and Function             |
|          | Oral Pathology and Pathophysiology         | Periodontology                  | Dentistry for the Disabled/Clinical Physiology |
|          | Oral and Maxillofacial Bioengineering      | Oral and Maxillofacial Surgery  |                                                |
|          | Oral Public Health and Ethics in Dentistry | Prosthodontics                  |                                                |

## School of Oral Health Care Sciences

| Departments                           | Subjects                                                                                                   | Head of Section                        |
|---------------------------------------|------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Fundamental Oral Health Care Sciences | Oral and Maxillofacial Biology<br>Fundamental Oral Health Care Science                                     | Kumiko SUGIMOTO                        |
| Oral Health Care Promotion            | Oral Health Care Education<br>Preventive Oral Health Care Science                                          | Kayo TERAOKA<br>Atsuhiro KINOSHITA     |
| Lifetime Oral Health Care Sciences    | Pediatric Oral Health Care Science<br>Adult Oral Health Care Science<br>Geriatric Oral Health Care Science | Masaaki ISHIKAWA<br>Kazuhiro SHIMOYAMA |
| Community Oral Health Care Science    | Community Oral Health Care Science                                                                         | Hidemi YOSHIMASU                       |

## Affiliated Educational and Research Facilities

|                                                       | Purpose                                                               |
|-------------------------------------------------------|-----------------------------------------------------------------------|
| School of Dental Technologists                        | Provide high level technology to Dental Technologists                 |
| Center for Education and Research in Oral Health Care | Investigation of supply and demand of oral health care in communities |





# College of Liberal Arts and Sciences

## The Mission

The College of Liberal Arts and Sciences provides a liberal arts environment for all students matriculated at Tokyo Medical and Dental University. Our curriculum combines liberal arts education and general education to provide a strong foundation for the next generation of doctors, dentists, nurses, medical technicians, and oral hygienists. Our focus on liberal arts is designed to provide the students with knowledge -- and more importantly -- an appreciation of history, culture, philosophy and ethics. Our focus on general education ensures our students have basic knowledge of a wide range of subjects. The two combined foci of liberal arts education and general education take intelligent students and guide them down a path that results in talented and capable health professionals who will make a substantial contribution in the future.

Our aims for our students and the abilities and skills they are to attain are as follows.

To develop civic-minded professionals who will be able to participate in the global society:

They must understand what it means to be a citizen in society, and act upon what they have learned. To do so, they need to learn about ethical norms and laws, and to respect and advance them. They also need to become aware of the global society in addition to their local societies, and become "citizens of the world" who can think and act on a global scale.

To develop scientific and analytical minds:

Social sciences and natural sciences have different methodologies, but in the end both aim to understand nature and the people living in it. As future professionals, it is important to become aware of the characteristics of each discipline and to apply this knowledge in research and problem-solving.

To develop techniques and skills required for successful communication:

Be it vocal, written, or visual, all communication requires skill. Nonverbal body language is also important. Moreover, it is necessary to sift through a wealth of acquired information, and be able to identify and retain what is valid, interpreting it correctly. As communicators, they must pare down information and structure it into an understandable form and order, which is a preliminary step to structuring the information as facts, figures, and composition which will be an understandable and cohesive message that they can successfully convey to their intended audience.

To provide a strong foundation for underlying future study:

Both medicine and dentistry are based upon a basic knowledge of natural sciences, logical and scientific thinking, and problem-solving skills. Through lectures and laboratory work in mathematics, physics, chemistry, and biology, our students will acquire these skills.

| Subjects                              | Head of Section                |
|---------------------------------------|--------------------------------|
| Philosophy                            |                                |
| History                               |                                |
| Literature                            |                                |
| History of Social Thought             |                                |
| Sociology                             | Sakumi ITABASHI                |
| Mathematics                           | Masao KIYOTA                   |
| Physics                               | Tsukasa CHIBA                  |
| Chemistry                             | Mitsuyo OKAZAKI                |
| Biology                               | Masaru WADA , Atsuhiko HATTORI |
| English                               | Philip Michael TROMOVITCH      |
| German                                | Tadashi SUZUKI                 |
| French                                | Hikaru NAKASHIMA               |
| Health Science and Physical Education | Tetsuya MIZUNO                 |



Hippocrates Hall



Champ de Causerie

# Institute of Biomaterials and Bioengineering

## The Mission

The Institute of Biomaterials and Bioengineering (IBB) was primarily established as the Research Institute of Dental Materials (RIDM) with the purpose of development of innovative dental devices and materials in 1951. Through the transformation of RIDM to the Institute for Medical and Dental Engineering in 1966, the Institute expanded into the present organization of the IBB with 3 large divisions consisting of 13 departments in 1999. Since the establishment, the IBB has been contributing to the advancement of bioengineering and clinical devices as the international forerunner through harmonizing the engineering and technology with dental and medical sciences.

The IBB has put forward the following 3 objectives, (A) through (C), in order to expand and deepen the basic sciences for biomaterials and bioengineering since April in 2004, when Tokyo Medical and Dental University restarted as a national university corporation, leading to the development of applied sciences and technologies for the advanced medicine and dentistry.

- (A) An inquiry into the Nano-Bioscience for Advanced Medicine and Dentistry
- (B) The creation of the Bio-Inspired Biomaterials for New Clinical Applications
- (C) The development of the Bio-System Engineering for Advanced Medical and Dental Devices

Despite the drastically changing circumstances around universities in Japan, the IBB has been continuously forwarding the role as the international center of excellence in biomaterials and bioengineering.

Purpose  
To study biofunctional molecules, biomaterials and biosystems

| ● Research Divisions    |                                        | Head of Section    |
|-------------------------|----------------------------------------|--------------------|
| Biofunctional Molecules | Molecular Recognition                  | Hirokazu TAMAMURA  |
|                         | Molecular Design                       |                    |
|                         | Applied Functional Molecules           | Akio KISHIDA       |
|                         | Biosensors                             |                    |
| Biomaterials            | Metals                                 | Takao HANAWA       |
|                         | Inorganic Materials                    | Kimihiro YAMASHITA |
|                         | Organic Materials                      | Kazunari AKIYOSHI  |
|                         | Biomaterials Mechanics                 |                    |
| Biosystems              | Biodesign                              | Kazuo TAKAKUDA     |
|                         | Biomedical Information                 | Kenji YASUDA       |
|                         | Biomedical Devices and Instrumentation | Koji MITSUBAYASHI  |
|                         | Biosystem Regulation                   | Hiroshi AZUMA      |
|                         | Artificial Organs                      | Setsuo TAKATANI    |



Institute of Biomaterials and Bioengineering

# Medical Research Institute

## The Mission

Our research focus is to tackle the issues in medical science with a hope to contribute to develop measures for the patients who are suffering from intractable diseases. These disorders include metabolic, neurological, psychiatric, cardiovascular, loco-motor, immunological, genetic, infectious and neoplastic ones. The patho-physiological bases of these diseases should be understood on the bases of molecular analyses of the mal-function and impaired regulation of homeostasis. State-of-the- art science on the cellular and molecular mechanisms operating in the life of basic organism as well as human has been sought vigorously in our institute and this activity has been continuously expanding in these years. This is reflected in our record of recent publications as well as the amounts of major grants obtained in the field of medical science including the participation of many staff members of our institute in the 21st Century COE program of our university. The strength of Medical Research Institute also lies on the close tie with its newly commenced graduate school system. The number of young investigators in our institute has increased significantly and the new educational system has been attracting attention of the medical science society. The activity of our institute has been international. We have established scientific ties with a number of overseas universities and institutions such as Harvard University.. In addition to the various international collaborations in our research activities, we have been accepting many visitors worldwide including scientists from major institutes. International symposiums and seminars have been constantly held

to provide cutting edge knowledge in medical science but also opportunities to establish relationship among young scientists and world top class investigators. As Medical Research Institute is growing in a number of respects as a young institution in the field of molecular medical science, we are welcoming everyone who is interested in joining us in our endeavor to seek for the clues to cure patients with intractable diseases in the future by unraveling the great mystery of nature.



Medical Research Institute

Purpose  
To study the pathogenesis, treatment and prevention of refractory diseases including collagen diseases

| ● Research Divisions        |                                                     | Head of Section    |
|-----------------------------|-----------------------------------------------------|--------------------|
| Advanced Molecular Medicine | Molecular Medicine and Metabolism                   | Yoshihiro OGAWA    |
|                             | Molecular Pharmacology                              | Masaki NODA        |
|                             | Molecular Cell Biology                              | Hiroshi SHIBUYA    |
|                             | Molecular Neuroscience                              |                    |
|                             | Cell Regulation                                     | Tetsushi FURUKAWA  |
|                             | Bio-informational Pharmacology                      |                    |
|                             | Project Research Unit                               |                    |
| Pathophysiology             | Neuropathology                                      | Hitoshi OKAZAWA    |
|                             | Pathological Biochemistry                           | Hirobumi TERAOKA   |
|                             | Pathological Cell Biology                           | Shigeomi SHIMIZU   |
|                             | Developmental and Regenerative Biology              | Hiroshi NISHINA    |
|                             | Immunology                                          |                    |
|                             | Molecular Pathogenesis                              | Akinori KIMURA     |
|                             | Frontier Research Unit Virus Research Unit          |                    |
|                             | Project Research Unit                               |                    |
| Medical Genomics            | Molecular Cytogenetics                              | Joji INAZAWA       |
|                             | Molecular Genetics                                  | Yoshio MIKI        |
|                             | Molecular Epidemiology                              | Masaaki MURAMATSU  |
|                             | Biochemical Genetics                                | Shigetaka KITAJIMA |
|                             | Functional Genomics                                 |                    |
|                             | Epigenetics                                         | Fumitoshi ISHINO   |
|                             | Bioinformatics                                      |                    |
|                             | Frontier Research Unit. Redox Response Cell Biology |                    |
|                             | Project Research Unit                               |                    |
| Integrative Research        | Pathogenetic Regulation                             |                    |
|                             | Biosystem Generation                                |                    |

# University Library

## The Mission

A new role is being demanded of university libraries as academic information is becoming increasingly computerized, modes of information distribution are undergoing unprecedented transformation, and the information utilization behavior of the users is changing greatly. In particular, the following 4 functions need to be improved at future university libraries: 1) collection and storage of strategic paper documents representative of the special characteristics of the university, 2) establishment and improvement of collection and storage systems for various kinds of academic documents, 3) measures for space reduction, etc., through computerization, and 4) maintenance of basic facilities in university libraries. In accordance with these requirements, the library of this university focuses on 3 points: (1) expansion of information use services, (2) integration and systematization of on-campus information resources, and (3) a strategy for quantitative and qualitative expansion of users; and developed the following concepts: (1) Expansion of information use services ① Computerization of library catalogs ② Enhancement and reexamination of electronic media

- ③ Establishment of information outlets
  - ④ Large-scale increase in the number and versatility of reading seats
  - ⑤ Increase in the number of users of the medical and dental media center, and enhancement of installed equipments
- (2) Integration and systematization of on-campus information resources
- ① Research related materials stored in each field as research related information
- ② Application of e-learning systems based on automatic lecture recording systems to learning content, etc.
- (3) A strategy for quantitative and qualitative expansion of users
- ① Expansion of information literacy education
- ② Response to multi-purpose needs of users
- ③ Creation of comfortable reading spaces
- In addition, there are plans of relocating the library of this university in 2010 to the 3rd and 4th floors of the Secondary Wing of the Tokyo Medical and Dental University Integrated Research Wing, change its name to the Medical and Dental Media Center, and reopen it based on the above concepts.

## Library Holdings

| Classification          | Japanese Books (including periodicals) | Foreign Books (including periodicals) | Total   |
|-------------------------|----------------------------------------|---------------------------------------|---------|
| The Main Library        | 108,832                                | 150,681                               | 259,513 |
| Kounodai Branch Library | 72,316                                 | 16,604                                | 88,920  |
| Total                   | 181,148                                | 167,285                               | 348,433 |

## Facilities

| Classification          | Reading Room       |       | Stack Room         | Office and Other     | Total                |
|-------------------------|--------------------|-------|--------------------|----------------------|----------------------|
|                         | Floor Space        | Seats |                    |                      |                      |
| The Main Library        | 551 m <sup>2</sup> | 142   | 880 m <sup>2</sup> | 1,192 m <sup>2</sup> | 2,623 m <sup>2</sup> |
| Kounodai Branch Library | 280 m <sup>2</sup> | 125   | 468 m <sup>2</sup> | 285 m <sup>2</sup>   | 1,033 m <sup>2</sup> |

## Utilization

| Classification          | Total Days Open | Visitors | Hours Open   |              | Books and Journals Checked Out |                |
|-------------------------|-----------------|----------|--------------|--------------|--------------------------------|----------------|
|                         |                 |          | Weekdays     | Holidays     | Students                       | Teaching Staff |
| The Main Library        | 360             | 166,906  | 9:00 ~ 22:00 | 9:00 ~ 17:00 | 8,588                          | 2,586          |
| Kounodai Branch Library | 235             | 44,004   | 9:00 ~ 20:00 | —            | 1,349                          | 203            |



Reading Room



Nationwide Joint Institute

Center for Education Research in Medicine and Dentistry

- Overall assessment of student goal attainment for attitude, technique and knowledge
- Research of medical and dental education and curriculum development

Director  
Nobuo NARA  
Koji ARAKI

Joint Institutes for Education and Research

| Research Facilities                                      | Purpose                                                                                                       | Director          |
|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-------------------|
| Human Gene Sciences Center                               | Research and education of disease related genes                                                               | Masataka NAKAMURA |
| Research Center for Frontier Life Science                |                                                                                                               |                   |
| • Instrumental Analysis Research Center for Life Science | Research and education of instrumental analysis                                                               |                   |
| • General Isotope Center                                 | Research and education on radioisotopes                                                                       |                   |
| • Animal Research Center                                 | Analyses of diseases and studies of animal care for medical use                                               |                   |
| Information Center for Medical Sciences                  | Research and education on information sciences and computers in medicine                                      |                   |
| International Student Center                             | To provide academic support for foreign students and students going abroad, and to carry out related research | Sayoko YAMASHITA  |



Human Gene Sciences Center



International Student Center

Health Service Center

Health Service Center

- Improving health management
- Maintaining and promoting the health of TMDU student and staff

Director  
Shuji MIYAKE

University Hospitals

The Mission

The University Hospital of Medicine is committed to providing excellent patient care as well as advanced medical technology to the community. The mission of the University Hospital of Dentistry includes world-class staff as well as providing excellent dental care tailored to individual patient’ s needs. The success of these missions requires (1) the practical training of faculty, staff, students, and trainees and (2) innovative scientific research and breakthrough discoveries. Each member of Tokyo Medical and Dental University is devoted to accomplishing our missions by delivering high quality patient care, education, and research while respecting the human spirit.

Our ultimate goal is to provide the highest quality medical care and scientific knowledge in the future, which includes:

1. To provide patients with the best possible medical care and enable their daily life and health to the utmost extent.
2. To reduce the likelihood of illness with the application of new findings in preventive medicine and clinical studies.
3. To improve the cure rate of illness with the swift application of new findings from clinical trials.
4. To educate medical professionals sensitive to society’ s needs.
5. To train medical professionals who can offer clinical training for students in their internship in the TMDU teaching hospitals and other affiliated hospitals.
6. To discipline medical educators and researchers with a vision for the future, who can advance medical education and practice for coming generations.

In line with these general purposes, we have a few specific aims as follows:

1. To provide a learning environment well organized with multiply attended teaching staff and clinical experiences for undergraduate and postgraduate education.
2. To provide patients with safe and high quality medical care.
3. To develop cooperative relations with central hospitals in the Tokyo area, as well as establishing a support system for providing significant medical contributions to the global community.
4. To conduct collaborative studies including clinical trials with other affiliated hospitals, and widen the coverage of high quality medical care.
5. To promote an effective intercollegiate research environment bringing our intellectual resources in cutting edge medical science to society.
6. To establish efficient and economical management of the hospitals with the highest medical security for the nation.



The University Hospital of Medicine



The University Hospital of Dentistry



University Hospital of Medicine

Beds 800

Hospital Departments

|                                                              |                                   |                                 |                                       |
|--------------------------------------------------------------|-----------------------------------|---------------------------------|---------------------------------------|
| Department of Internal Medicine                              | Hematology                        | Nephrology                      | Cardiovascular Medicine               |
|                                                              | Rheumatology                      | Geriatrics                      | Pulmonary Medicine                    |
|                                                              | Endocrine, Metabolic, Diabetes    | Gastroenterology and Hepatology |                                       |
| Department of Surgery                                        | Esophageal and Gastric Surgery    | Breast Surgery                  | Thoracic Organ Replacement            |
|                                                              | Colorectal Surgery                | Vascular Surgery                | Urology                               |
|                                                              | Hepato-Biliary-Pancreatic Surgery | Thoracic-Cardiovascular Surgery | Head and Neck Surgery                 |
| Department of Sensory, Motor System Medicine and Dermatology | Ophthalmology                     | Dermatology                     | Orthopedic Surgery                    |
|                                                              | Oto-Rhino-Laryngology             | Plastic and Aesthetic Surgery   |                                       |
| Department of Pediatrics, Maternal and Woman's Clinic        | Pediatrics and Pediatric Surgery  | Maternal and Woman's Clinic     |                                       |
| Department of Neurology, Neurosurgery and Neuropsychiatry    | Neurosurgery                      | Neuropsychiatry                 | Psychosomatic and Palliative Medicine |
|                                                              | Neurology                         | Anesthesiology and Pain Clinic  |                                       |
| Department of Radiology                                      | Diagnostic Radiology and Oncology |                                 |                                       |

Trauma and Acute Crtical Care Medical Center

Central Clinical Facilities

|                                   |                                                |                                           |                               |
|-----------------------------------|------------------------------------------------|-------------------------------------------|-------------------------------|
| Department of Pharmacy            | Supply Unit                                    | Department of General Medicine            | Hyper Baric Medical Center    |
| Clinical Laboratory               | Maternity Ward                                 | Outpatient Chemotherapy Center            | ME Center                     |
| Operating Center                  | Department of Pathology                        | Positron Emission Tomography Center       | Center for Cell Therapy       |
| Radiological Center               | Department of Endoscopic Diagnosis and Therapy | Center for Medical Welfare and Support    | Department of Medical Records |
| Hospital Blood Transfusion Center | Department of Medical Informatics              | Clinical Research Center                  | Quality Management Section    |
| Physical Medicine Centerr         | Department of Blood Purification               | Center for Postgraduate Medical Education | Infection Control Center      |
| Intensive Care Unit               |                                                |                                           |                               |

Department of Nursing



New Faculty Building of Medicine

University Hospital of Dentistry

Beds 60 Chair Units 317

Hospital Departments

|                                                             |                                      |                                      |                                |
|-------------------------------------------------------------|--------------------------------------|--------------------------------------|--------------------------------|
| Clinics for Dentofacial Growth and Development              | Orthodontics                         | Pediatric Dentistry                  |                                |
| Clinics for Conservation of Oral and Maxillofacial Function | Operative Dentistry and Endodontics  | Orofacial Pain Clinic                | Temporomandibular Joint Clinic |
|                                                             | Periodontics                         | Head and Neck Psychosomatic Medicine |                                |
| Clinics for Oral and Maxillofacial Rehabilitation           | Oral Surgery                         | Maxillofacial Prosthetics            | Dental Implant Clinic          |
|                                                             | Maxillofacial Surgery                | Sports Dentistry                     |                                |
|                                                             | Prosthodontics                       | Speech Clinic                        |                                |
| Clinics for General Dentistry                               | Oral Diagnosis and General Dentistry | Ambulatory Anesthesia Service        | Cleanroom                      |
|                                                             | Dental Sleep Clinic                  | Oral and Maxillofacial Radiology     | Oral Health Care               |
|                                                             | General Dentistry I                  | Special Care Clinic                  | Dental Allergy                 |
|                                                             | General Dentistry II                 | Dysphagia Rehabilitation             |                                |
|                                                             | General Dentistry III                | Fresh Breath Clinic                  |                                |

Central Clinical Facilities

|                            |                                               |                                                              |                             |
|----------------------------|-----------------------------------------------|--------------------------------------------------------------|-----------------------------|
| Clinical Laboratory        | Center for Advanced Dental Clinical Education | Center for Development of Instruments and Drugs in Dentistry | Section of Central Supplies |
| Dental Laboratory          | Center for Clinical Cooperation               | Division of Surgical Operation                               | Section of Dental Hygiene   |
| Unit for Infection Control | Center for Dental Information                 | Dental Ward                                                  |                             |

Department of Pharmacy

Department of Nursing



Number of Patients

(Fiscal Year 2007)

| Classification                   | Inpatients |         |               | Outpatients |         |
|----------------------------------|------------|---------|---------------|-------------|---------|
|                                  | Total      | Per Day | Bed Occupancy | Total       | Per Day |
| University Hospital of Medicine  | 253,020    | 691.3   | 86.4%         | 516,495     | 2,108.1 |
| University Hospital of Dentistry | 17,958     | 49.1    | 81.8%         | 433,587     | 1,769.7 |
| Total                            | 270,978    | 740.4   | 86.1%         | 950,082     | 3,877.8 |



# Current Projects

- Newly Funded Projects
  - Global COE Program
    - Human Resource Development Plan for Cancer
    - Support Program for Contemporary Educational Needs
    - University Hospitals Collaborative Project to Develop Advanced Medical Specialists
    - Support Program for the Internationalization of University Education
      - Remedial Training Programs
      - Support Program for Distinctive University Education
      - Support Programs for Improving Graduate School Education
      - Special Coordination Funds for Promoting Science and Technology
    - Program of Founding Research Centers for Emerging and Reemerging Infectious Diseases
      - Japan Science and Technology Agency Project to Develop "Innovative Seeds"
      - Supporting Program for Creating University Ventures
    - Molecular Imaging Research Program
    - The Integrated Database Project
    - JSPS Core to Core Program
  - Program for Accelerating Internationalization of Higher(University)Education
    - Project for the Strategic Development of Industry-University-Government (I-U-G) Collaboration(Strategic Development Program)
    - Special Funds for Education and Research
      - Funds for Subjects Related to Policies
    - Medical and Dental Sciences, Master of Medical Administration Course
  - Intellectual Property Division · Technology Licensing Organization (TLO)

# Newly Funded Projects

The following proposals by TMDU were newly funded in year 2008

## Global COE Program

### International Research Center for Molecular Science in Tooth and Bone Diseases

Program Leader : Masaki NODA, MD, PhD (Director, Medical Research Institute)

→ Page 40

## University Hospitals Collaborative Project to Develop Advanced Medical Specialists

### Development of Advanced Medical Specialists through the Province-Urban University Hospital Network : Tailor-Made Medical Training Program to Acquire "Extra Merit"

Principal Investigator : Tohru SAKAMOTO, MD, PhD (Director, University Hospital of Medicine.)

→ Page 43

## Remedial Training Program

### Remedial Training Program for Recruiting Women Doctors Who Have Started Families to Reduce the Shortage of Doctors in Japan

Principal Investigator : Nobuo NARA, MD, PhD  
(Director, Center for Research in Medicine and Dentistry)

→ Page 45

## Special Coordination Funds for Promoting Science and Technology

### Innovative Support for Women Scientists

Principal Investigator : Takashi OHYAMA, DDS, PhD, President

→ Page 51

## Program of Founding Research Centers for Emerging and Reemerging Infectious Diseases

### Ghana-Tokyo Medical and Dental University Research Center

Principal Investigator : Nobuo OHTA, MD, PhD (Professor, Section of Environmental Parasitology, Graduate School of Medical and Dental Sciences)

→ Page 55

# Newly Funded Projects

## Japan Science and Technology Agency Project to Develop "Innovative Seeds" Supporting Program for Creating University Ventures

### Development of a Disposable, Magnetically Levitated Centrifugal Blood Pump

Principal Investigator : Setsuo TAKATANI, PhD, DMed  
(Professor, Department of Artificial Organs, Institute of Biomaterials and Bioengineering)

→ Page 56

## Program for Accelerating Internationalization of Higher (University) Education

### International Education Program for Interdisciplinary Disease Science

Principal Investigator : Hiroshi TANAKA, DM, PhD (Dean, Biomedical Science PhD Program)

→ Page 60

## Project for the Strategic Development of Industry-University-Government (I-U-G) Collaboration (Strategic Development Program)

### Promoting International Industry-University-Government (I-U-G) Collaborative Activities

Principal Investigator : Yuko MAEDA, PhD  
(Director, Intellectual Property Division, Technology Licensing Organization)

→ Page 61

## Special Funds for Education and Research

### Research Project of Sensing Biology

Principal Investigator : Kohji MITSUBAYASHI, PhD (Professor, Department of Biomedical Devices and Instrumentation, Institute of Biomaterials and Bioengineering)

→ Page 62

## Funds for Subjects Related to Policies

### Special Education Program for Creating a Liberal Arts Education Model for Medical and Dental Universities—A Refinement of Liberal Arts Education at Tokyo Medical and Dental University

Principal Investigator : Masaru WADA, PhD (Dean, College of Liberal Arts and Sciences)

→ Page 68



## Global COE Program

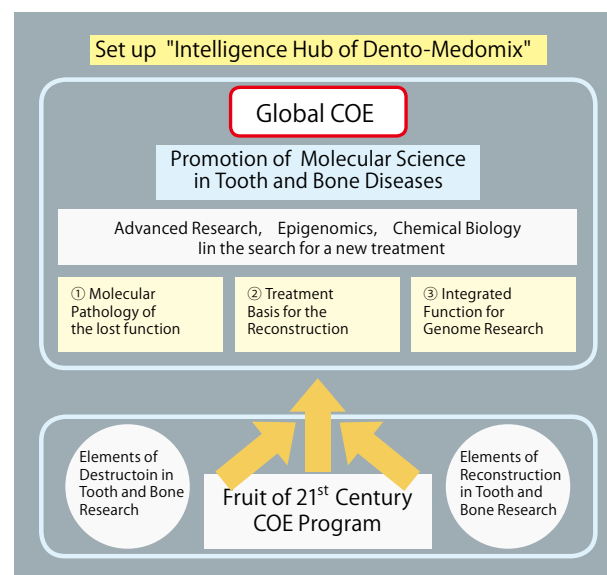
### International Research Center for Molecular Science in Tooth and Bone Diseases

Program Leader : Masaki NODA, MD, PhD (Director, Medical Research Institute)

Tokyo Medical and Dental University is a distinguished institute and known as a world center for the study of "tooth" and "bone" diseases. The purpose of this Global COE (G-COE) program is to form a world-top class research center in the field of tooth and bone diseases. This program is a new development as well as succession of previous 21st century COE (21COE) program. We will promote our cutting-edge studies on tooth and bone diseases and form a unique international educational research center. Our G-COE center will nurture young researchers of the next generation who will work globally on molecular science in "tooth" and "bone" diseases. This is critical for the future welfare of all human beings, and is of particular importance in Japan, the world's fastest aging society.

In modern developed countries, maintenance of not only life expectancy, but also "healthy life expectancy" is an important issue, and "tooth" and "bone" diseases are major problems that need to be urgently addressed in this regard. In the 21st century COE program, this center has made a remarkable accomplishment in clarification of the mechanism of loss of tooth and bone, and in discovery of novel methods for tooth and bone reconstruction by finding "key elements" of the regulatory systems in the function of osteoclasts and osteoblasts, and "key elements" in initiation for clinical medicine. However, identification

of individual "key elements" alone is not enough to understand the mechanisms of the comprehensive pathology and onset of the diseases. Thus, in the Global COE center, such "elements" of basic studies and "elements" of clinical research discovered in the previous 21st Century COE program will be integrated and developed into three areas including (1) elucidation of basic molecular mechanisms in pathology of the diseases leading to loss of tooth and bone, (2) fundamental clinical research for diagnosis and therapeutic treatments, and also (3) advancement of functional genomic studies on tooth and bone diseases based on genomic and epigenomic science. Through the research into these three areas, this center will aim to become the highest standard organization in the world in terms of "integrated research on molecular science for tooth and bone diseases". Moreover, we will further develop the "international research network". Through this, we will establish "an intelligence hub" that will create innovative science and lead the research of the world to provide cutting edge information worldwide.



## Human Resource Development Plan for Cancer

### Training Program for Specialists in Cancer

Principal Investigator : Kikuo OHNO, MD, PhD (Vice Dean, Graduate School of Medical and Dental Sciences)

Cancer has the highest mortality rate in Japan. It is imperative to build a new system where medical professionals work as a team to deal with cancer in a comprehensive manner; from diagnosis, to treatment, and to terminal care. We need to produce doctors who are specialized in highly sophisticated treatments as well as co-medical staff who are also experts in cancer treatment.

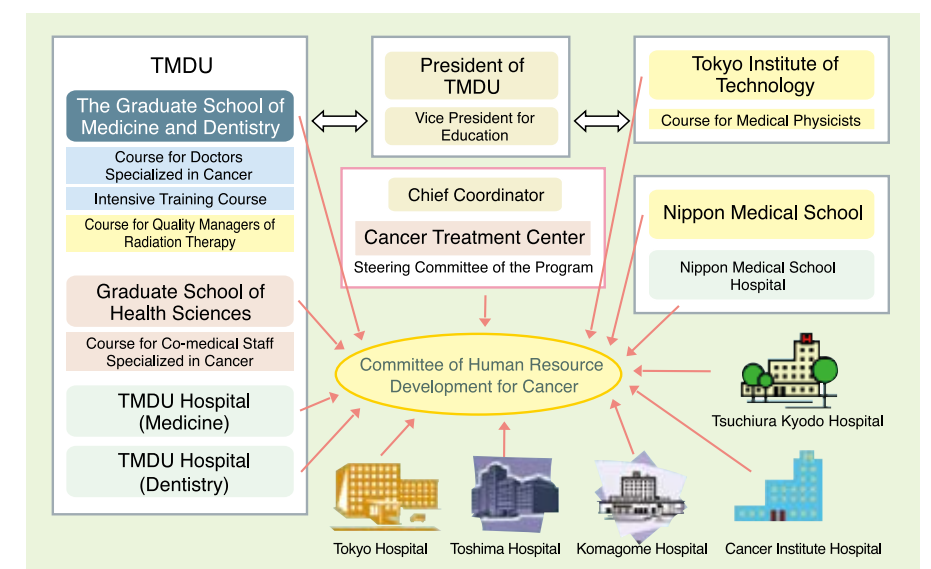
The unique aspect of this program is a network where various medical and educational institutions work together with the Cancer Treatment Center, which coordinates the whole program. The Graduate School of Medicine and Dentistry, Graduate School of Health Sciences, TMDU Hospitals, Nippon Medical School, Tokyo Institute of Technology, Tokyo Metropolitan Komagome Hospital, the Cancer Institute Hospital, Tokyo Metropolitan Toshima Hospital, Tokyo Hospital, and Tsuchiura Kyodo Hospital are taking part in this program.

This training program has three courses. The first one is a training course for doctors, which is divided into three

specializations: radiation therapy, chemotherapy, and palliative therapy. The second course is designed for co-medical staff. This course offers two educational programs: one is aimed at nurses who are specialized in nursing care for cancer patients, and the other is for medical physicists and quality managers of radiation therapy. The third is an intensive training course for specialists who are already engaged in cancer treatment.

It is time to introduce a new mode of cancer treatment. From now on we need to take a more holistic approach toward cancer treatment rather than treat specific aspects of the disease. A team of specialized physicians and co-medical staff needs to collaborate to design treatment and care plans for an individual patient instead of supplying a patterned combination of a surgical operation with postoperative supplementary chemo/radiation. We are making every effort to develop a new educational system to foster qualified human resources who will be able to provide coherent and comprehensive treatment for cancer.

### Training Program for Specialists in Cancer



## Support Program for Contemporary Educational Needs

### Integration of Information and Communication Technology into Clinical Training

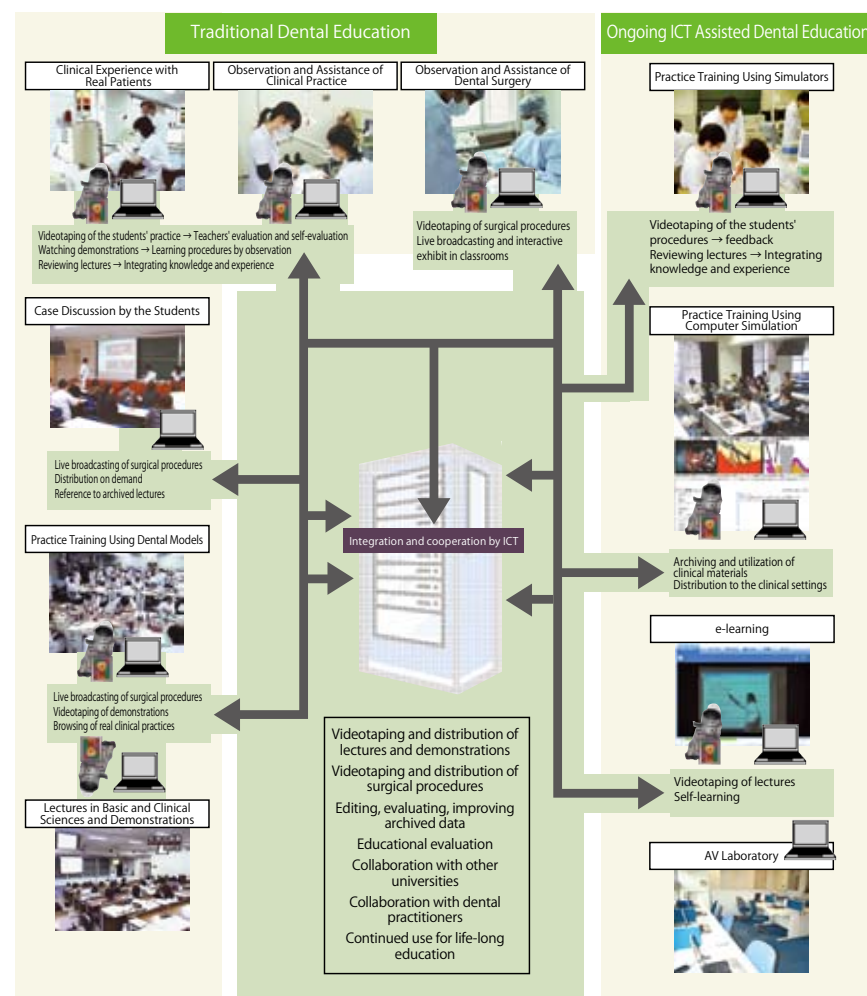
Principal Investigator : Junji TAGAMI, DDS, PhD (Dean, Faculty of Dentistry)

Since the School of Dentistry, TMDU, was founded in 1928, clinical experience with real patients and practice training using dental models have been key elements of clinical education. In later years, information and communication technology has been actively utilized, enabling our students to utilize computer-assisted simulation system, lectures on-demand, online assignments, and online examination.

The aim of this program is to integrate traditional educational methods and advanced information and communication technology, by which clinical training, practice training, and lectures will be able to be effectively interlinked.

The key focus of this program is to expand digital content. Employing automatic visual recording system, we are planning to establish a digital archive of (1) treatments and surgeries, (2) demonstrations of dental practices, (3) lectures, and (4) student trainings. Then we will launch an on-demand distribution system in order to incorporate these contents into clinical education, which the students will be able to use for self-evaluation and learning.

In mobilizing these high-end technologies, our ultimate goal is to establish new, more practical educational methods, closely linked with real clinical settings, by which we can produce fully skilled personnel who have an inquiring mind enabling them to learn about problems themselves as well as their solutions.



## University Hospitals Collaborative Project to Develop Advanced Medical Specialists

### Development of Advanced Medical Specialists through the Province-Urban University Hospital Network: Tailor-Made Medical Training Program to Acquire "Extra Merit"

Principal Investigator : Tohru SAKAMOTO, MD, PhD (Director, University Hospital of Medicine)

This project was launched in 2008 as one of the University Hospitals' Collaborative Projects to Develop Advanced Medical Specialists. Its aim is to build a collaborative network among medical institutes in the Tokyo area as well as understaffed provincial regions in order to produce advanced medical specialists and excellent general physicians.

Faculties of medicine of TMDU, Akita University, and Shimane University have produced numerous medical doctors who assume leading roles in community healthcare. This has been achieved through full coordination among a university hospital as an advanced medical institution and its affiliated hospitals in each region.

These three university hospitals already started an inter-university training program for post-graduate clinicians in 2007. We have extended this program, implementing new training programs for medical specialists and general practitioners.

The participants in these programs can choose (i) a three-month program or (ii) a one-year program to acquire extra merit as a specialist or a general practitioner. These three universities have graduate schools and admit working people as well. If participants wish to follow their academic interest in the fields they experience during their intern training, they can go to the graduate school to pursue their interest and get a degree.

As another advantage of this project, participants can have very different experiences in areas around Tokyo as well as in rural areas suffering from a shortage of medical staff. This wide-range of experiences should broaden their view of medicine.

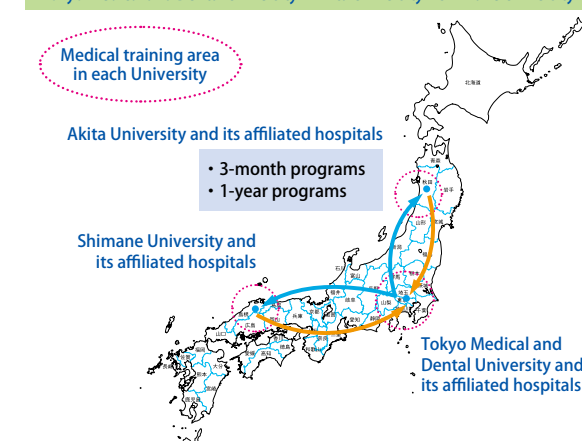
We have an effective strategy for the training: 2nd year interns and residents work under the guidance of skilled specialists in advanced medical treatment, and they are required to act as an instructor for 1st-year interns and medical students, through which experience they can strengthen the base of their own knowledge and skills.

E-Portfolio (electronic portfolio) is another feature of this project. We use TV conference, an online network to share information, and one common Web-based form is used for participants' assessment. These ensure consistency in training and assessment methods when participants change training sites. As a part of three-month or one-year training packages, registered participants are provided with travel expenses and accommodations.

Thus, this project enables the participants to set a clear goal and have a training program specifically designed for individual participants. It is hoped that this idea of 'tailor-made' medical training will open up a new era of medical training in Japan.

### Development of Advanced Medical Specialists through the Province-Urban University Hospital Network

-Tailor-Made Medical Training Program to Acquire "Extra Merit"-  
Tokyo Medical and Dental University • Akita University • Shimane University



### Examples of The Training Packages

3-month programs ←Registered participants are provided with travel expenses and accommodations.

**ER Training of Flying Doctor Services**

**Thoracic Cardiovascular surgery**

**Shimane University Training of Remote Medical Care**

**Akita University Training of Home Medical Care**

1-year programs

**Neurosurgery**

**Urology**



## Support Program for the Internationalization of University Education

### Education Alliance in This Age of Globalization of Medicine

Principal Investigator : Takehito TAKANO, MD, PhD  
(Professor, Division of Public Health, Graduate School of Medical and Dental Sciences)

This program aims to promote international alliances in medical education by fostering eminent professionals who can commit to develop better health care systems around the world. The program is expected to be a model of international collaboration in education with overseas medical institutions and universities that will install strategic capacity-building programs through learning gained from public health and medical care systems in Japan and other countries. As an education program for the healthcare field, this program takes an advantage of collaboration with the World Health Organization (WHO) to effectively expand international cooperation in the field of medical education.

This program includes the following activities:

- Inviting young leaders of health and medical fields from countries around the world and offering them public health leadership courses to help them acquire skills and knowledge in developing better healthcare systems. Both Japanese and international students participate in these leadership courses conducted in English.
- Sending instructors to foreign countries to conduct educational activities, in collaboration with universities and institutions in other countries.
- Developing bilingual teaching materials in English and Japanese to enable healthcare leadership education across countries.
- Strengthening the collaboration with WHO in human resource development to nurture leaders who can enhance quality of healthcare throughout the world.
- Designing a new curriculum for an international leadership course in healthcare.



## Remedial Training Programs

### Remedial Training Program for Recruiting Women Doctors Who Have Started Families to Reduce the Shortage of Doctors in Japan

Principal Investigator : Nobuo NARA, MD, PhD (Director, Center for Research in Medicine and Dentistry)

Recently, a shortage of doctors in OB-GYNE, pediatrics, surgery, and anesthesiology has become apparent in Japan. The need for such doctors in these fields is an urgent issue nationwide. Now females comprise more than 30 percent of the medical students and this is expected to increase. However, women doctors at home find difficulty in coming back to the clinics after child care. One of the most effective strategies to increase such doctors in Japan is to recruit these doctors who left the clinics for delivery and child care to return to the clinics. The reasons why they might not come back to the clinics are the following: first, they are afraid of returning to their clinics after such a long interval; second, they are not familiar with state-of-the art medicine; and third, they feel that they still have to continue child care at home.

A remedial training program is planned to recruit such doctors to the clinics by enhancing their potential. They

are able to apply for the course on the website at any time. The program consists of the following content for two weeks: first, simulation-based learning in the clinical skills laboratory at Tokyo Medical and Dental University; second, ward training at Ome Municipal General Hospital; and third, small seminar learning state-of-the art medicine at Tokyo Medical and Dental University. The trainees' knowledge and skills are finally evaluated by a multiple choice examination and OSCE(objective structured clinical examination). If the trainee passes, she is given the certificate of mastering the training course.

The remedial training program will recruit many such doctors to the clinics and improve the shortage of doctors. The ultimate goal of the program is to contribute to the population nationwide.

URL : <http://www.tmd.ac.jp/mdc/return/>





## Reeducation Program for Responding to Social Needs for Dental Hygienists and Dental Technologists

Principal Investigator : Yuzo TAKAGI, DDS, PhD (Director, Center for Education and Research in Oral Health Care)

This reeducation program is aimed at supporting the dental hygienists and dental technologists who are currently at work or planning to return to work to acquire the latest knowledge and techniques so as to actively and productively pursue their career.

We offer two courses — the dental hygienist course and the dental technologists course — both of which are designed to respond to the rapid changes in the healthcare environment. These programs introduce interdisciplinary approaches to the curriculum. Although two-year courses used to be prevalent in education for dental hygienists, three-year programs have been introduced in 2004, and since then they have been increasing. In order to fill the gap between these two educational systems, we offer a one-year supplementary program for those who already finished a two-year program. We also provide a program for dental technologists who have finished their job training programs two to ten years ago.

Our educational policy is to motivate the students to develop self-directed learning habits that would empower them to initiate independent learning of new concepts and skills, and integrate them with the knowledge and didactic skills provided in the program. Distance learning and e-learning programs are also available so that students can access them from their work sites or from home, thereby complementing and enhancing the knowledge and clinical techniques they acquired at the university.



## Remedial Training Program for Mid-Career Nurses Making Career Transitions

Principal Investigator : Akiko HONDA, RN, PhD (Professor, Home Care Nursing, Graduate School of Health Care Sciences)

The central aims of this program are to support mid-career nurses intending to further their career by improving their practical skills and to assist those who are returning to work as a nurse after a long hiatus. We also help those who want to pursue their career in a specialized field of nursing. In this remedial education program for nurses, they are expected to acquire self-directed learning habits that, we believe, will lead them to achieve self-fulfillment in their professional career.

We offer one generalist course and four specialist courses, responding to the needs of nurses making career transitions. In specialist courses we have four divisions: home care nursing, midwifery, research, and education. Participants can take some courses for undergraduate and graduate students at TMDU as well as courses offered in this program.

We hope this program will provide mid-career nurses with opportunities for lifelong learning. We issue certificates to the participants of this training program, which will help them obtain other professional qualifications certified by other official bodies.

The educational goals of this program are:

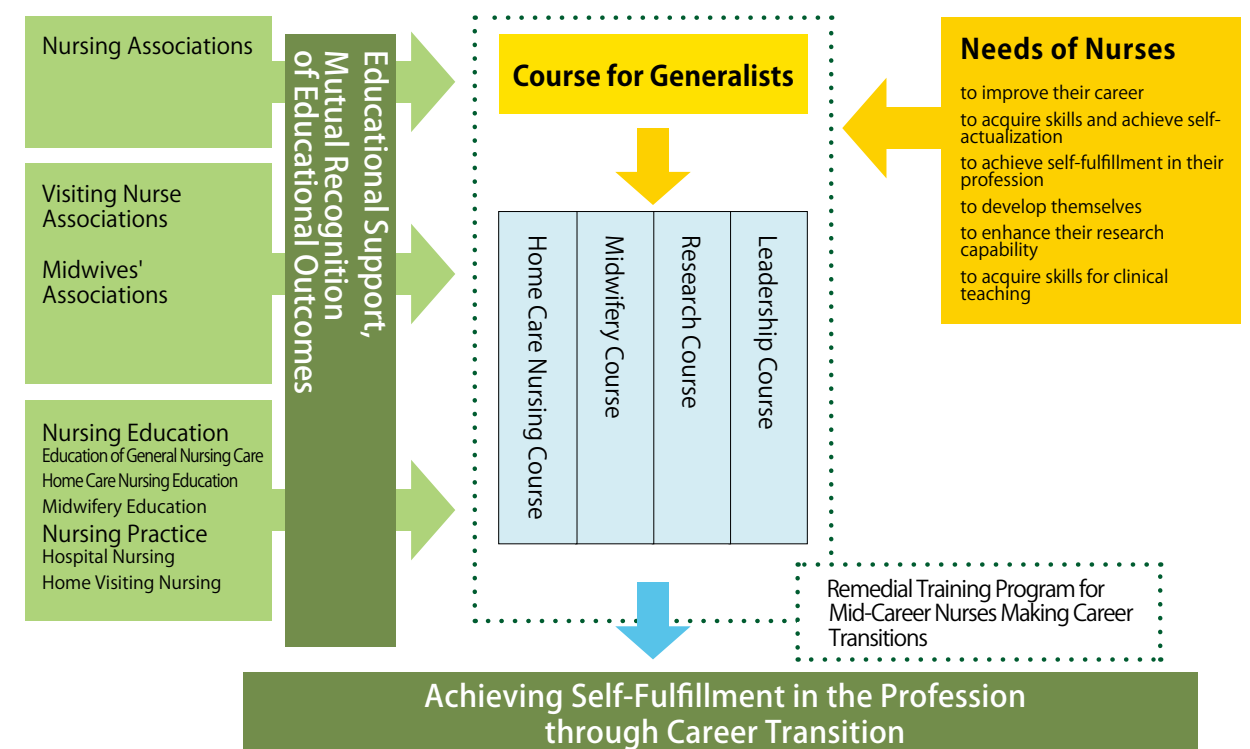
"To encourage mid-career nurses to pursue a more rewarding career in the medical profession"

"To help mid-career nurses acquire new skills and qualifications to develop their career".

At the end of this program, the participants will:

- ① Have their own initiative to develop themselves in their profession
- ② Have renewed practical skills and management ability in their specialized field of nursing
- ③ Have leadership skills and an inquiring mind for further development of nursing science.

### Overview of the Program



## Support Program for Distinctive University Education

### Establishment of a Computer Assisted Education System on Clinical Simulation for Medical and Dental Practice Training

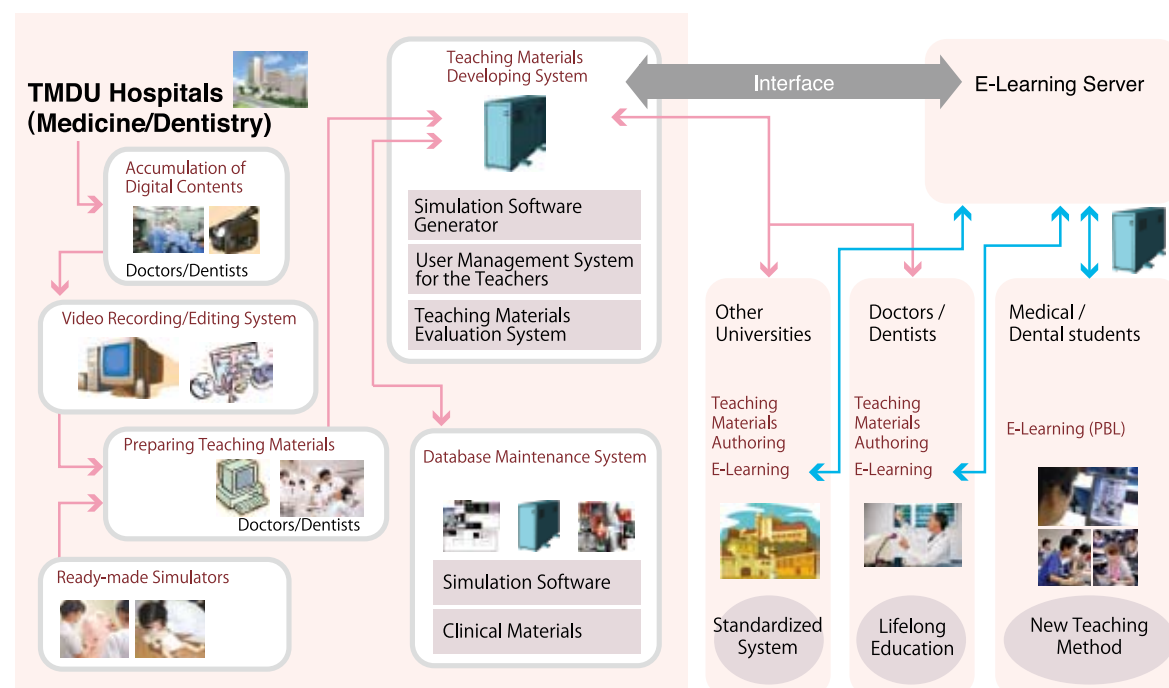
Principal Investigator : Atsuhiko KINOSHITA, DDS, PhD (Professor, School of Oral Health Care Sciences)

In order to advance the clinical ability of medical and dental students, we will establish a computer assisted education system using clinical materials such as macro photographs, X-ray photographs, CT images, MRI images, operation movies, endoscopy movies, cardiac sounds, and breath sounds.

As a part of this program, we engage in the following:

- (1) Developing a simulation software generator which enables non-specialist computer users to create multimedia medical and dental simulation software. These multimedia training aids make it possible for the students to simulate clinical experiences such as a medical interview, examination, diagnosis, treatment planning, surgery, and other medical procedures.
- (2) Constructing databases of medical data, scenarios for case study, and medical / dental simulation software itself, to which both the teachers and the students can access on demand under secure access control.
- (3) Incorporating the medical / dental simulation software into an e-learning system and appraise its educational effects.
- (4) Utilizing ready-made simulators for medical and dental education.

### Future image of Computer Assisted Education System on Clinical Simulation for Medical and Dental Practice Training



## Support Programs for Improving Graduate School Education

### Global Linkage Program between University and Industry

Principal Investigator : Hiroshi TANAKA, DM, PhD (Dean, Biomedical Science PhD Program)

For our Biomedical Science PhD Program, we have designed and implemented an educational program which fosters human resources who can promote practical studies in fusing the interdisciplinary fields related to complex disease research with leading-edge life science. Soon after its launch, our program, "International Educational Program in Biosciences", was granted support from the Ministry of Education, Culture, Sports, Science and Technology as part of their Attractive Education in Graduate Schools program. By introducing an international viewpoint into our graduate school education, we have succeeded in producing a new type of researcher who can show initiative in discussions with overseas scientists in English.

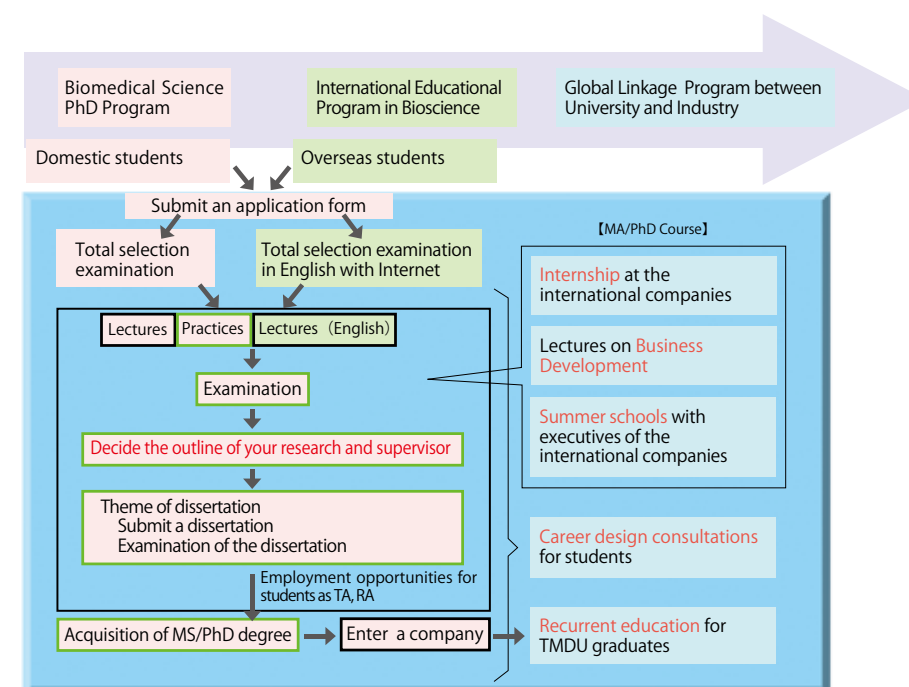
Now, our newly started program, "Global Linkage Program between University and Industry", takes the next step. The chief aim of the program is to help the students to develop their communication skills pursue their career paths in the international community. While strengthening the foundation of basic competence nurtured by the former

program, the students can develop their application skills in this program.

This program is more case and experience oriented than the former program which mainly consisted of classroom lectures and seminars. The students can have internship opportunities at international business firms or international research institutes to see real-world examples and global trends and envisage future needs. The students are also provided with specialist consultations which support them to define their career objectives, which can help maximize the educational effects of internships. We also collaborate with international companies and open a school where our students and faculty study business strategies and hone their communication skills.

Thus our program aims to enhance linkages between the graduate school and international business arena while supporting our students to contribute to the global community.

### Graduate School Education Meets the Needs of International Society



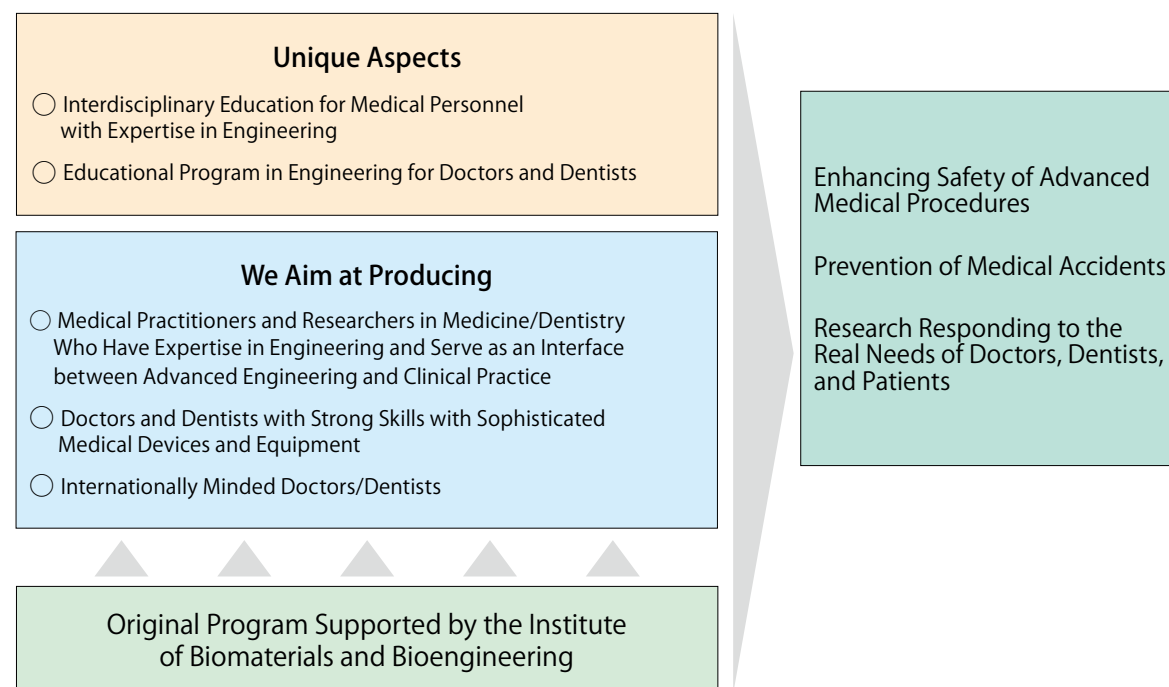
## Educational Program for Specialists Interfacing between Advanced Engineering and Medical/Dental Practice

Principal Investigator : Junji TAGAMI, DDS, PhD (Dean, Graduate School of Medical and Dental Sciences)

Life science and engineering in medicine/dentistry have been the two principal fields for research and education at graduate schools of medicine and dentistry. Recently, however, people in such schools tend to focus on research in life science because its advancement invariably leads to marked progress in clinical medicine. Developments in life science have also greatly contributed to the improvement of surgical therapeutics and dental treatments. Research in engineering is, however, essential for advancement of clinical practice in surgery and clinical dentistry because it heavily depends on sophisticated biomaterials and medical equipments.

The main aim of this project is to reform the educational program in the field of engineering in medicine/dentistry in order to produce specialists who can serve as an interface between advanced engineering and clinical practice. Interdisciplinary educational programs have been hitherto offered for the students majoring in science and technology to acquire the knowledge of medicine and dentistry, but no systematic educational program in engineering and technology has been available to doctors and dentists. The unique aspect of this program is that it is aimed at offering to medical doctors and dentists, and this original program can be offered by only TMDU with its affiliated research institution ; The Institute of Biomaterials and Bioengineering.

### Educational Program for Specialists Interfacing between Advanced Engineering and Medical Practice



## Special Coordination Funds for Promoting Science and Technology

### Innovative Support for Women Scientists

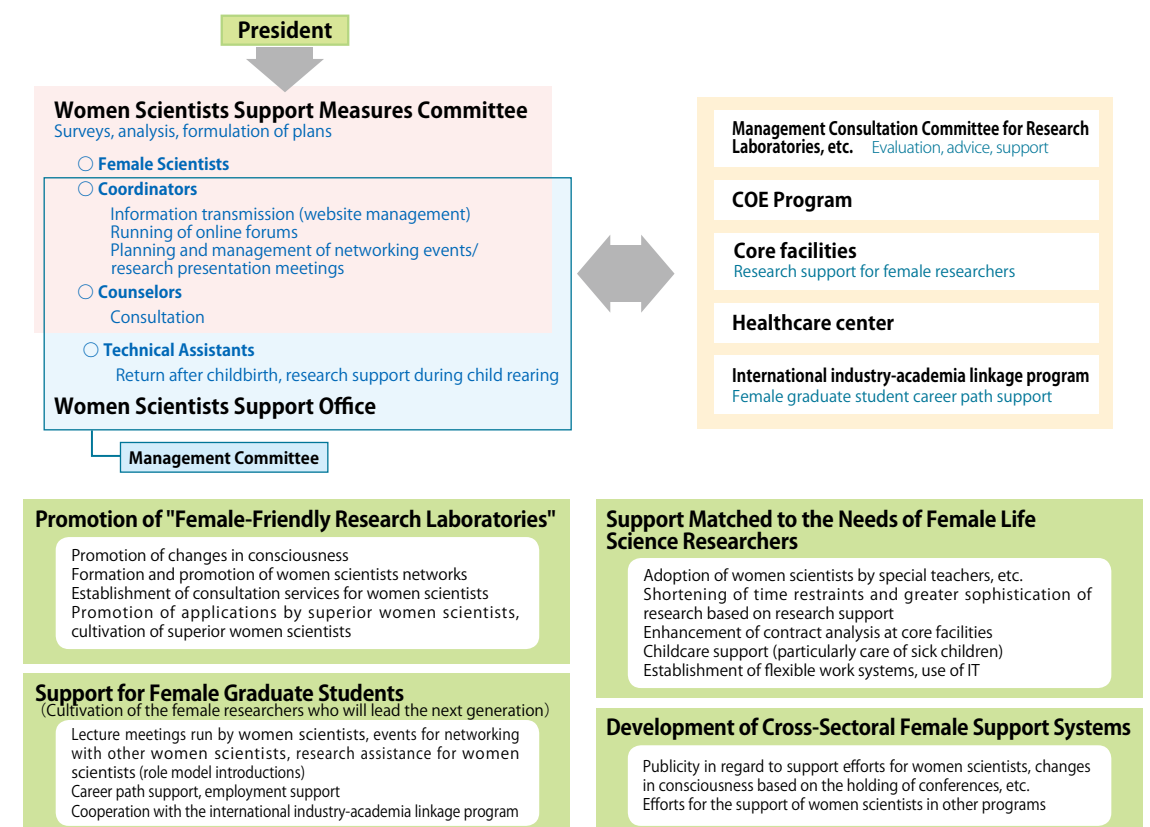
Principal Investigator : Takashi OHYAMA, DDS, PhD, President

The university adopted this program as the "Women Scientists Support Model Development Program" using Special Coordination Funds for Promoting Science and Technology. The program is being implemented from March 2008 for a planned 3-year period.

The program has only just started, but Special Professor Araki, who is supervising the program, has taken up her post. Along with opening a Women Scientists Support Office, Special Professor Araki has also launched a Women Scientists Support Measures Committee, proposed measures and policies and established an implementation system. Applications for this program have centered on the Medical Research Institute, the Institute of Biomaterials and Bioengineering, the School of Biomedical Science and the Biomedical Science PhD Program, but diffusion across all academic areas has been called for and the Women Scientists Support Measures Committee has also been made up with a

multi-disciplinary perspective.

This program will prioritize the promotion of suitable arrangements in research environments and changes in consciousness so that Women Scientists can demonstrate their abilities to the maximum. The program will advance exchanges and networks among Women Scientists through activities such as conferences, networking events and online forums, and will also promote the presentation of role models to female students and changes in their awareness of research. In addition, the program will promote the hiring of researchers and aim at support for life events such as childbirth and child raising and other issues particular to women, as well as environmental arrangements so that IT is set up and women can work flexibly. The program is also aimed at increasing awareness by promoting research on gender medicine.





Medical Top Track (MTT) Program

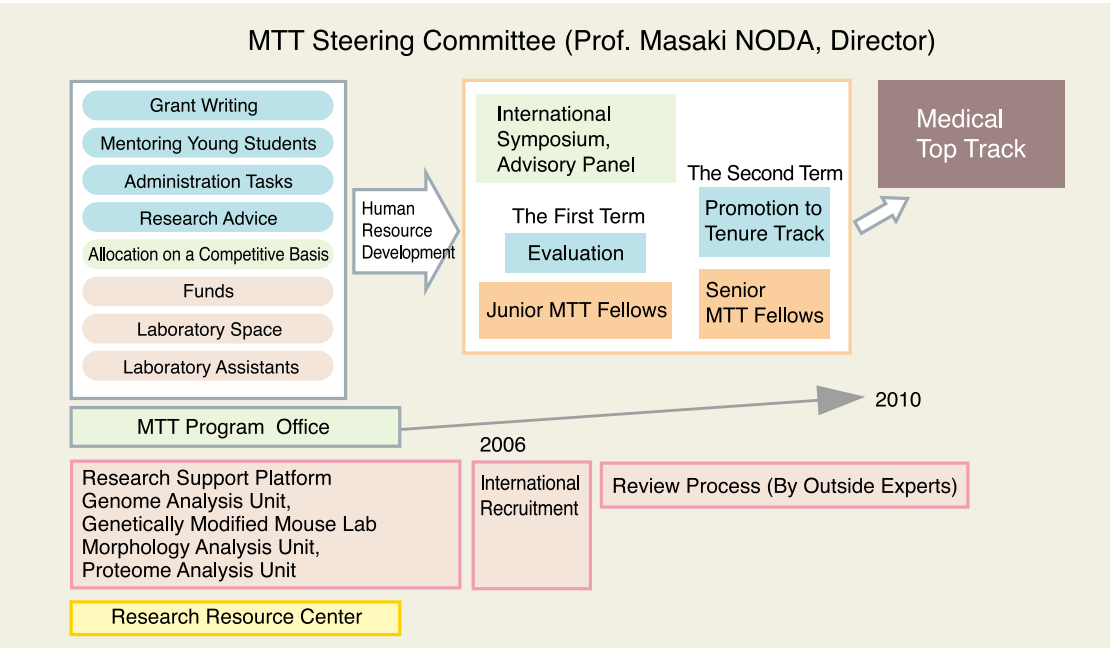
Principal Investigator : Masaki NODA, MD, PhD (Director, Medical Research Institute)

The Medical Top Track (MTT) program is designed to establish a system where we nurture young investigators in medical science. Within this program we will recruit MTT Fellows based on a competitive application process which examines their scientific accomplishments as well as their performance in English interviews regarding the scope of their future research. We have invited outside experts as well as experienced researchers to create a promotion committee for this program. This committee is also in charge for selection of MTT Fellows. The candidates should have up to ten years of postdoctoral research experience. Strong candidates should have the ability to raise funds to conduct pioneering research and possess a strong motivation to pursue a career in scientific research.

MTT Fellows will be provided (on a competitive basis) with (1) funds to start the fellowship, (2) laboratory space, and (3) postdoctoral laboratory assistants to help them. In the first three years of their fellowship they are referred to as Junior MTT Fellows and should be committed to their research activities, with necessary support offered from the Research Support Platform and the Research Resource Center affiliated with the Medical Research Institute.

While continuing to engage in their research they can have opportunities to participate in a wide range of experiences, which will be required to become future leading scientists. Senior MTT Fellows also mentor their younger colleagues. A grant writing course is offered for them to grade up their skill in writing grant applications. They will also experience management administration tasks in their laboratories. The Senior MTT Fellows who have produced outstanding achievements can be promoted to a tenure track faculty position at our institute or outside our university.

Thus, MTT Fellowship is a preliminary step to be appointed as an assistant or associate professor. One of the objectives of this program is to enhance the mobility of research personnel and to establish a new tenure system in the medical science community in Japan. We are aiming to create a new, competitive model where young, talented researchers are encouraged to take an additional challenge.



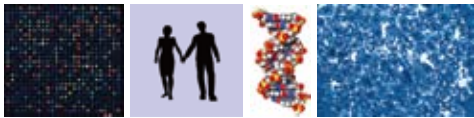
Educational Program for Biomedical Omics Information Scientists

Principal Investigator : Hiroshi TANAKA, DM, PhD (Director, Information Center for Medical Sciences)

As the Human Genome Project showed, advancements in the information science and computational technology are vital for the development of life science. Bioinformatics is a new field of research that integrates life science and information science. At the moment, however, there are not enough researchers actively working for the development of this area. Now that the Human Genome Project has been completed, diverse pioneering investigations have been pursued, such as genome-wide profiling of gene expression processes with microarray techniques and comprehensive analysis of cell proteins with mass spectrometers. Life science is now expanding its field, encompassing holistic information to understand complex life systems—this broad discipline is termed *omics* and its application to clinical medicine is anticipated greatly.

In 2003 TMDU launched a five-year project to offer study opportunities to medical scientists for learning both life science and information science. This Educational Program for Biomedical Omics Information Scientists has been granted funding as a project to promote science and technology from the Ministry of Education, Culture, Sports, Science and Technology. The main goal of this program is to nurture doctors and medical personnel who can integrate life science and information science into practical applications in medicine and contribute to the further development of biomedical omics.

This educational program is also aimed at bioinformaticians who have been active in their field and are planning to diversify their activities into medical science. A special course is offered for them to acquire basic and practical knowledge in medicine and to learn methods of information management in omics. We believe that this program can qualify students to open up a new frontier in biomedical omics.



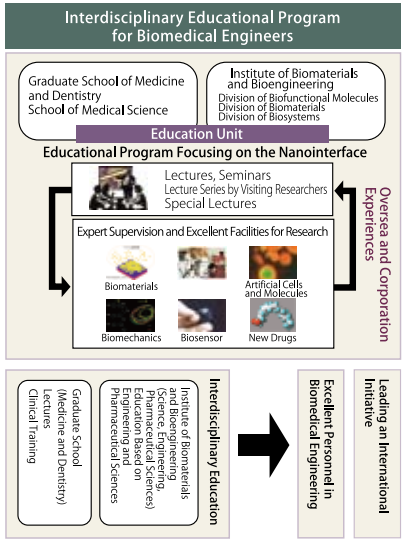
Interdisciplinary Educational Program for Biomedical Engineers

Principal Investigator : Kimihiro YAMASHITA, PhD (Director, Institute of Biomaterials and Bioengineering)

The objective of this program is to produce biomedical engineers who are sufficiently knowledgeable about basic science and highly skilled in applicable techniques, and able to contribute to the development of nanotechnology and multidisciplinary research related to nanotechnology. The program is aimed at students of the TMDU Graduate School of Medicine and Dentistry, the Biomedical Science PhD Program of TMDU, and students sent to our institute by business companies. Our ultimate goal is to supply excellent personnel to the academic and industrial arenas who can exercise initiative for technological progress.

The key technology of our research and education is focused on the nanointerface, that is, the technology to control the interface reaction at the nanometer scale. By building a close linkage between basic science and technology, we nurture researchers who can develop new and highly functional biomaterials, materials for drug delivery system, and medical devices/systems for diagnosis.

We offer courses in science, engineering, and pharmacy as well as medicine and dentistry. By inviting lecturers from abroad and sending our students to overseas institutions and business companies, we also encourage the students to expand their experience and deepen their understanding of the global science community.



## Educational Program for Intellectual Property Evaluation in the Life Science

Principal Investigator : Yuko MAEDA, PhD (Director, Intellectual Property Division, Technology Licensing Organization)

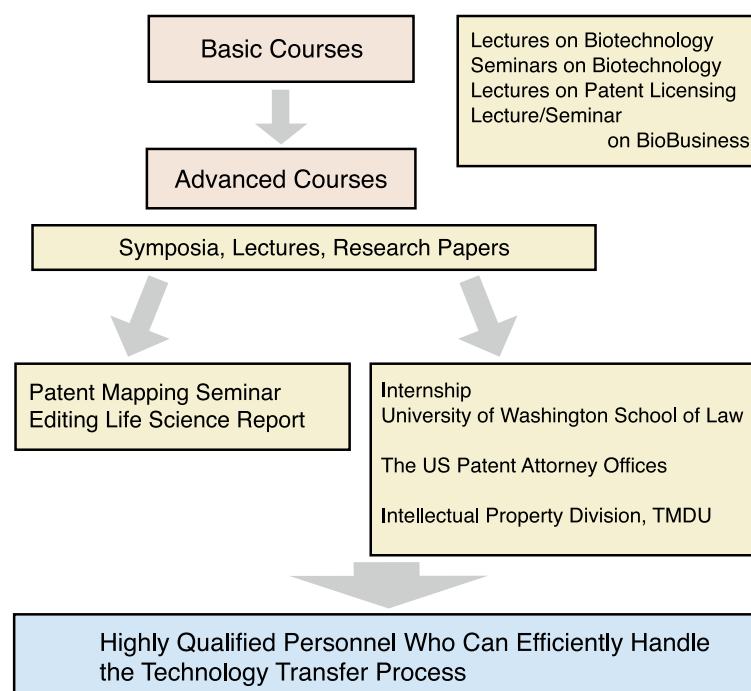
Life science (including medicine and dentistry) is predicted to be a key alternative area to information technology in the 21st century, and it is an urgent national agenda for Japan to accumulate intellectual properties in this field. We must have sufficient knowledge not only in life science but also in patent systems and regulations, along with a strategic analysis of market needs, in order to accurately evaluate intellectual property in life science. English competency is also required as significant patents in medicine and biotechnology are applied mainly in the USA. Unfortunately there is a serious shortage of qualified personnel for this purpose in Japan, and as a result many technological inventions are yet to be properly evaluated. This problem is particularly urgent within intellectual property divisions and technological licensing organizations of universities, and in the financial industry including venture capital firms which invest in bio-venture companies. The chief aim of this program is to nurture qualified appraisers of intellectual property, by which we can

efficiently promote technology licensing and stimulate new industries. We are also aiming at producing patent attorneys who are knowledgeable in life science. We believe this will be of great help to accumulate intellectual properties in Japan.

The Intellectual Property Division, TMDU, employs graduate students who have expert knowledge in life science as intellectual property assistants and give them opportunities to take part in intensive educational courses offered by experienced patent attorneys and IP managers, and to experience on-the-job training investigating patents in medicine and biotechnology, filed both at home and abroad.

This educational program is not only aimed at graduate students of TMDU, but, with support from the Biomedical Science PhD Program and School of Biomedical Science, students of other universities and business people. We are making efforts to produce experts in intellectual property evaluation in the life science.

### Educational Program for Intellectual Property Evaluation in the Life Science



## Program of Founding Research Centers for Emerging and Reemerging Infectious Diseases

### Ghana-Tokyo Medical and Dental University Research Center

Principal Investigator : Nobuo OHTA, MD, PhD (Professor, Section of Environmental Parasitology, Graduate School of Medical and Dental Sciences)

As a global problem to be solved in the 21st century, infectious diseases have attracted a large amount of attention from various fields such as medical, social, economic and political. We are still living in the era in which an infectious disease breakout can occur anytime and anywhere. We must be aware of the fact that breakouts of emerging infectious diseases that have never encountered in the past could possibly arise.

The most important factor for the success of disease control depends on collection of information. Many emerging and reemerging infectious diseases have occurred in developing countries; therefore, it is necessary to establish partnership with researchers in those areas for the real-time data collection. "Program of Founding Research Centers for Emerging and Reemerging Infectious Diseases" by MEXT was launched in 2005 to meet the urgent need of Japanese society, to aim for strengthening the cooperation established between the researchers in Japan and developing countries, and to implement an initiative role in Japan for the purpose of infectious diseases research and control in the world.

Tokyo Medical and Dental University has promoted the project of research partnership on infectious diseases at Noguchi Memorial Institute for Medical Research, The University of Ghana, Ghana, in cooperation with Research Institute of Tuberculosis, Japan anti-Tuberculosis

Association. Infectious diseases are prevalent in West African sub-region where Ghana is located. Not only HIV/AIDS, tuberculosis and malaria, but also viral hemorrhage fever such as Lassa fever and Yellow fever, parasitic diseases such as African sleeping sickness and schistosomiasis, bacterial infections such as Buruli Ulcer which is specific for West African sub-region remain to be serious problems in the public health. However, the medical research for those infectious diseases still remains to be developed. Considering those, it is required to build up reliable epidemiological data and informational network. There are still many problems in an applied medical field, for instance, performing proper protocols for treatment and developing new treatment. We assume that it is possible to promote not only the research but also the development of human resources and the countermeasure for diseases effectively by establishing a research center where we can perform on-site research of infectious diseases.

The Japanese government established Noguchi Institute in Ghana named after Dr. Hideyo Noguchi. Noguchi Institute is one of the most excellent levels of research environments in West African sub-region; they have P3 level laboratory facilities and an experimental animal center. Two researchers from Tokyo Medical and Dental University are dispatched to Noguchi Institute, and we have started research for viral and parasitic infectious diseases on the partnership with the researchers at Noguchi Institute. The last year was 80th anniversary after Dr. Noguchi succumbed to Yellow Fever in Ghana. It is important that Japanese researchers stay on site and promote leading-edge study of infectious diseases. There is also an enormous significance that we play a central role in facilitating to improve the research for infectious diseases, and foster young researchers in West African region.

### Signing ceremony of Ghana-TMDU exchange agreement



## Japan Science and Technology Agency Project to Develop "Innovative Seeds" Supporting Program for Creating University Ventures

### Development of a Disposable, Magnetically Levitated Centrifugal Blood Pump

Principal Investigator : Setsuo TAKATANI, PhD, DMed (Professor, Department of Artificial Organs, Institute of Biomaterials and Bioengineering)

This project aims to form a venture company based on a magnetically levitated (mag-lev) disposable, biocompatible centrifugal pump technology that enables support of patient's circulation for at least one-month duration with minimum administration of anti-coagulants, to commercialize the mag-lev disposable centrifugal blood pump and to move forward the device to clinical applications. This project applies the magnetic levitation technology developed through collaboration between the two research institutes, Institute of Biomaterials and Bioengineering of Tokyo Medical and Dental University and Institute of Precision Engineering of Tokyo Institute of Technology, as a part of activities for Collaboration of Four Universities (Tokyo Medical and Dental University, Tokyo Institute of Technology, Hitotsubashi University and Tokyo Foreign

Language University) in Tokyo Area, to rotary blood pumps so as to improve durability and biocompatibility of the conventional centrifugal blood pumps with mechanical bearings and develop a mechanically non-contact, mag-lev centrifugal blood pump that enables safe and reliable support of circulation of patients with minimum usage of anti-coagulants. In order to achieve features of simplicity, reliability and low cost, pump system is separated into two parts, a disposable pump head and a re-usable mag-lev control and motor drive system as shown in Fig 1. After confirming the basic pump function and durability, electro-mechanical and physiological reliability of the device are evaluated in calves (Fig 2), and then clinical applications are sought through a venture company to contribute to society (Fig 3).

Fig 1 Disposable, magnetically levitated centrifugal blood pump system

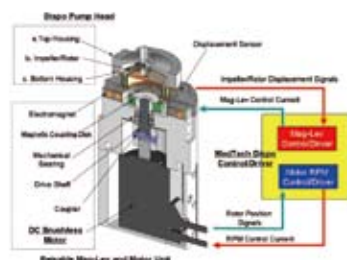
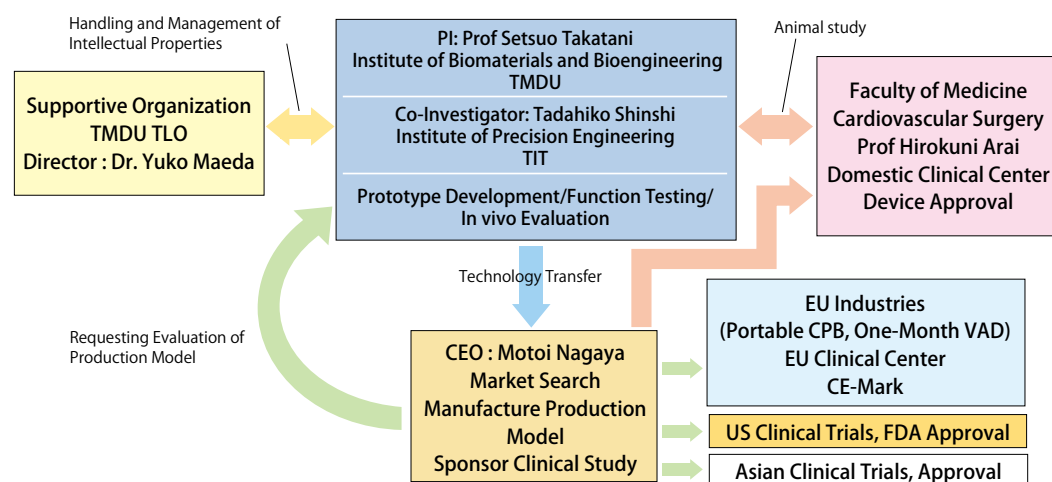


Fig 2 A calf implanted with a prototype pump system



Fig 3 Organization of R&D Group



## Molecular Imaging Research Program

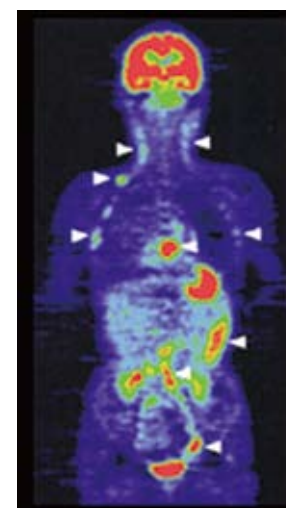
### Imaging Research for New Drug Development to Treat Refractory Infectious Diseases

Principal Investigator : Masatoshi HAGIWARA, MD, PhD (Professor, Functional Genomics, School of Biomedical Science)

There are two million patients affected by hepatitis C, many of whom develop hepatic cirrhosis which eventually progresses to hepatoma. With no other treatment option available than interferon therapy, new drugs to eradicate the hepatitis C virus are keenly awaited. Prion diseases, including bovine spongiform encephalopathy, are also a cause of public anxiety because there is no effective treatment for them. Bird flu virus is another threat as it so frequently mutates that the vaccine is not always effective. The safety of Tamiflu, an oral drug for flu, has been called into question, and the development of a new drug which has a different site of action is much anticipated.

The public has high expectations for the development of new drugs to treat these refractory infectious diseases, diseases that have spurred great social anxiety. In order to fulfill those expectations, this program has set out to focus on hepatitis C, transmissible spongiform encephalopathy, and new forms of pandemic influenza. Our objective in this program is to develop lead compounds for new drugs.

As for hepatitis C, Dr. Hagiwara, the project leader, and his team are planning to synthesize new compounds that show remarkable effects in in-vitro evaluation as well as develop molecular imaging probes for them. As a part of this program, Dr. Kuwata and his team have already produced concrete achievements: they constructed a logical model of a new anti-prion compound based on the three-dimensional structure of the prion molecule—and it was proven effective in laboratory animals. We are also planning to design an agent against NP proteins which can lead to the development of a new drug effective against many types of influenza. Our ultimate goal is to accelerate drug discovery by the innovation such as synthesis of new molecular imaging probes with high speed c-methylation reaction and in vivo kinetic analysis with PET imaging, in cooperation with the Molecular Imaging Research Program, Kobe MI R&D Center, RIKEN.



- Antiviral Compounds against Hepatitis C
- Anti Prion Compounds
- Antiviral Compounds against Influenza

In Vivo Kinetic Analysis of Low Molecular Weight Compounds Using PET Imaging

Development of New Diagnosis, Treatment, Prevention Methods



## The Integrated Database Project

### Development of an Integrated Database in Biomedical Sciences

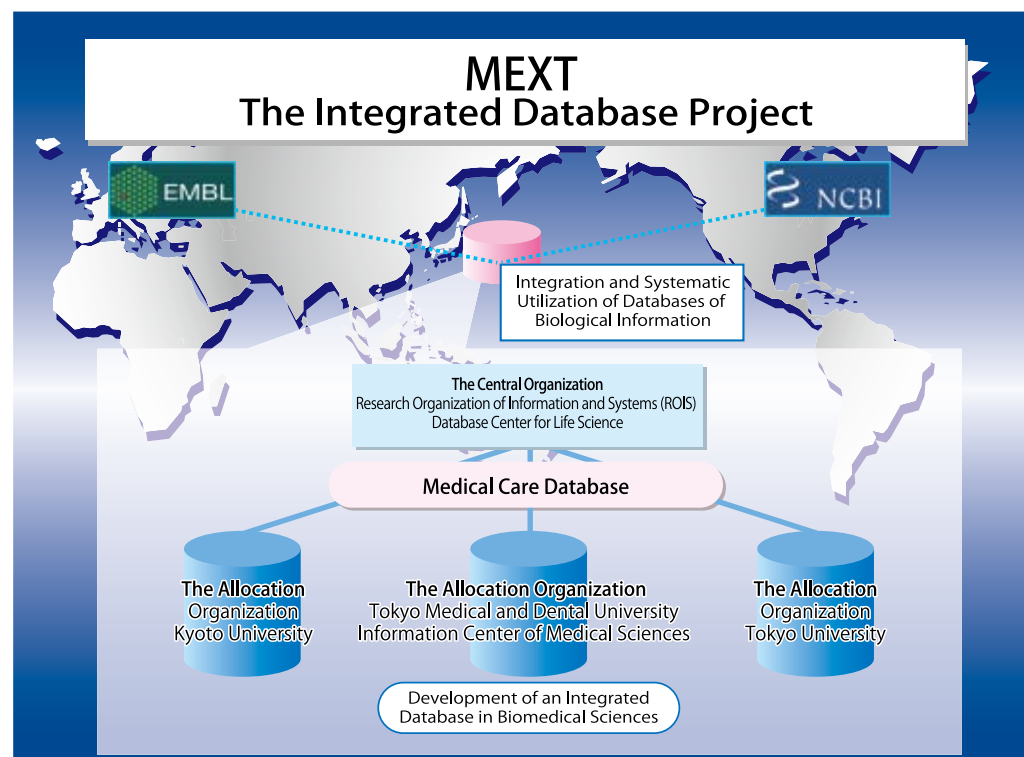
Principal Investigator : Hiroshi TANAKA, DM, PhD (Director, Information Center of Medical Sciences)

Since the Human Genome Project was completed in 2003, an enormous amount of information in the field of biological science has been made available. In Japan, many universities and research institutes have created databases of molecular information. However, these projects are separately planned and carried out, and there is no national organization in Japan to integrate them into one central database like the National Center for Biotechnology Information (NCBI) in the US and the European Bioinformatics Institute (EBI).

In 2006 the Ministry of Education, Culture, Sports, Science and Technology (MEXT) launched the Integrated Database Project in order to establish a national, central organization to manage databases of a wide range of biological data, from molecular information to disease information. It was announced in 2007 that allocation organizations would be appointed to promote the integration of databases in collaboration with the central organization,

and as a result of open application, the Information Center of Medical Sciences, TMDU, was selected as one of three allocation organizations, along with the University of Tokyo and the University of Kyoto.

It is widely known that our Information Center of Medical Sciences has already started a project to build the "Clinical Omics Database Based on Systems Pathobiology", commissioned and sponsored by MEXT, and in this project we are gathering clinical and omics data related to diseases. We are sure that we were appointed as an allocation organization to play an important role in the Integrated Database Project because of our achievements, especially our approach to viewing a disease as a system. Collaborating with the University of Osaka where data about intractable neurological diseases will be collected, we will make further efforts to establish the integrated database in biomedical sciences.



## JSPS Core to Core Program

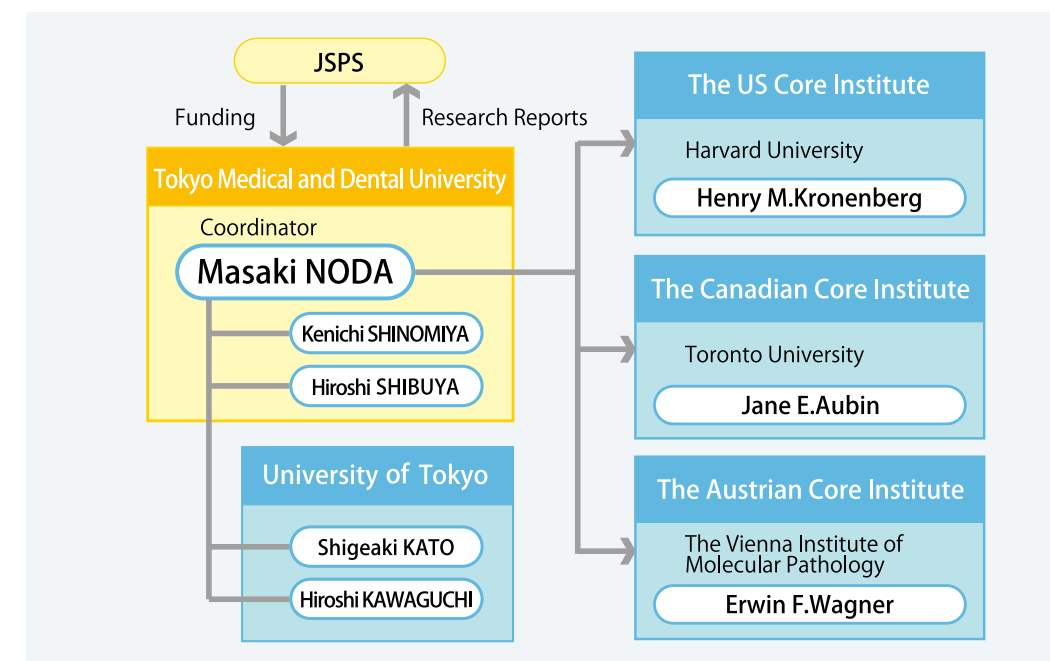
### Advanced Bone and Joint Science (ABJS)

Principal Investigator : Masaki NODA, MD, PhD (Director, Medical Research Institute)

This project is funded by the Japan Society for the Promotion of Science which has initiated a program for the purpose of building and expanding a cooperative international framework among universities and research institutions in Japan and 15 other technologically advanced countries. In 2004 and 2005, we carried out our project as one of the "Integrated Action Initiatives" and based on the results we achieved, our project was upgraded to a "Strategic Research Networks" project, aiming at managing a long-term network of researchers and institutions. According to the project plan, we are working to promote international collaboration in the field of advanced biomedical science and also to help young researchers build cooperative networks across borders. The main focus of our research is advanced bone and joint science (ABJS). The chief aim of

this project is to establish an international research hub to carry out pioneering research in the molecular pathology of bone and joint diseases. Along with TMDU, Harvard University in the US, Toronto University in Canada, the Vienna Institute of Molecular Pathology in Austria, and the Institute of Molecular and Cellular Biosciences and the Graduate School of Medicine of the University of Tokyo in Japan are taking part in this project. We have already hosted more than 10 ABJS Forums, more than 15 Young Investigator Net meetings, and international symposiums. Research collaboration, development of young researchers, and symposiums are main activities within this project, and through these activities, we will make a significant contribution to the advancement of bone and joint science.

### Advanced Bone and Joint Science(ABJS)



## Program for Accelerating Internationalization of Higher (University) Education

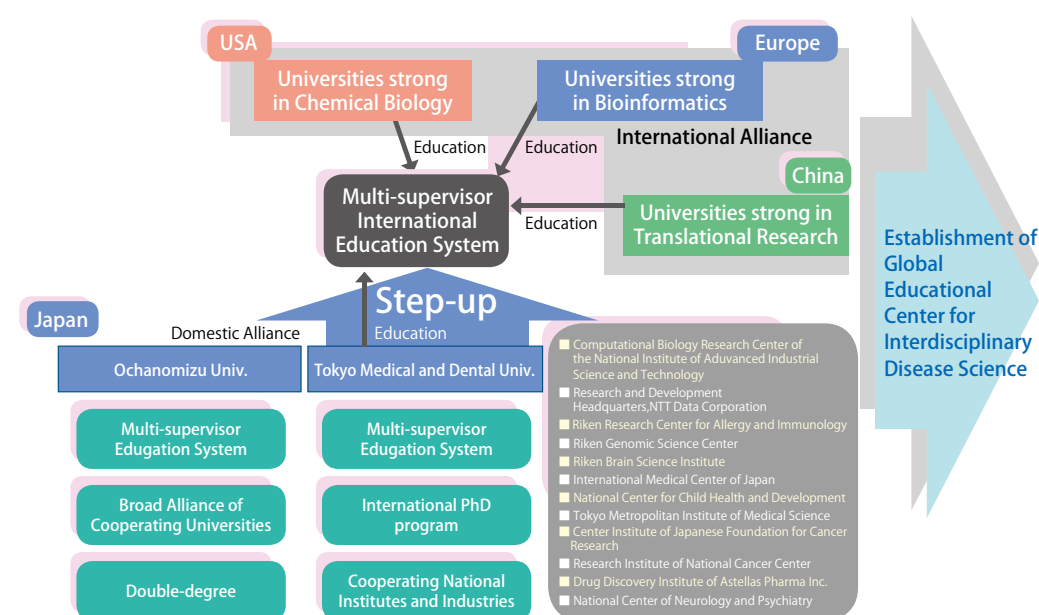
### International Educational Program for Interdisciplinary Disease Science

Principal Investigator : Hiroshi TANAKA, DM, PhD (Dean, Biomedical Science PhD Program)

Graduate School of Biomedical Science, Biomedical Science PhD Program was established upon the philosophy of interdisciplinary disease science. The program is in alliance with several governmental/private institutes of advanced science, enabling diverse, flexible curriculums from which students freely select the area of research. As the courses are also offered in English, students from abroad are able to complete their PhD without the knowledge of Japanese language. In this project, we are aiming to further develop the globalization of education and strengthen alliance with other universities. The project crosses over the boundaries of nations, and with the cooperation of faculty members overseas, we plan to establish a multi-supervisor international education system. Our goals are to form a global alliance of higher education institutes in Europe, the United States, and Asia (approximately 10 institutes including Heidelberg University, Peking Union University, China Medical University, Ochanomizu University, and our

own institute), to share the philosophy of interdisciplinary disease science upon which we reconstruct our educational systems, and to develop international cooperation education of the Double-degree Program (5-year PhD course), by the end of the three-year project. We intend to modify the system so that students are able to receive education from institutes overseas whilst enrolled in the master's program at our university, while maintaining the quality of our education up with the global standards. Our "Global Linkage Program between University and Industry" to enhance the linkages between the graduate school and international business, and active faculty interaction among universities in cooperation obtained through the International Educational Program for Interdisciplinary Disease Science, we aim to accelerate the globalization of our institute, leading up to the organization of the Double-degree program.

#### International Cooperation for the Establishment of Multi-supervisor Education System



## Project for the Strategic Development of Industry-University-Government (I-U-G) Collaboration (Strategic Development Program)

### Promoting International Industry-University-Government (I-U-G) Collaborative Activities

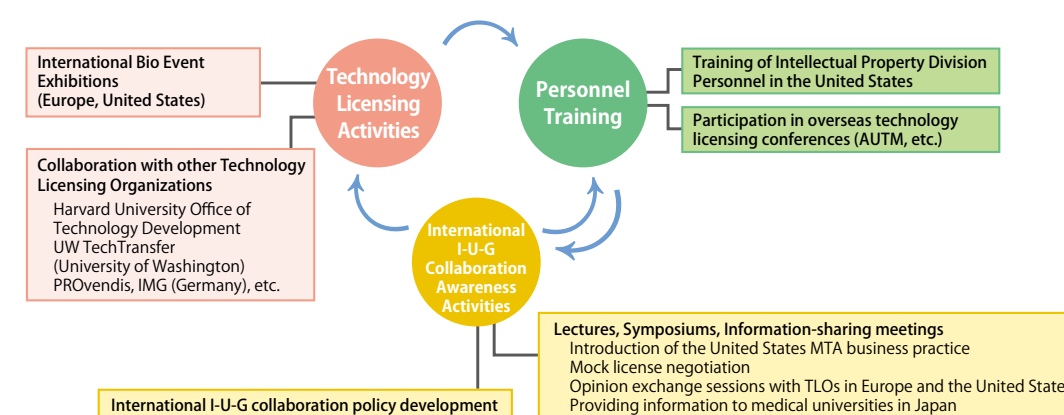
Principal Investigator : Yuko MAEDA, PhD (Director, Intellectual Property Division, Technology Licensing Organization)

The aim of this project is to support various proactive and distinctive activities to continually develop intellectual property strategies for universities and other organizations that are the driving force behind innovation creation, and to improve the quality of I-U-G collaborative activities overall. The project is devoted to strengthening international I-U-G collaboration frameworks through promoting international rights acquisition of basic patents, expanding cooperative research and entrusted research activities involving overseas corporations, and training and retaining qualified intellectual property personnel.

The Intellectual Property Division at Tokyo Medical and Dental University was established in September 2003, and with the privatization of national universities in April 2004, began applying for patents for inventions by university researchers as properties of the university. Furthermore, the Technology Licensing Organization (TLO) was established in August 2004 and began licensing technologies to enterprises. In March 2008, the Technology Licensing Organization obtained TLO certification from the Ministry of Education, Culture, Sports, Science and Technology and the Ministry of Economy, Trade and Industry, and plans to conduct further public relations activities to produce

more technology licensing results. The International I-U-G Collaboration Department was established in May 2007 and undertakes the active licensing of technology to overseas entities through activities such as partnership negotiations with TLOs in the United States and other countries, and participation in technology licensing events in Europe.

As international I-U-G collaboration strategies, the organization is committed to the improvement of the quality of patent applications and to efficient technology licensing activities, as well as to the expansion of technology licensing through activities with TLOs in and out of Japan, in addition to the technology licensing activities revolving around our collaborative associates. Particularly with regard to overseas commitment, the department aims to develop a system that enables mutually efficient technology licensing through regular dialogues with multiple partnered overseas TLOs in regions such as Europe or the United States, where we have an understanding of the national conditions of each country. The fruits of these activities are widely shared with the society through training in workshops for mock license negotiations and publishing case studies concerning technology licensing.



## Research Project of Sensing Biology

Principal Investigator : Kohji MITSUBAYASHI, PhD

(Professor, Department of Biomedical Devices and Instrumentation, Institute of Biomaterials and Bioengineering)

*In vivo* sensing and *in situ* imaging have an important role for cell analysis, physical monitoring and pathologic diagnosis. Sensing biology is a new multidisciplinary field integrating bio/chemical sensing (imaging) and biology science. Based on the medical/dental research, many scientists have contributed to the advancement of the study of this area at TMDU. We launched a strategic project for promotion of the sensing-biology research and are certain that we will contribute to elucidation of life process, development of novel diagnosis and treatment of diseases in the medical/dental field.

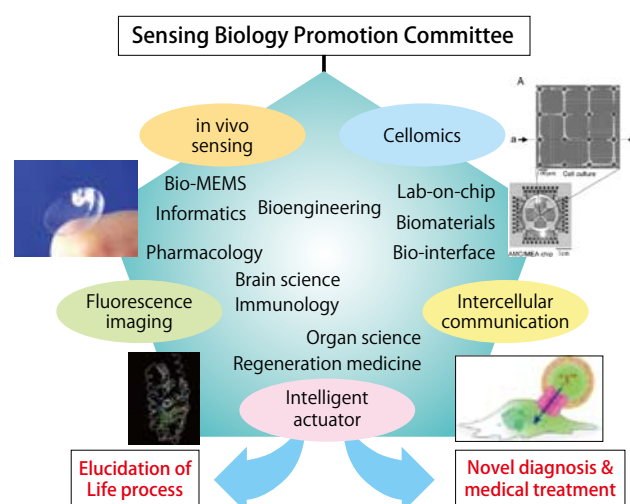
Main research topics are as follows.

1. Wearable bio/chemical sensing devices and instrumentation  
Flexible and wearable sensors are fabricated using MEMS (microelectromechanical systems) techniques onto functional polymers in order to apply (or implant) to human body for bio/chemical monitoring. Human body communication system is also investigated for data acquisition from those wearable sensors without any electric wires.
2. Cellomics research with Lab-on-Chip  
By fusion of latest nano- and bio-technologies, we are developing an on-chip artificial organ model for drug discovery and toxicology use. Epigenetic information and memorization stored in living system such as brain (neural network system), immune system and cardio systems by environmental hysteresis are also investigated by cellomics research with Lab-on-Chip.

3. Research of de novo cell for intercellular communications with living cell  
We design functional molecular assembly systems such as giant liposomes, proteo-liposomes and liposome-tube networks for construction of artificial cell to communicate with living cell.
4. Intelligent actuators driven with biological energy  
Novel chemo-mechanical system (Organic engine) is investigated to develop intelligent actuators driven (and regulated) by biological energy such as blood chemicals.

In this project, we will improve the research facilities and establish the Fabrication Center for development of sensing devices and probes. We are also planning to take collaboration with Research Project of Chemical Biology at TMDU in order to accelerate both research activities for elucidation of life process and development of novel diagnosis and treatment of diseases in the medical/dental field.

## Research Project of Sensing Biology



## Bioethics Research Center

Principal Investigator : Shuki MIZUTANI, MD, PhD (Director, Bioethics Research Center)

The Bioethics Research Center was established in 2005 to promote international collaboration to explore new ethical standards to meet changes and challenges in the post-genomic era.

In 2007, we engaged in the following:

### 1. Support for Ethical Review of Research Proposals

Yuka Ozasa, Instructor of the Center visited the Harvard School of Public Health and studied the effective and efficient management of the ethical review process for research proposals. Based on her report, we have introduced some new approaches as listed below.

- (1) The Bioethics Research Center prescreens research proposals before the ethical review board examines them.
- (2) The Bioethics Research Center monitors research various ethical committees in our university and give them advice for efficient and non-biased review.
- (3) The Bioethics Research Center functions as a hub of the ethical review boards of our university to share the knowledge and experience. Our objective is sharing information on common problems and collaborating to solve them.

### 2. Education Programs in Ethical Issues

We offer some courses in ethical issues, especially issues concerning clinical cases related to genetic counseling, for the Department of Medicine, Biomedical Science PhD Program, the Graduate School of Health Sciences, and for other universities. In collaboration with the Clinical Research Center affiliated with the TMDU Hospital, we organized a forum to give lectures on ethical issues concerning medical research for doctors certified to conduct clinical trials by medical associations. We are planning to continually enhance our educational activities.

### 3. Clinical Practice in Genetic Counseling

We also conduct genetic counseling to those patients who needs genetic advice and considers genetic testing based upon the referral from the other specialities at the department of Medical Genetics. Our department has been approved by the Japanese board of Clinical Genetics and thus after completion of 3-year program in our department, one can be eligible for the board examination. Currently, ten medical doctors have registered in our program and joined in our sessions and attend the clinical conferences and invited seminars and lectures. We also making a novel database for clinincal genetics to share our clinical experience. Our database is uniquely cateogolized by clients' relationship to the proband and their attitudes to the disease itself, rather than clinical diagnosis or mode of ingerirance.

### 4. International Collaborations

In January, 2008, we held an international symposium on bioethics together with the Japan Association of Medical School Ethical Committees. The invited speakers included Dr. Thomas Murray, Director of the Hastings Center, USA, Dr.Robert Troug, Chair of the Harvard ES Cell Research Organization, USA, and Dr. Wilhelm Vossenkuhl, Director of the Bioethics Center, University of Munich, Germany. Participants from all over Japan actively discussed issues related to international as well as domestic advanced research fields such as stem cell research and ethical consideration around medical research.





Hard Tissue Genome Center

Principal Investigator : Masaki NODA, MD, PhD (Director, Hard Tissue Genome Center)

TMDU established the Hard Tissue Genome Center with special funds granted by the Ministry of Education, Culture, Sports, Science, and Technology. The Hard Tissue Genome Center acts as the hub of a network of clinical and scientific researchers of hard tissue diseases belonging to different departments of TMDU. The chief aim of the center is to promote studies on hard tissue diseases by integrating clinical and pathology information about diseases with findings in molecular bioscience.

The Hard Tissue Genome Center consists of the following seven divisions:

- 1. Molecular bioscience of hard tissue diseases
- 2. Structural analysis of hard tissue disease-related genes
- 3. Functional analysis of hard tissue disease-related genes
- 4. Pathology of cartilaginous diseases
- 5. Pathology of oral tumors
- 6. Development of advanced diagnostic methods
- 7. Development of advanced treatment methods
- 8. Innovative Therapeutics

Director Noda is in charge of general management of the center.

The Hard Tissue Genome Center is a trans-sectional organization across the departments of medicine and dentistry as well as the research institutes of TMDU. We recently invited two researchers to launch the center. We have held strategic meetings for research promotion and carried out research plans to integrate and analyze clinical and genomic data.

We requested an international panel of scientists to assess our organization; both our research policy and budget scheme were highly accredited. The panel also gave us useful advice on our research plans.

Our main objective is to develop tailor-made treatments for hard tissue diseases and to introduce the idea of "translational research" into our approach so that discoveries at "the bench" (i.e., basic research) can be translated into clinical applications at "the bedside". Our center will act as a rallying point of collective efforts from all sections of TMDU and contribute to the development of new treatments for hard tissue diseases.

Divisions and Objectives

1. Division of Molecular Bioscience of Hard Tissue Diseases (Professor Masaki NODA, Associate Professor Yoichi EZURA)

This division carries out basic research concerning hard tissue diseases in molecular biology, pathology, and molecular pathophysiology. Our focus will be on molecular functions in cell proliferation and cell adhesion, tumor infiltration into bones, and regulation of cell proliferation and cell adhesion.

2. Division of Structural Analysis of Hard Tissue Disease-Related Genes (Professor Johji INAZAWA, Associate Professor Issei IMOTO, Associate Professor Kenichi OZAKI)

This division aims to identify genes responsible for hard tissue diseases, develop biomarkers for malignancy testing, and develop screening methods for molecular targets, regarding cartilaginous and oral tumors. For these purposes we do analytical studies of polymorphic genes, structural abnormalities of chromosomes, and epigenetic control of gene expression.

3. Division of Functional Analysis of Hard Tissue Disease-Related Genes (Professor Yoshio MIKI)

This division conducts systematic analyses of gene expression and proteomic analyses regarding hard tissue diseases. We also use the functional genomics approach in order to identify genes responsible for disease, and molecular targets of treatment, leading to the development of testing methods of anticancer sensitivity.

4. Division of Pathology Analysis of Cartilaginous Diseases (Professor Tsuyoshi ISHIDA)

This division carries out research in pathology diagnosis of cartilaginous diseases. Using data collected from pathology diagnoses and morphological analyses of tumor cells, we do research on functional annotation of genes responsible for disease as well as susceptibility estimation.

5. Division of Pathology Analysis of Oral Tumors (Professor Hitoshi TSUDA)

This division carries out research in pathology diagnosis of oral tumors. Using data collected from pathology diagnoses and functional and morphological analyses of tumor cells and combining them with simulation analysis, we do research on functional annotation of genes responsible for disease as well as susceptibility estimation.

6. Division of Development of Advanced Diagnostic Methods (Professor Ken OMURA, Associate Professor Shogo HASEGAWA)

This division aims at developing advanced diagnostic methods for malignant hard tissue diseases, especially oral tumors.

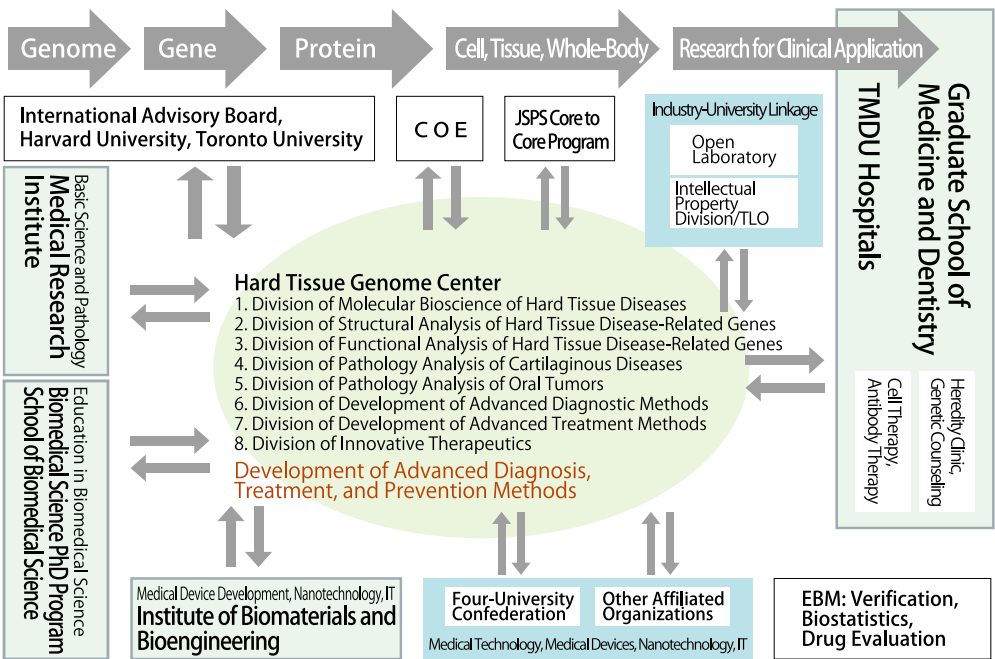
7. Division of Development of Advanced Treatment Methods (Professor Kenichi SHINOMIYA, Associate Professor Keisuke ABE)

This division aims at developing advanced treatment methods for hard tissue diseases, especially cartilaginous tumors.

8. Division of Innovative Therapeutics (Professor Keiji MORIYAMA)

This division aims at development of future treatment of the hard tissue diseases.

Hard Tissue Genome Center



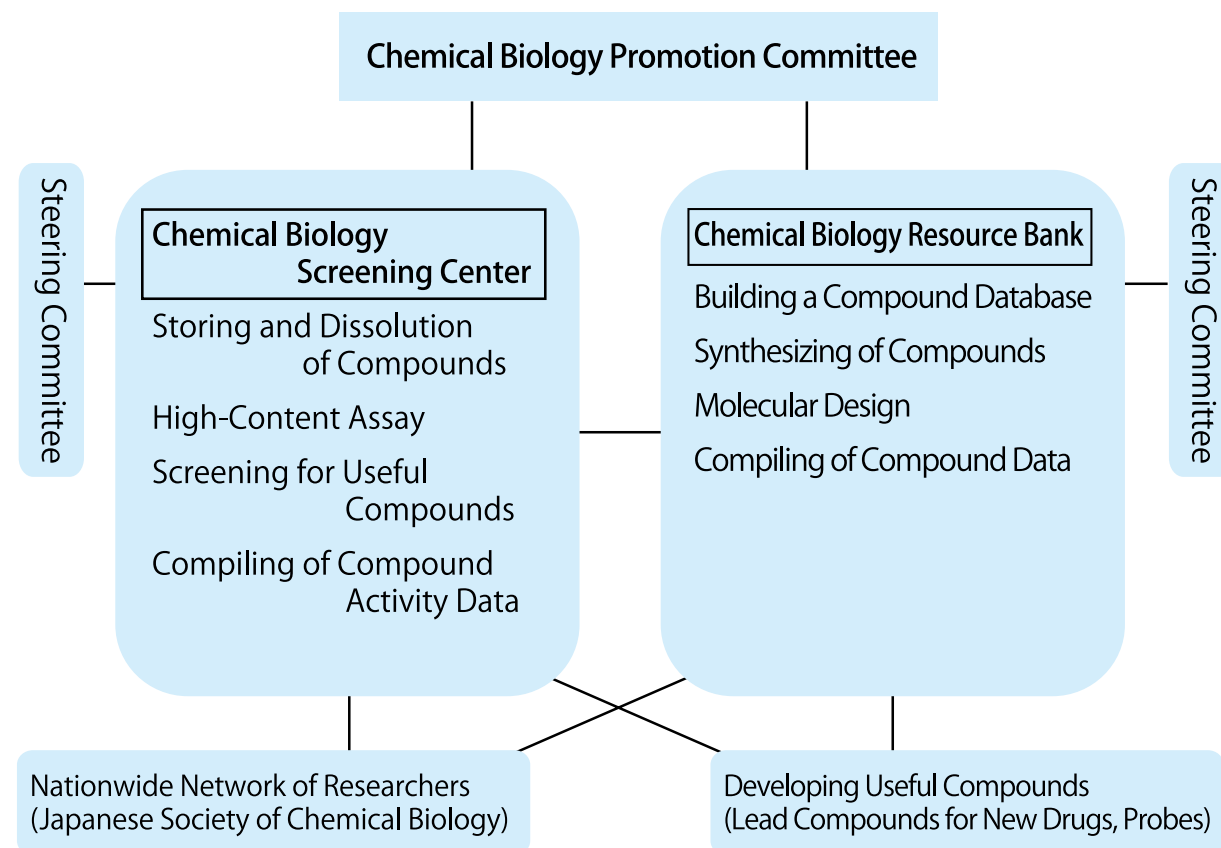
## Research Promotion of Chemical Biology

Principal Investigator : Takeshi TSUBATA, MD, PhD (Dean, School of Biomedical Science)

Chemical biology is a new interdisciplinary field of science integrating chemistry and biology, applying ideas of chemistry and chemically synthesized compounds to the study and manipulation of biological phenomena. As new methodology is introduced in this newly emerging scientific discipline, significant discoveries will be made. It is also expected that new findings in chemical biology will directly lead to development of new drugs and new diagnostic agents, including visualization probes, as chemical compounds are used in many research projects. The US National Institutes of Health also emphasize the importance of the development of chemical biology in their roadmap for medical research. Chemical biology is expanding its field as are related disciplines such as bioinformatics and materials science. TMDU has produced many remarkable achievements in medical research and played a leading

role in education and research in chemical biology. Now, TMDU is launching a granted project for promotion of research in chemical biology and plans to make further contributions to its development.

Within this project we will improve and expand the facilities of the Chemical Biology Screening Center and the Chemical Biology Resource Bank and make them a solid platform for education and research in chemical biology at TMDU. We are also planning to establish a chemical compound library and build a database of structures, and activities of the compounds compiled in the library, and make the library and the database accessible to outside researchers as well. These efforts will help researchers to identify promising compounds for drug discovery, which is expected to lead to better diagnosis and treatment of diseases.



## Funds for Subjects Related to Policies

### Special Educational Program for International Medical Leaders of Tomorrow

Principal Investigator : Kikuo OHNO, MD, PhD (Dean, Faculty of Medicine)

Based on the preliminary training conducted within the "Innovative Educational Program to Nurture Internationally-Minded Medical Leaders", this special educational program aims at offering medical education that meets the highest global standards.

Within this program, we engage in the following:

- (1) Supporting the students to take part in clinical clerkships at Harvard Medical School.
- (2) Reforming the clinical clerkship program at TMDU and improving facilities so that the students can maximize their education.
- (3) Supporting the students to do research work at overseas affiliated universities and to deliver papers at international conferences.

This program makes it possible for the students in the sixth year who pass the selection process to take part in clinical clerkships at Harvard Medical School. This externship program is implemented as part of the curriculum. We offer to candidate students for the Harvard Medical School Externship three months of intensive training.

As part of the project semester in the fourth year, students have a chance to undertake a research project overseas for five months. TMDU has a student exchange with Imperial College, London. Thus, TMDU offers opportunities for students to study abroad which will help the students to extend their intellectual horizons and foster global understanding.

We also invite experts on education from Harvard to work with TMDU faculty to improve clinical clerkship programs. Through this partnership with Harvard, we believe we can develop new ideas and approaches to medical education which can meet various challenges in the new era.



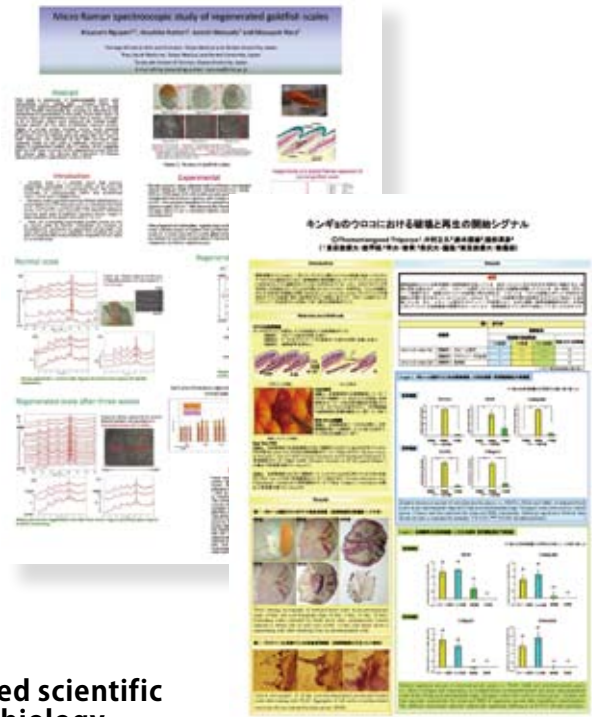
### Special Education Program for Creating a Liberal Arts Education Model for Medical and Dental Universities—A Refinement of Liberal Arts Education at Tokyo Medical and Dental University

Principal Investigator : Masaru WADA, PhD (Dean, College of Liberal Arts and Sciences)

Building on our current curriculum, this special education program aims to develop a liberal arts program that will provide a sound foundation in the sciences and the arts for health professionals who will be the leaders of the next generation. In doing so, we aim to create a model curriculum which will contribute to educational programs at other institutions involved in training health professionals in Japan.

Within this program we engage in the following:

- 1) Employing placement tests in natural science courses to ensure students in every level acquire the basic knowledge required for their professional training. Students with top-level grades will be encouraged to embark on research projects.
- 2) Developing reading, writing, and presentation skills in mandatory humanities and language courses that are organized as small group seminars.
- 3) Teaching self-management skills for body and mind, thus creating a base from which to communicate with, and understand, others. Health science and physical education courses are incorporating new educational techniques, and a fitness management tool for data analysis is in development.



Motivated students attended scientific meetings in chemistry and biology.

We offer introductory courses in biology, chemistry, and physics for students who are new to the subjects. Our present second-year students take achievement tests mid-year (usually the end of September), and based on the results, are invited to take follow-up courses to help them prepare themselves for professional training. Motivated students who excel in science are invited to assist in research, and the chemistry department has trained motivated students to deliver papers at an academic society.

This program will allow research-oriented students to pursue their ideas as well as allow all students to develop a scientific and critical mind. Together with communicative competence and linguistic skills, these abilities should help TMD students become reliable health professionals in their local and global communities.

### Medical and Dental Sciences, Master of Medical Administration Course

In 2004, TMDU established a new master's degree course, the Medico-Dental Master of Medical Administration Course, to produce specialists in administrative management of medical service (1 year course) and healthcare policy (2 year course). This course is supported by the "Four-University Confederation" consisting of Hitotsubashi University, Tokyo Institute of Technology, Tokyo University of Foreign Studies, and TMDU.

The aim of this course is to produce professional personnel who can take the lead in managing medical service and executing medical policy, responding to changing social needs for medical service. With rapid changes in the healthcare system in Japan and the globalization of medicine, it is imperative to produce qualified experts who can design and manage a new system to provide better, patient-centered healthcare service.

In this course, the students are offered a comprehensive educational program in medicine related subjects, including organization management and safety management. Laws, economics, engineering, sociology, and ethics are also incorporated into the curriculum.

#### Main subjects are as follows:

- |                                                           |                                                             |
|-----------------------------------------------------------|-------------------------------------------------------------|
| 1. Medical Policy                                         | 6. Medical Facility and Hygiene Control                     |
| 2. Quality Control of Medical Service and Risk Management | 7. Management Strategy and Organization Control             |
| 3. Medical Law and Medical Ethics                         | 8. Human Resource Management and Human Resource Development |
| 4. Hospital Information and Information Security          | 9. Information Supply in Medical Service                    |
| 5. Cultural Study of World Medicine                       | 10. Clinical Epidemiology                                   |

### Intellectual Property Division · Technology Licensing Organization (TLO)

Society has high expectations related to the creative power of universities to realize an affluent and wealthy society in the 21st century. In particular, life science (including medicine and dentistry) is predicted to be a key alternative area to information technology in the 21st century, and TMDU is expected to play an important role in building a country on intellectual property. To meet these social needs, we established the Intellectual Property Division specialized in medicine, biomaterials and biotechnology in September 2003, and established the Technology Licensing Organization (TLO) in August 2004. It is unprecedented for a national university cooperation to affiliate both an intellectual property division and a TLO. By close collaboration of the two, we promote efficient technology licensing, securing property rights and university-industry linkages, which lead to the development and wide application of new medical technologies.

We publish a journal, Life Science Report, to classify and disseminate patent information in life science. Human resource development is another mission of our organization. We offer educational programs for qualified personnel who can evaluate intellectual property in the field of life science.







# International Exchange

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Tokyo Medical and Dental University and Partners Harvard Medical International, Inc.  
Alliance for Medical Education

Overseas Affiliated Universities, Inter-Faculty Agreements

Number of International Students

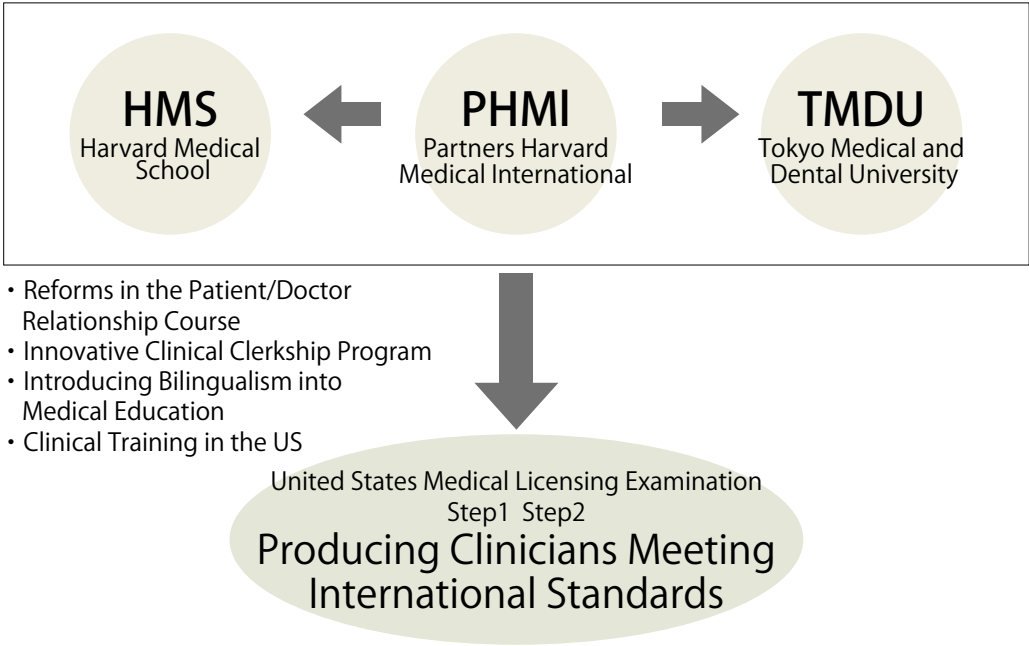
# Tokyo Medical and Dental University and Partners Harvard Medical International, Inc. Alliance for Medical Education

Since 2002, TMDU has cooperated with Harvard Medical International, Inc. (Partners Harvard Medical International, Inc. since 2008) and implemented wide-ranging reforms into our medical education. One of the chief aims of this alliance is to create a new model of medical education in Japan in order to meet various challenges we face in the 21st century. Partnering with PHMI, closely related to Harvard Medical School, TMDU has introduced new ideas and approaches into its curriculum, including patient-doctor relationship courses, hybrid programs integrating basic science and clinical studies, and innovative clinical clerkship programs.

This alliance also provides TMDU students with a chance to take part in a clinical clerkship at Harvard Medical School. As a part of a recent curriculum reform, TMDU introduced the Harvard Medical School Externship program in 2004. The students who pass the selection go through nine months of preparatory training then take part in clinical clerkships at Harvard Medical School. They stay in Boston for three months and take three, four-week elective clerkship rotations. Harvard Medical School provides exchange students from all over the world with a chance to experience the same clinical training as Harvard students at HMS affiliated teaching hospitals. Working hard with talented and enthusiastic students of HMS and other medical schools all over the world, TMDU students can develop their clinical skills and get a better understanding of the American healthcare system as well as acquire an international way of thinking.



〈Harvard Medical School〉





Tokyo Medical and Dental University and Partners Harvard Medical International, Inc. Alliance for Medical Education

| Nations /Area            | Universities                                                                                      | Dates of Agreements<br><Y/M/D> |
|--------------------------|---------------------------------------------------------------------------------------------------|--------------------------------|
| United States of America | Harvard Medical International, Inc.<br>(Since 2008, PHMI: Partners Harvard Medical International) | 2002/07/01                     |

Overseas Affiliated Universities  
Inter-Faculty Agreements

Graduate School of Medical and Dental Sciences (Medical Division) • Graduate School of Health Care Sciences • Faculty of Medicine

| Nations /Area                                        | Universities                                                                                                                                                                              | Dates of Agreements                                  |
|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| Republic of Finland                                  | Seinajoki Polytechnic University, Graduate School<br>Seinajoki Polytechnic University<br>Tampere University                                                                               | 2000/07/07<br>2000/07/17<br>2000/07/17               |
| Federal Republic of Germany                          | Justus-Liebig University Medical Faculty, Institute for Biochemistry                                                                                                                      | 2000/07/18                                           |
| United States of America                             | New York University, Graduate School of Education, Division of Nursing<br>University of Colorado, Graduate School<br>University of Illinois<br>University of Washington School of Nursing | 2000/11/07<br>2000/11/28<br>2001/04/27<br>2002/01/08 |
| Canada                                               | Department of Health Administration, Faculty of Medicine, University of Toronto<br>Faculty of Nursing, University of Toronto                                                              | 2001/03/15<br>2001/07/05                             |
| United Kingdom of Great Britain and Northern Ireland | University of Sheffield, Graduate School of Nursing and Midwifery<br>Imperial College London Faculty of Medicine                                                                          | 2001/09/10<br>2003/04/30                             |
| People's Republic of China                           | Capital University of Medical Sciences, Faculty of Public Health                                                                                                                          | 2002/03/18                                           |
| Kingdom of Thailand                                  | Faculty of Medicine, Chulalongkorn University                                                                                                                                             | 2002/03/25                                           |
| French Republic                                      | École Normale Supérieure de Lyon                                                                                                                                                          | 2005/04/01                                           |
| Republic of Ghana                                    | Noguchi Memorial Institute for Medical Research                                                                                                                                           | 2008/05/28                                           |

Graduate School of Medical and Dental Sciences (Dental Division) • Faculty of Dentistry

| Nations /Area              | Universities                                                                                                                                                                                                                                  | Dates of Agreements                                                |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| Republic of Korea          | College of Dentistry, Seoul National University<br>School of Dentistry, Kyungpook National University<br>School of Dentistry, Chonnam National University                                                                                     | 1983/10/10<br>1995/09/04<br>2006/10/20                             |
| Kingdom of Thailand        | Faculty of Dentistry, Chulalongkorn University<br>Faculty of Dentistry, Mahidol University<br>Faculty of Dentistry, Chiang Mai University<br>Faculty of Dentistry, Prince of Songkla University<br>Faculty of Dentistry, Khon Kaen University | 1991/01/18<br>2001/05/03<br>2001/12/07<br>2003/03/21<br>2008/01/08 |
| People's Republic of China | College of Stomatolgy, Jilin University<br>Stomatology College of Dalian Medical University<br>School of Stomatology, Peking University<br>School of Stomatology, Capital Medical University<br>Tongji University, School of Stomatology      | 1993/07/27<br>2000/06/08<br>2003/09/21<br>2006/09/01<br>2008/10/14 |
| Taiwan                     | College of Oral Medicine, Taipei Medical University<br>School of Dentistry, College of Medicine, National Taiwan University                                                                                                                   | 2004/04/23<br>2005/06/14                                           |
| Republic of Indonesia      | Faculty of Dentistry, University of Indonesia                                                                                                                                                                                                 | 1993/08/31                                                         |
| Republic of Singapore      | Faculty of Dentistry, National University of Singapore                                                                                                                                                                                        | 1995/07/20                                                         |
| Malaysia                   | Faculty of Dentistry, University of Malaya                                                                                                                                                                                                    | 1995/08/27                                                         |

|                                            |                                                                                                                                                                                                                               |                                                      |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| Kingdom of Denmark                         | School of Dentistry, Faculty of Health Sciences,University of Copenhagen                                                                                                                                                      | 1995/08/31                                           |
| Union of Myanmar                           | Institute of Dental Medicine Yangon                                                                                                                                                                                           | 1995/09/08                                           |
| Socialist Republic of Vietnam              | Faculty of Odonto-Stomatology, The University of Medicine & Pharmacy at Ho Chi Minh City<br>University of Odonto-Stomatology, Hanoi                                                                                           | 1996/01/16<br>2005/06/07                             |
| Mongolia                                   | School of Dentistry, Health Sciences University of Mongolia                                                                                                                                                                   | 1999/01/19                                           |
| Democratic Socialist Republic of Sri Lanka | Faculty of Dental Sciences, University of Peradeniya                                                                                                                                                                          | 1999/04/29                                           |
| Kingdom of Cambodia                        | Faculty of Odonto-Stomatology, University of Health Sciences, Phnom Penh Cambodia                                                                                                                                             | 2002/09/19                                           |
| Lao People's Democratic Republic           | Faculty of Medical Sciences, National University of Laos                                                                                                                                                                      | 2003/10/28                                           |
| Republic of the Philippines                | College of Dentistry, University of the Philippines Manila                                                                                                                                                                    | 2003/11/06                                           |
| Federal Republic of Germany                | Charité-University Medicine Berlin                                                                                                                                                                                            | 2004/03/17                                           |
| United States of America                   | School of Dental Medicine, University of Pennsylvania<br>Harvard School of Dental Medicine<br>School of Dentistry, University of North Carolina at Chapel Hill<br>School of Dentistry, University of California San Francisco | 1994/01/27<br>1996/07/26<br>1999/03/18<br>2000/08/28 |
| Canada                                     | Faculty of Dentistry, McGill University                                                                                                                                                                                       | 2006/08/07                                           |
| Australia                                  | School of Dental Science, Faculty of Medicine, Dentistry and Health Sciences, The University of Melbourne                                                                                                                     | 1994/03/31                                           |

Institute of Biomaterials and Bioengineering

| Nations /Area                                        | Universities                                                                                                                                                                    | Dates of Agreements      |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| United Kingdom of Great Britain and Northern Ireland | Bioengineering Unit, University of Strathclyde<br>Interdisciplinary Research Centre in Biomedical Materials and Science, Queen Mary and Westfield College, University of London | 1993/03/26<br>1995/07/03 |
| Kingdom of Sweden                                    | Department of Biomedical Engineering, Linköping University                                                                                                                      | 1995/09/26               |
| Republic of Poland                                   | Institute of Biocybernetics and Biomedical Engineering and International Center of Biocybernetics, Polish Academy of Science                                                    | 1996/02/21               |
| Republic of Korea                                    | Institute for Biomaterials Research and Development, Kyungpook National University                                                                                              | 1996/09/24               |
| People's Republic of China                           | School of Stomatology, Peking University                                                                                                                                        | 2006/06/06               |

Medical Research Institute

| Nations /Area            | Universities                                                           | Dates of Agreements |
|--------------------------|------------------------------------------------------------------------|---------------------|
| Republic of Singapore    | Oncology Research Institute, National University of Singapore          | 2003/01/01          |
| United States of America | The General Hospital Corporation D/B/A, Massachusetts General Hospital | 2005/04/25          |
| Kingdom of Thailand      | Faculty of Dentistry, Chulalongkorn University                         | 2006/02/28          |
| French Republic          | École Normale Supérieure de Lyon                                       | 2008/02/25          |

Biomedical Science PhD Program • School of Biomedical Science • Medical Research Institute

| Nations /Area               | Universities                                                                                          | Dates of Agreements      |
|-----------------------------|-------------------------------------------------------------------------------------------------------|--------------------------|
| Republic of Poland          | Medical University of Gdansk                                                                          | 2003/11/01               |
| Federal Republic of Germany | Deutsches Rheuma-Forschungszentrum Berlin                                                             | 2004/02/01               |
| People's Republic of China  | School of Basic Medical Sciences, Peking University Health Science Center<br>China Medical University | 2006/02/27<br>2008/04/01 |



Number of International Students

| Classification            |                        | Graduate Students                              |    |                                         |   |                                |   | Undergraduate Students |   |                      | Research Students   |   |                      |                    |                                              |   |   |                            |   |                              | Japanese Language Course Students | Subtotal                     |                  | Total |                 |  |
|---------------------------|------------------------|------------------------------------------------|----|-----------------------------------------|---|--------------------------------|---|------------------------|---|----------------------|---------------------|---|----------------------|--------------------|----------------------------------------------|---|---|----------------------------|---|------------------------------|-----------------------------------|------------------------------|------------------|-------|-----------------|--|
|                           |                        | Graduate School of Medical and Dental Sciences |    | Graduate School of Health Care Sciences |   | Biomedical Science PhD Program |   | Faculty of Medicine    |   | Faculty of Dentistry | Faculty of Medicine |   | Faculty of Dentistry |                    | Institute of Biomaterials and Bioengineering |   |   | Medical Research Institute |   | International Student Center |                                   | International Student Center | National Expense |       | Private Expense |  |
| Country/Area              |                        |                                                |    |                                         |   |                                |   |                        |   |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              |                                   |                              |                  |       |                 |  |
| Asia                      | Korea                  | 1                                              | 2  |                                         | 1 |                                | 1 |                        |   |                      |                     | 1 |                      |                    |                                              |   |   |                            |   |                              |                                   |                              | 1                | 5     | 6               |  |
|                           | China                  | 8                                              | 43 | 2                                       |   | 2                              | 1 |                        | 4 |                      | 1                   | 2 | 8                    | 1                  |                                              |   |   |                            |   |                              |                                   |                              | 15               | 57    | 72              |  |
|                           | Mongolia               | 3                                              | 2  |                                         |   |                                |   |                        |   |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              |                                   |                              | 3                | 2     | 5               |  |
|                           | Philippines            | 2                                              |    |                                         |   |                                |   |                        |   |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              |                                   |                              | 2                | 0     | 2               |  |
|                           | Indonesia              | 3                                              | 1  |                                         |   |                                |   |                        |   |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              |                                   |                              | 3                | 1     | 4               |  |
|                           | Vietnam                | 2                                              |    |                                         |   |                                |   | 2                      |   |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              |                                   |                              | 4                | 0     | 4               |  |
|                           | Laos                   | 1                                              |    |                                         |   |                                |   |                        |   |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              |                                   |                              | 1                | 0     | 1               |  |
|                           | Cambodia               | 1                                              |    |                                         |   |                                |   |                        |   |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              |                                   | 1                            | 0                | 1     |                 |  |
|                           | Malaysia               | 1                                              | 1  |                                         |   |                                |   |                        |   |                      | 1                   |   |                      |                    |                                              |   |   |                            |   |                              |                                   |                              | 1                | 2     | 3               |  |
|                           | Brunei                 |                                                |    |                                         |   |                                |   | 1                      |   |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              |                                   |                              | 1                | 0     | 1               |  |
|                           | Thailand               | 15                                             | 2  |                                         |   |                                |   | 1                      | 1 |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              |                                   |                              | 16               | 3     | 19              |  |
|                           | Myanmar                | 1                                              | 1  |                                         |   |                                | 1 |                        |   |                      |                     |   |                      | 1                  |                                              |   |   | 1                          |   |                              |                                   |                              | 1                | 4     | 5               |  |
|                           | Bangladesh             | 8                                              | 7  |                                         |   |                                |   |                        |   |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              |                                   |                              | 8                | 7     | 15              |  |
|                           | India                  | 1                                              | 2  |                                         |   |                                |   |                        |   |                      |                     |   | 1                    |                    |                                              |   |   |                            |   |                              |                                   |                              | 1                | 3     | 4               |  |
|                           | Sri Lanka              | 4                                              | 1  |                                         |   | 1                              |   |                        |   |                      |                     |   | 1                    |                    |                                              |   |   |                            |   |                              |                                   |                              | 5                | 2     | 7               |  |
|                           | Afghanistan            |                                                | 1  |                                         |   |                                |   |                        |   |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              |                                   |                              | 0                | 1     | 1               |  |
|                           | Iran                   |                                                | 3  |                                         |   |                                | 1 |                        |   |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              |                                   |                              | 0                | 4     | 4               |  |
|                           | Iraq                   | 1                                              |    |                                         |   |                                |   |                        |   |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              |                                   |                              | 1                | 0     | 1               |  |
|                           | Lebanon                | 1                                              |    |                                         |   |                                |   |                        |   |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              |                                   |                              | 1                | 0     | 1               |  |
|                           | Jordan                 | 2                                              |    |                                         |   |                                |   |                        |   |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              |                                   |                              | 2                | 0     | 2               |  |
| Africa                    | Egypt                  | 2                                              |    |                                         |   |                                |   |                        |   |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              |                                   |                              | 2                | 0     | 2               |  |
|                           | Libya                  | 1                                              |    |                                         |   |                                |   |                        |   |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              |                                   |                              | 1                | 0     | 1               |  |
|                           | Cote d'Ivoire          | 1                                              |    |                                         |   |                                |   |                        |   |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              |                                   |                              | 1                | 0     | 1               |  |
|                           | Ghana                  | 1                                              | 1  |                                         |   |                                |   |                        |   |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              |                                   |                              | 1                | 1     | 2               |  |
| Europe                    | Germany                |                                                |    |                                         |   |                                |   |                        |   |                      |                     | 1 |                      |                    |                                              |   |   |                            |   |                              |                                   |                              | 1                | 0     | 1               |  |
|                           | Cyprus                 | 1                                              |    |                                         |   |                                |   |                        |   |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              | 1                                 |                              | 2                | 0     | 2               |  |
|                           | Bosnia and Herzegovina | 1                                              |    |                                         |   |                                |   |                        |   |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              |                                   | 1                            | 0                | 1     |                 |  |
|                           | Azerbaijan             | 1                                              |    |                                         |   |                                |   |                        |   |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              |                                   | 1                            | 0                | 1     |                 |  |
|                           | Slovakia               |                                                |    |                                         |   |                                |   |                        |   |                      |                     | 1 |                      |                    |                                              |   |   |                            |   |                              |                                   | 1                            | 0                | 1     |                 |  |
|                           | Sweden                 |                                                |    |                                         |   | 1                              |   |                        |   |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              |                                   | 1                            | 0                | 1     |                 |  |
| Central and South America | Mexico                 |                                                | 1  |                                         |   |                                | 1 |                        |   |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              |                                   |                              | 0                | 2     | 2               |  |
|                           | Brazil                 | 1                                              |    |                                         |   |                                |   |                        |   |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              |                                   |                              | 1                | 0     | 1               |  |
|                           | Paraguay               | 2                                              | 1  |                                         |   |                                |   |                        |   |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              | 1                                 |                              | 3                | 1     | 4               |  |
| Oceania                   | Fiji                   | 1                                              |    |                                         |   |                                | 1 |                        |   |                      |                     |   |                      |                    |                                              |   |   |                            |   |                              |                                   |                              | 1                | 1     | 2               |  |
|                           | Australia              |                                                |    |                                         |   |                                |   |                        |   | 1                    |                     |   |                      |                    |                                              |   |   |                            |   |                              |                                   |                              | 0                | 1     | 1               |  |
| Subtotal                  |                        | 67                                             | 69 | 2                                       | 1 | 4                              | 6 | 4                      | 5 | 0                    | 3                   | 4 | 11                   | 1                  | 1                                            | 0 | 0 | 0                          | 1 | 0                            | 0                                 | 3                            | 85               | 97    | 182             |  |
| Grand Total               |                        | National Expense 73                            |    | Private Expense 76                      |   |                                |   | National Expense 4     |   | Private Expense 8    |                     |   |                      | National Expense 5 |                                              |   |   | Private Expense 13         |   |                              |                                   | National Expense 3           |                  | 182   |                 |  |
|                           |                        | 149                                            |    |                                         |   |                                |   | 12                     |   |                      | 18                  |   |                      |                    |                                              |   | 3 |                            |   |                              |                                   |                              |                  |       |                 |  |

\* "Private Expense" (Graduate Students) includes visiting students from other universities.



|                                    |                                                                           |
|------------------------------------|---------------------------------------------------------------------------|
| International House                |                                                                           |
| Address                            | 8-1, Kounodai 2 chome, Ichikawa City, Chiba Prefecture                    |
| Data on the Building               | Three-Story Reinforced Concrete Building                                  |
| Floor Space                        | 1,708 m <sup>2</sup>                                                      |
| Rooms for Personal Use             | Single 33 Rooms, Couple 10 Rooms, Family 5 Rooms                          |
| House Office and Shared Facilities | House Office, Entrance, Hall Mail Boxes, Store Room, Lounge, Laundry Room |

|                                    |                                                        |
|------------------------------------|--------------------------------------------------------|
| International Student House        |                                                        |
| Address                            | 8-1, Kounodai 2 chome, Ichikawa City, Chiba Prefecture |
| Data on the Building               | Four-Story Reinforced Concrete Building                |
| Floor Space                        | 1,175 m <sup>2</sup>                                   |
| Rooms for Personal Use             | Single 50 Rooms                                        |
| House Office and Shared Facilities | Lounge, Laundry Room                                   |

\* International House includes rooms for accommodation.

# Statistics 2008

Number of Staff Members

Number of Graduate Students

Number of Undergraduate Students

Number of Applicants and Students Admitted (Fiscal Year 2008) (Graduate schools)

Number of Applicants and Students Admitted (Fiscal Year 2008) (Faculties)

Number of Graduates • Career Prospects after Graduation (Graduate Schools • Faculties)

Degrees Conferred

### Educational Facilities

Grants-in-Aid for Scientific Research (Fiscal Year 2008)

Entrusted Research Funds (Fiscal Year 2007)

Grants-in-Aid for Scientific Research from Ministry of Health, Labour and Welfare

Endowed Departments, Finances (2008 Fiscal Year Budget)

Number of Staff Members

(May 1, 2008)

| Classification                                                    | Director | Academic Staff |                     |          |                    |          | Other Staff |            |       | Total |         |
|-------------------------------------------------------------------|----------|----------------|---------------------|----------|--------------------|----------|-------------|------------|-------|-------|---------|
|                                                                   |          | Professor      | Associate Professor | Lecturer | Research Associate | Subtotal | Clerk       | Co-medical | Nurse |       |         |
| President                                                         | 1        |                |                     |          |                    |          |             |            |       | 1     |         |
| Trustee                                                           | 5        |                |                     |          |                    |          |             |            |       | 5     |         |
| Auditor                                                           | 2(1)     |                |                     |          |                    |          |             |            |       | 2     | (1)     |
| Administration Bureau                                             |          |                |                     |          |                    |          | 139         |            |       | 139   | 139     |
| Graduate School of Medical and Dental Sciences                    |          | 72             | 49                  | 38       | 146                | 305      |             |            |       | 305   |         |
| Graduate School of Health Care Sciences                           |          | 16             | 5                   | 5        | 13                 | 39       |             |            |       | 39    |         |
| School of Biomedical Science                                      |          | 7              | 5                   |          | 1                  | 13       |             |            |       | 13    |         |
| Faculty of Medicine                                               |          |                |                     |          |                    |          | 74          | 6          |       | 80    | 80      |
| University Hospital of Medicine                                   |          | 1              | 8                   | 31       | 85                 | 125      | 4           | 84         | 672   | 760   | 885     |
| Faculty of Dentistry                                              |          | 6              | 2                   | 5        |                    | 13       | 32          | 3          |       | 35    | 48      |
| University Hospital of Dentistry                                  |          |                | 4                   | 12       | 22                 | 38       |             | 51         | 58    | 109   | 147     |
| School of Dental Technologists                                    |          |                |                     | 4        |                    | 4        |             |            |       |       | 4       |
| College of Liberal Arts and Sciences                              |          | 11             | 9                   |          | 2                  | 22       | 5           |            |       | 5     | 27      |
| Institute of Biomaterials and Bioengineering                      |          | 10             | 5                   |          | 17                 | 32       | 6           |            |       | 6     | 38      |
| Medical Research Institute                                        |          | 15             | 20                  |          | 25                 | 60       | 9           |            |       | 9     | 69      |
| University Library                                                |          |                |                     |          |                    |          | 6           |            |       | 6     | 6       |
| Kounodai Branch Library                                           |          |                |                     |          |                    |          | 2           |            |       | 2     | 2       |
| Human Gene Sciences Center                                        | 1        |                |                     | 1        | 1                  | 3        |             |            |       |       | 3       |
| Research Center for Frontier Life Science                         |          |                |                     |          |                    |          |             |            |       |       |         |
| (Instrumental Analysis Research Center for Life Science)          |          |                | 1                   |          | 1                  | 2        |             |            |       |       | 2       |
| (General Isotope Center)                                          |          |                | 1                   |          |                    | 1        |             |            |       |       | 1       |
| (Animal Research Center)                                          |          |                | 1                   |          | 1                  | 2        |             |            |       |       | 2       |
| Joint Institutes for Education and Research Administration Office |          |                |                     |          |                    |          | 8           |            |       | 8     | 8       |
| International Student Center                                      |          |                | 3                   |          |                    | 3        |             |            |       |       | 3       |
| Health Service Center                                             | 1        | 1              |                     |          |                    | 2        |             |            | 1     | 1     | 3       |
| Center for Education Research in Medicine and Dentistry           | 2        | 1              |                     | 1        |                    | 4        |             |            |       |       | 4       |
| Center for Brain Integration Research                             |          |                | 2                   |          |                    | 2        |             |            |       |       | 2       |
| Number of Staff Members                                           | 8(1)     | 142            | 117                 | 97       | 314                | 670      | 285         | 144        | 731   | 1160  | 1838(1) |

\* Note ( ) : The numbers in parentheses indicate part-time directors

Number of Graduate Students

(May 1, 2008)

● Graduate School of Medical and Dental Sciences

| Specialized Courses                      | Capacity of Admission | Total Capacity | Master's Program |          |          | Doctor's Program |           |           |           |             | Total       |
|------------------------------------------|-----------------------|----------------|------------------|----------|----------|------------------|-----------|-----------|-----------|-------------|-------------|
|                                          |                       |                | 1st year         | 2nd year | Subtotal | 1st year         | 2nd year  | 3rd year  | 4th year  | Subtotal    |             |
| Medical and Dental Sciences              | 35                    | 70             | 34 21            | 44 22    | 78 43    |                  |           |           |           |             | 78 43       |
| Medical and Dental Sciences (MMA Course) | 15                    | 25             | 16 10            | 10 7     | 26 17    |                  |           |           |           |             | 26 17       |
| Oral Health Sciences                     | 42                    | 168            |                  |          |          | 51 (3) 26        | 51 (3) 22 | 32 (3) 18 | 65 (4) 28 | 199 (13) 94 | 199 (13) 94 |
| Maxillofacial/ Neck Reconstruction       | 30                    | 120            |                  |          |          | 35 (1) 13        | 25 (1) 4  | 23 (1) 6  | 24 5      | 107 (3) 28  | 107 (3) 28  |
| Bio-Matrix                               | 18                    | 72             |                  |          |          | 14 (2) 7         | 11 3      | 14 7      | 19 (3) 6  | 58 (5) 23   | 58 (5) 23   |
| Public Health                            | 20                    | 80             |                  |          |          | 17 (5) 7         | 23 (3) 14 | 22 (5) 9  | 28 (4) 15 | 90 (17) 45  | 90 (17) 45  |
| Gerontology and Gerodontology            | 10                    | 40             |                  |          |          | 15 5             | 12 5      | 17 6      | 23 5      | 67 21       | 67 21       |
| Comprehensive Patient Care               | 8                     | 32             |                  |          |          | 9 5              | 9 6       | 11 7      | 16 7      | 45 25       | 45 25       |
| Cognitive and Behavioral Medicine        | 19                    | 76             |                  |          |          | 19 4             | 18 3      | 19 8      | 23 5      | 79 20       | 79 20       |
| Bio-Environmental Response               | 17                    | 68             |                  |          |          | 14 6             | 14 7      | 19 7      | 14 8      | 61 28       | 61 28       |
| Systemic Organ Regulation                | 29                    | 116            |                  |          |          | 34 8             | 30 10     | 32 13     | 45 11     | 141 42      | 141 42      |
| Advanced Therapeutical Sciences          | 21                    | 84             |                  |          |          | 28 8             | 30 16     | 20 6      | 30 8      | 108 38      | 108 38      |
| Subtotal                                 | 264                   | 951            | 50 31            | 54 29    | 104 60   | 236 89           | 223 90    | 209 87    | 287 98    | 955 364     | 1,059 424   |

● Graduate School of Health Care Sciences

| Specialized Courses                   | Capacity of Admission | Total Capacity | Master's Program |          |          | Doctor's Program |          |          |          |          | Total   |
|---------------------------------------|-----------------------|----------------|------------------|----------|----------|------------------|----------|----------|----------|----------|---------|
|                                       |                       |                | 1st year         | 2nd year | Subtotal | 1st year         | 2nd year | 3rd year | 4th year | Subtotal |         |
| Comprehensive Health Nursing Sciences | (1) 17 (2) 8          | (1) 34 (2) 24  | 18 16            | 18 17    | 36 33    | 11 11            | 13 12    | 19 19    |          | 43 42    | 79 75   |
| Biomedical Laboratory Sciences        | (1) 12 (2) 6          | (1) 24 (2) 18  | 13 10            | 12 10    | 25 20    | 6 5              | 7 5      | 12 7     |          | 25 17    | 50 37   |
| Subtotal                              | (1) 29 (2) 14         | (1) 58 (2) 42  | 31 26            | 30 27    | 61 53    | 17 16            | 20 17    | 31 26    |          | 68 59    | 129 112 |

● Biomedical Science PhD Program

| Specialized Courses | Capacity of Admission | Total Capacity | Master's Program |          |          | Doctor's Program |          |          |          |          | Total  |
|---------------------|-----------------------|----------------|------------------|----------|----------|------------------|----------|----------|----------|----------|--------|
|                     |                       |                | 1st year         | 2nd year | Subtotal | 1st year         | 2nd year | 3rd year | 4th year | Subtotal |        |
| Bioinformatics      | (1) 21 (2) 8          | (1) 42 (2) 23  | 21 14            | 26 7     | 47 21    | 9 3              | 12 6     | 15 5     |          | 36 14    | 83 35  |
| Functional Biology  | (1) 24 (2) 7          | (1) 48 (2) 20  | 27 9             | 16 7     | 43 16    | 8 5              | 4 2      | 4 2      |          | 16 9     | 59 25  |
| Subtotal            | (1) 45 (2) 15         | (1) 90 (2) 43  | 48 23            | 42 14    | 90 37    | 17 8             | 16 8     | 19 7     |          | 52 23    | 142 60 |

| Grand total (Master's Program • Doctor's Program) | Capacity of Admission | Total Capacity | Master's Program |          |          | Doctor's Program |               |               |               |                  | Total              |
|---------------------------------------------------|-----------------------|----------------|------------------|----------|----------|------------------|---------------|---------------|---------------|------------------|--------------------|
|                                                   |                       |                | 1st year         | 2nd year | Subtotal | 1st year         | 2nd year      | 3rd year      | 4th year      | Subtotal         |                    |
|                                                   | 264                   | 951            | 50 31            | 54 29    | 104 60   | 236 89 (6)[5]    | 223 90 (4)[3] | 209 87 (4)[5] | 287 98 (7)[4] | 955 364 (21)[17] | 1,059 424 (21)[17] |

| Grand total (Master's Program • Doctor's Program) | Capacity of Admission | Total Capacity | Master's Program |          |          | Doctor's Program |          |          |          |          | Total   |
|---------------------------------------------------|-----------------------|----------------|------------------|----------|----------|------------------|----------|----------|----------|----------|---------|
|                                                   |                       |                | 1st year         | 2nd year | Subtotal | 1st year         | 2nd year | 3rd year | 4th year | Subtotal |         |
|                                                   | 103                   | 217            | 79 49            | 72 41    | 151 90   | 34 24            | 36 25    | 50 33    |          | 120 82   | 271 172 |

Grand Total  
1,330 596  
(21)[17]

\* Note 1 : The numbers in red indicate the female students.  
\* Note 2 ( ) : The numbers in angle brackets indicate International students in the Graduate Dental Science Course.  
\* Note 3 [ ] : The numbers in brackets indicate International students in the Graduate Public Health Leader Course.  
\* Note 4 (1) : Master's Program  
\* Note 5 (2) : Doctor's Program



Number of Undergraduate Students

(May 1, 2008)

● Faculty of Medicine

|                                |                    | Capacity of Admission | Total Capacity | 1st year | 2nd year | 3rd year       | 4th year         | 5th year       | 6th year       | Total              |
|--------------------------------|--------------------|-----------------------|----------------|----------|----------|----------------|------------------|----------------|----------------|--------------------|
| School of Medicine             |                    | 75<br>(5)             | 470            | 76 28    | 79 16    | 94 23<br>[6 3] | 83 25<br>[5 3]   | 83 30<br>[5 3] | 86 34<br>[5 3] | 501 156<br>[21 12] |
| School of Health Care Sciences | Nursing Science    | 50<br>(10)            | 220            | 59 57    | 50 48    | 47 42          | 59 53<br>[11 9]  |                |                | 215 200<br>[11 9]  |
|                                | Medical Technology | 30<br>(10)            | 140            | 35 29    | 35 25    | 32 23          | 37 30<br>[11 10] |                |                | 139 107<br>[11 10] |
| Subtotal                       |                    | 80<br>(20)            | 360            | 94 86    | 85 73    | 79 65          | 96 83<br>[22 19] |                |                | 354 307<br>[22 19] |

● Faculty of Dentistry

|                                     |  | Capacity of Admission | Total Capacity | 1st year | 2nd year | 3rd year        | 4th year         | 5th year        | 6th year        | Total              |
|-------------------------------------|--|-----------------------|----------------|----------|----------|-----------------|------------------|-----------------|-----------------|--------------------|
| School of Dentistry                 |  | 55<br>(10)            | 370            | 56 23    | 62 26    | 68 30<br>[10 8] | 64 26<br>[11 7]  | 63 26<br>[10 7] | 62 31<br>[10 7] | 375 162<br>[41 29] |
| School of Oral Health Care Sciences |  | 25<br>(10)            | 120            | 30 27    | 22 21    | 32 30<br>[6 6]  | 35 34<br>[10 10] |                 |                 | 119 112<br>[16 16] |

| Grand total | Capacity of Admission | Total Capacity | 1st year | 2nd year | 3rd year           | 4th year           | 5th year          | 6th year          | Total                 |
|-------------|-----------------------|----------------|----------|----------|--------------------|--------------------|-------------------|-------------------|-----------------------|
|             | 235<br>(45)           | 1,320          | 256 164  | 248 136  | 273 148<br>[22 17] | 278 168<br>[48 39] | 146 56<br>[15 10] | 148 65<br>[15 10] | 1,349 737<br>[100 76] |

● Research Students

| Classification                               | Male | Female | Total |
|----------------------------------------------|------|--------|-------|
| Faculty of Medicine                          |      |        |       |
| School of Medicine                           | 36   | 19     | 55    |
| School of Health Care Sciences               | 8    | 28     | 36    |
| Faculty of Dentistry                         |      |        |       |
| School of Dentistry                          | 127  | 103    | 230   |
| Institute of Biomaterials and Bioengineering | 5    | 1      | 6     |
| Medical Research Institute                   | 8    | 3      | 11    |
| Total                                        | 184  | 154    | 338   |

- \* Note 1 : The numbers in red indicate the female students.  
\* Note 2 < > : The numbers in angle brackets indicate the maximum number of students who can transfer into the third-year program from other institutions. They are not included in the numbers above them.  
\* Note 3 [ ] : The numbers in brackets indicate the students transferring into the third-year program from other institutions.

Number of Applicants and Students Admitted (Fiscal Year 2008)

Graduate Schools

● Graduate School of Medical and Dental Sciences

| Specialized Courses                | Capacity of Admission | Applicants |        |       | Students Admitted |        |       |
|------------------------------------|-----------------------|------------|--------|-------|-------------------|--------|-------|
|                                    |                       | Male       | Female | Total | Male              | Female | Total |
| Medical-Dental Sciences            | 50                    | 102        | 107    | 209   | 18                | 31     | 49    |
| Oral Health Sciences               | 42                    | 28         | 25     | 53    | 23                | 23     | 46    |
| Maxillofacial/ Neck Reconstruction | 30                    | 24         | 13     | 37    | 20                | 13     | 33    |
| Bio-Matrix                         | 18                    | 8          | 7      | 15    | 6                 | 6      | 12    |
| Public Health                      | 20                    | 8          | 4      | 12    | 7                 | 6      | 13    |
| Gerontology and Gerodontology      | 10                    | 14         | 4      | 18    | 10                | 4      | 14    |
| Comprehensive Patient Care         | 8                     | 6          | 6      | 12    | 4                 | 5      | 9     |
| Cognitive and Behavioral Medicine  | 19                    | 15         | 4      | 19    | 15                | 3      | 18    |
| Bio-Environmental Response         | 17                    | 5          | 7      | 12    | 8                 | 6      | 14    |
| Systemic Organ Regulation          | 29                    | 29         | 8      | 37    | 26                | 8      | 34    |
| Advanced Therapeutical Sciences    | 21                    | 21         | 7      | 28    | 19                | 8      | 27    |
| Total                              | 264                   | 260        | 192    | 452   | 156               | 113    | 269   |

● Graduate School of Health Care Sciences

| Specialized Courses                   | Capacity of Admission | Applicants |          |          | Students Admitted |          |          |
|---------------------------------------|-----------------------|------------|----------|----------|-------------------|----------|----------|
|                                       |                       | Male       | Female   | Total    | Male              | Female   | Total    |
| Comprehensive Health Nursing Sciences | (1) 17<br>(2) 8       | 4<br>0     | 27<br>33 | 31<br>33 | 2<br>0            | 15<br>10 | 17<br>10 |
| Biomedical Laboratory Sciences        | (1) 12<br>(2) 6       | 13<br>1    | 15<br>5  | 28<br>6  | 3<br>1            | 9<br>5   | 12<br>6  |
| Total                                 | (1) 29<br>(2) 14      | 17<br>1    | 42<br>38 | 59<br>39 | 5<br>1            | 24<br>15 | 29<br>16 |

● Biomedical Science PhD Program

| Specialized Courses | Capacity of Admission | Applicants |         |           | Students Admitted |         |          |
|---------------------|-----------------------|------------|---------|-----------|-------------------|---------|----------|
|                     |                       | Male       | Female  | Total     | Male              | Female  | Total    |
| Bioinformatics      | (1) 21<br>(2) 8       | 27<br>10   | 28<br>3 | 55<br>13  | 9<br>7            | 14<br>3 | 23<br>10 |
| Functional Biology  | (1) 24<br>(2) 7       | 47<br>3    | 28<br>6 | 75<br>9   | 15<br>3           | 9<br>4  | 24<br>7  |
| Total               | (1) 45<br>(2) 15      | 74<br>13   | 56<br>9 | 130<br>22 | 24<br>10          | 23<br>7 | 47<br>17 |

- \* Note 1 (1) : Master's Program  
\* Note 2 (2) : Doctor's Program

Number of Applicants and Students Admitted (Fiscal Year 2008)

Faculties

● Faculty of Medicine

|                                | Capacity of Admission | Applicants |             |             | Students Admitted |            |            |
|--------------------------------|-----------------------|------------|-------------|-------------|-------------------|------------|------------|
|                                |                       | Male       | Female      | Total       | Male              | Female     | Total      |
| School of Medicine             | 75〈5〉                 | 360〈34〉    | 171〈31〉     | 531〈65〉     | 48〈3〉             | 27〈3〉      | 75〈6〉      |
| School of Health Care Sciences |                       |            |             |             |                   |            |            |
| Nursing Science                | 55〔20〕                | 10〔2〕      | 171〔45〕     | 181〔47〕     | 2〔1〕              | 53〔21〕     | 55〔22〕     |
| Medical Technology             | 35                    | 34         | 121         | 155         | 6                 | 29         | 35         |
| Subtotal                       | 165〔20〕〈5〉            | 404〔2〕〈34〉 | 463〔45〕〈31〉 | 867〔47〕〈65〉 | 56〔1〕〈3〉          | 109〔21〕〈3〉 | 165〔22〕〈6〉 |

● Faculty of Dentistry

|                                     | Capacity of Admission | Applicants |         |         | Students Admitted |        |        |
|-------------------------------------|-----------------------|------------|---------|---------|-------------------|--------|--------|
|                                     |                       | Male       | Female  | Total   | Male              | Female | Total  |
| School of Dentistry                 | 55〈10〉                | 240〈12〉    | 180〈27〉 | 420〈39〉 | 33〈2〉             | 23〈8〉  | 56〈10〉 |
| School of Oral Health Care Sciences | 27〈6〉                 | 5〈0〉       | 58〈24〉  | 63〈24〉  | 3〈0〉              | 24〈6〉  | 27〈6〉  |
| Subtotal                            | 82〈16〉                | 245〈12〉    | 238〈51〉 | 483〈63〉 | 36〈2〉             | 47〈14〉 | 83〈16〉 |

| Grand total | Capacity of Admission | Applicants |             |                | Students Admitted |             |             |
|-------------|-----------------------|------------|-------------|----------------|-------------------|-------------|-------------|
|             |                       | Male       | Female      | total          | Male              | Female      | Total       |
|             | 247〔26〕〈21〉           | 649〔2〕〈46〉 | 701〔45〕〈82〉 | 1,350〔47〕〈128〉 | 92〔1〕〈5〉          | 156〔21〕〈17〉 | 248〔22〕〈22〉 |

\* Note 1〔 〕: The numbers in brackets indicate the number of students admitted on recommendation  
\* Note 2〈 〉: The numbers in angle brackets indicate the students transferring into the third year program from other institutions. They are not included in the numbers above them.  
\* Note 3: The number of foreign students is not included.



Number of Graduates • Career Prospects after Graduation

Graduate Schools

| Classification                                 |                  |                            | Fiscal year 2007 | Total      | Higher Education | Resident | Employment | Others |
|------------------------------------------------|------------------|----------------------------|------------------|------------|------------------|----------|------------|--------|
| Graduate School of Medical and Dental Sciences | Doctor's Program |                            | 197              | 1,036      | 2                |          | 135        | 60     |
|                                                | Master's Program |                            | 63               | 250        | 12               |          | 46         | 5      |
| Medical Research Division                      | Doctor's Program | Medical Science            |                  | 978 (58)   |                  |          |            |        |
|                                                |                  | Nursing Science            |                  | 30         |                  |          |            |        |
|                                                |                  | Medical Laboratory Science |                  | 10         |                  |          |            |        |
|                                                | Master's Program | Nursing Science            |                  | 100        |                  |          |            |        |
|                                                |                  | Medical Laboratory         |                  | 93         |                  |          |            |        |
| Dental Research Division                       | Doctor's Program |                            |                  | 1,361 (28) |                  |          |            |        |
| Health Care Sciences                           | Doctor's Program |                            | 17               | 71         |                  |          | 13         | 4      |
|                                                | Master's Program |                            | 28               | 200        | 4                |          | 17         | 7      |
| Biomedical Science PhD Program                 | Doctor's Program |                            | 14               | 18         |                  |          | 8          | 6      |
|                                                | Master's Program |                            | 37               | 108        | 12               |          | 20         | 5      |
| total                                          |                  |                            | 356              | 4,255      | 30               |          | 239        | 87     |

Faculties

| Classification       |                                     | Fiscal year 2007 | Total | Higher Education | Resident | Employment | Others |
|----------------------|-------------------------------------|------------------|-------|------------------|----------|------------|--------|
| Faculty of Medicine  | School of Medicine                  | 86               | 3,820 | 2                | 84       |            |        |
|                      | School of Health Care Sciences      | 103              | 1,521 | 28               |          | 69         | 6      |
| Faculty of Dentistry | School of Dentistry                 | 67               | 4,010 |                  | 50       |            | 17     |
|                      | School of Oral Health Care Sciences | 27               | 27    | 7                |          | 15         | 5      |
| Total                |                                     | 283              | 9,378 | 37               | 134      | 84         | 28     |

\* Note : The numbers in parentheses indicate the number of students in the Research Division (former curriculum) .

Degrees Conferred

Doctor's Program

| Classification   | Doctor of Philosophy<br>in Medical Science | Doctor of Philosophy<br>in Dental Science | Doctor of<br>Philosophy | Doctor of Nursing<br>Science | Doctor of Medical<br>Laboratory Science | Doctor of Philosophy<br>in Science |
|------------------|--------------------------------------------|-------------------------------------------|-------------------------|------------------------------|-----------------------------------------|------------------------------------|
| Fiscal year 2007 | 107                                        | 89                                        | 13                      | 7                            | 2                                       | 12                                 |
| Total            | 1,439                                      | 1,735                                     | 91                      | 57                           | 26                                      | 17                                 |

Granted by Merit of Thesis

| Classification   | Doctor of Philosophy<br>in Medical Science | Doctor of Philosophy<br>in Dental Science | Doctor of<br>Philosophy | Doctor of Nursing<br>Science | Doctor of Medical<br>Laboratory Science |
|------------------|--------------------------------------------|-------------------------------------------|-------------------------|------------------------------|-----------------------------------------|
| Fiscal year 2007 | 16                                         | 6                                         | 2                       | 1                            | 1                                       |
| Total            | 1,678                                      | 472                                       | 18                      | 8                            | 8                                       |

Master's Program

| Classification   | Master of Medical<br>Science | Master of Dental<br>Science | Master of Medical<br>Administration(1) | Master of Medical<br>Administration(2) | Master of Nursing<br>Science | Master of Medical<br>Laboratory Science | Master of<br>Science | Master of<br>Biomedical Science | Master of<br>Functional Biology |
|------------------|------------------------------|-----------------------------|----------------------------------------|----------------------------------------|------------------------------|-----------------------------------------|----------------------|---------------------------------|---------------------------------|
| Fiscal year 2007 | 45                           | 0                           | 8                                      | 9                                      | 15                           | 13                                      | 35                   | 1                               | 1                               |
| Total            | 202                          | 5                           | 39                                     | 34                                     | 212                          | 181                                     | 104                  | 2                               | 2                               |

\* Note 1 (1) : Administrative Management of Medical Service  
\* Note 2 (2) : Healthcare Policy



Graduation Ceremony



Entrance Ceremony

Educational Facilities

(May 1, 2008)

Enrollment of the Students

| School                                                     | Grade    |          | Total   |
|------------------------------------------------------------|----------|----------|---------|
|                                                            | 1st year | 2nd year |         |
| School for Dental Technologists                            | 20 (11)  | 21 (14)  | 41 (25) |
| Special Training Course of School for Dental Technologists | 10 (4)   | 11 (6)   | 21 (10) |
| Total                                                      | 30 (15)  | 32 (20)  | 62 (35) |

Number of Graduates

| School                                                     | Fiscal year 2007 | Total |
|------------------------------------------------------------|------------------|-------|
| School for Dental Technologists                            | 18               | 1,006 |
| Special Training Course of School for Dental Technologists | 6                | 454   |
| Total                                                      | 24               | 1,460 |

Number of Applicants and Students Admitted (Fiscal Year 2008)

| School                                                     | Capacity of Admission | Applicants |        |       | Students Admitted |        |       |
|------------------------------------------------------------|-----------------------|------------|--------|-------|-------------------|--------|-------|
|                                                            |                       | Male       | Female | Total | Male              | Female | Total |
| School for Dental Technologists                            | 20                    | 24         | 25     | 49    | 9                 | 11     | 20    |
| Special Training Course of School for Dental Technologists | 10                    | 8          | 9      | 17    | 6                 | 4      | 10    |
| Total                                                      | 30                    | 32         | 34     | 66    | 15                | 15     | 30    |



Grants-in-Aid for Scientific Research (Fiscal Year 2008)

(September 1, 2008)

| Categories for Research                                | Number | Amount (in thousands of yen) |
|--------------------------------------------------------|--------|------------------------------|
| Grant-in-Aid for Scientific Research on Priority Areas | 37     | 367,000                      |
| Grant-in-Aid for Exploratory Research                  | 40     | 56,600                       |
| Grant-in-Aid for Young Scientists (A)                  | 5      | 42,120                       |
| Grant-in-Aid for Young Scientists (B)                  | 85     | 158,600                      |
| Grant-in-Aid for JSPS Fellows                          | 29     | 22,700                       |
| Grant-in-Aid for Scientific Research (S)               | 1      | 21,710                       |
| Grant-in-Aid for Scientific Research (A)               | 15     | 200,330                      |
| Grant-in-Aid for Scientific Research (B)               | 59     | 359,840                      |
| Grant-in-Aid for Scientific Research (C)               | 108    | 192,920                      |
| Grant-in-Aid for Creative Scientific Research          | 3      | 288,990                      |
| Grant-in-Aid for Young Scientists (Start-up)           | 27     | 45,539                       |
| Total                                                  | 409    | 1,756,349                    |

Entrusted Research Funds (Fiscal Year 2007)

| Categories for Research Funds      | Number of Projects | Amount (in thousands of yen) |
|------------------------------------|--------------------|------------------------------|
| Entrusted Research                 | 83 (21)            | 722,325 (10,850)             |
| Cooperative Research               | 114 (76)           | 210,293 (113,359)            |
| Donation for Promotion of Learning | 794                | 1,267,424                    |
| Total                              | 991                | 2,200,042                    |

\* A multi-year contract means the research was conducted for more than two years including the fiscal year 2007. The "Amount" is the sum of all the money entrusted to the projects in the fiscal year 2007.  
\* Figures in parentheses indicate values related to multi-year projects.

Grants-in-Aid for Scientific Research from Ministry of Health, Labour and Welfare

(September 1, 2008)

| Categories for Research                                                  | Number of Projects | Amount (in thousands of yen) |
|--------------------------------------------------------------------------|--------------------|------------------------------|
| Research on HIV/AIDS                                                     | 1                  | 5,000                        |
| Research on Health Security Control                                      | 4                  | 21,500                       |
| Research on Psychiatric and Neurological Diseases and Mental Health      | 1                  | 36,400                       |
| Research on Regenerative Medicine for Clinical Application               | 2                  | 66,000                       |
| Comprehensive Research on Aging and Health                               | 1                  | 3,840                        |
| Research on Measures for Intractable Diseases                            | 3                  | 198,957                      |
| Research on Regulatory Science of Pharamaceuticals and Medical Devices   | 3                  | 15,900                       |
| Researches on Sensory and Communicative Disorders                        | 1                  | 14,000                       |
| Research on Hepatitis                                                    | 1                  | 112,112                      |
| Comprehensive Research on Cardiovascular and Life-Style Related Diseases | 1                  | 21,000                       |
| Research on Policy Planning and Evaluation                               | 1                  | 7,584                        |

|                                             |    |         |
|---------------------------------------------|----|---------|
| Research on Statistics and Information      | 1  | 1,051   |
| Research on Region Medical                  | 5  | 38,000  |
| Research on Allergic disease and Immunology | 1  | 36,000  |
| Total                                       | 26 | 577,344 |

Endowed Departments

(September 1, 2008)

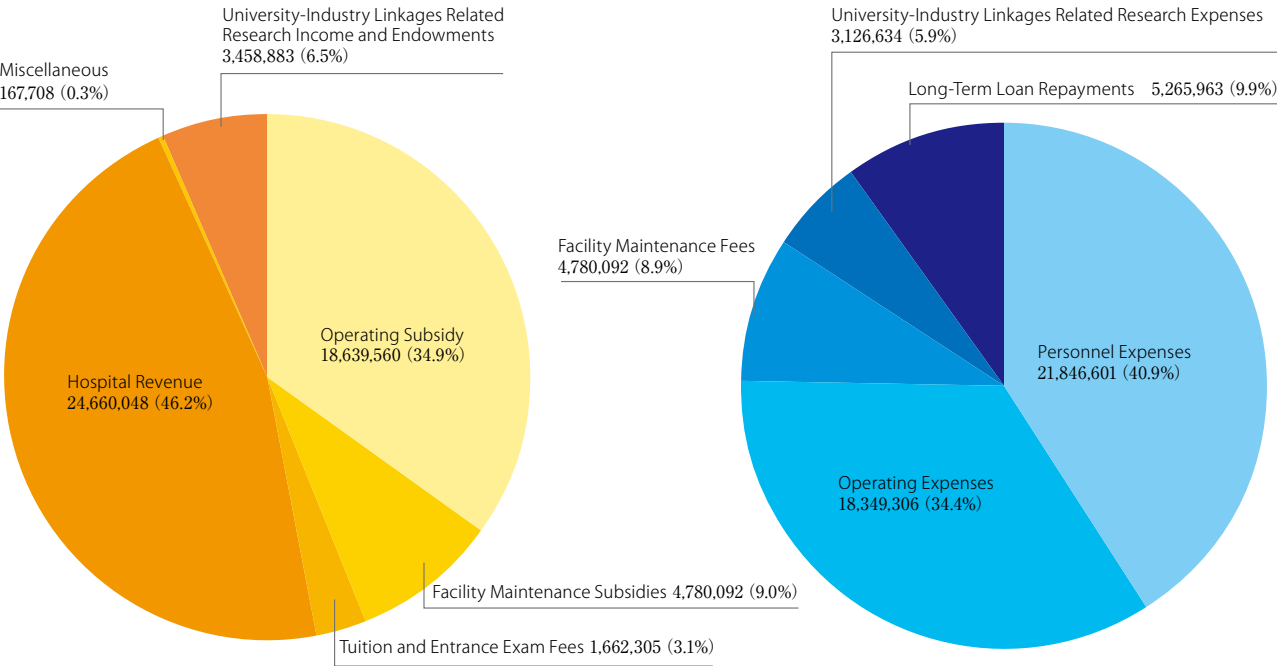
| Departments/Institutes                         | Endowed Departments                                               | Term                    | Donor                                                                                                                                                                                                                                                                    |
|------------------------------------------------|-------------------------------------------------------------------|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Graduate School of Medical and Dental Sciences | Department of Clinical Informatics                                | 2003/12/15 ~ 2008/12/14 | Nippon Gene Co., Ltd. / MicroDiagnostic, Inc.                                                                                                                                                                                                                            |
| Information Center for Medical Sciences        | Department of Advanced Biomedical Informatics                     | 2004/8/1 ~ 2009/7/31    | VeriSign Japan K.K. / Fuji Xerox Co., Ltd. / T.T.T. Co., Ltd. / Sprite, Inc.                                                                                                                                                                                             |
| Graduate School of Medical and Dental Sciences | Department of Pharmacovigilance                                   | 2005/4/1 ~ 2010/3/31    | Mitsubishi Tanabe Pharma Corporation / Wyeth K.K. / Takeda Pharmaceutical Co., Ltd. / Abbott Japan Co., Ltd. / Eisai Co., Ltd. / Chugai Pharmaceutical Co., Ltd.                                                                                                         |
| Graduate School of Medical and Dental Sciences | Department of Nanomedicine                                        | 2005/4/1 ~ 2010/3/31    | Dai Nippon Printing Co., Ltd.                                                                                                                                                                                                                                            |
| Graduate School of Medical and Dental Sciences | Department of Translational Oncology                              | 2005/10/1 ~ 2011/9/30   | Taiho Pharmaceutical Co., Ltd.                                                                                                                                                                                                                                           |
| Graduate School of Medical and Dental Sciences | Department of Sleep-Related Respiratory Disorders                 | 2005/10/1 ~ 2008/9/30   | Fuji Respironics Co., Ltd.                                                                                                                                                                                                                                               |
| Graduate School of Medical and Dental Sciences | Development of Natural Bioproducts                                | 2005/11/1 ~ 2008/10/31  | Tokiwa Phytochemical Co., Ltd.                                                                                                                                                                                                                                           |
| Graduate School of Medical and Dental Sciences | Department of Hepatitis Control                                   | 2006/4/1 ~ 2009/3/31    | Schering-plough K.K.                                                                                                                                                                                                                                                     |
| Graduate School of Medical and Dental Sciences | Department of Advanced                                            | 2007/4/1 ~ 2010/3/31    | Nisshin Kyorin Pharmaceutical Co., Ltd. / Asahi Kasei Medical Co., Ltd. / Ajinomoto Pharma Co., Ltd. / Ucb Japan Co., Ltd. / Otsuka Pharmaceutical Co., Ltd. / Eisai Co., Ltd. / JIMRO Co., Ltd. / Zeria Pharmaceutical Co., Ltd. / Mitsubishi Tanabe Pharma Corporation |
| Graduate School of Medical and Dental Sciences | Department of Regenerative Therapeutics for Spine and Spinal Cord | 2007/8/1 ~ 2009/7/31    | PENTAX Corporation / Stryker Biotech K.K. Medtronic Sofamor Danek, Co., Ltd.                                                                                                                                                                                             |
| Graduate School of Medical and Dental Sciences | Department of Advanced Regulatory Vascular Surgery                | 2007/6/1 ~ 2010/5/31    | Mitsubishi Tanabe Pharma Corporation                                                                                                                                                                                                                                     |
| Graduate School of Medical and Dental Sciences | Department of Cartilage Regeneration                              | 2007/6/1 ~ 2009/5/31    | Zimmer K.K.                                                                                                                                                                                                                                                              |

Finances (2008 Fiscal Year Budget)

(The numbers in the pie-charts represent thousands of yen)

Total Income    ¥ 53,368,596 thousand yen

Total Expenses    ¥ 53,368,596 thousand yen





# TMDU Campuses



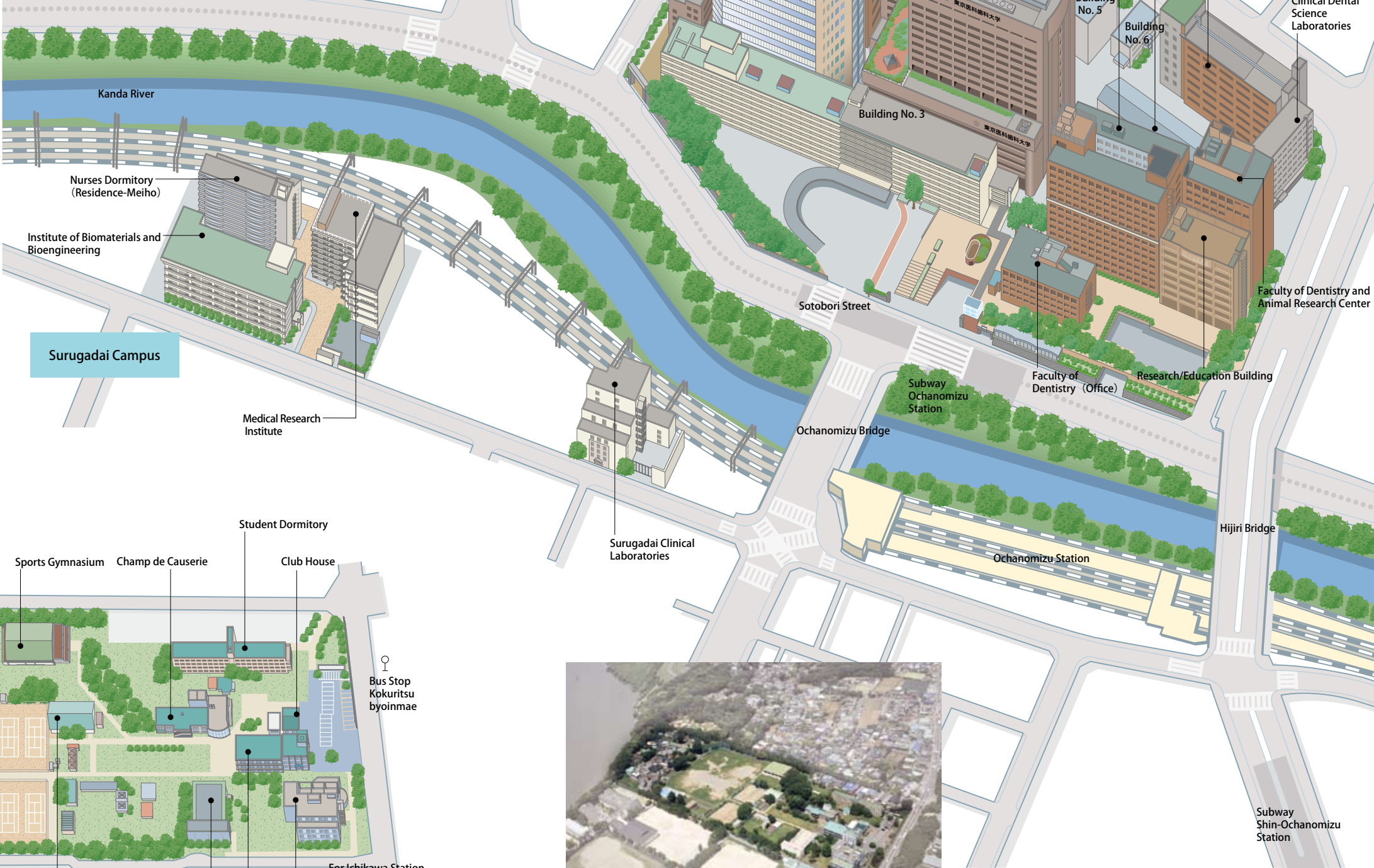
Medical-Dental Building II

**Medical-Dental Building II**

To foster academic doctors and world-class researchers who will meet the needs of the 21st century, a new building is under construction on Yushima campus. This building is to become a core facility of TMDU by providing space for communal use, versatile research and laboratory zones, open labs for education and research projects, and common labs for the TMDU community.



Building No. 2 Educational Facilities





Location of University Campuses, Buildings and Addresses

(May 1, 2008)

Yushima Campus ■ Grounds (sq. Metre) : 45,192 m<sup>2</sup> ■ Buildings (sq. Metre) : 237,832 m<sup>2</sup>

| Name                                                                                                                                                                                                                                                                                                                                      | Address・Zip code・Telephone                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| Administration Bureau / Graduate School of Medical and Dental Sciences<br>Graduate School of Health Care Sciences<br>Biomedical Science PhD Program<br>School of Biomedical Science                                                                                                                                                       | 5-45, Yushima 1 chome, Bunkyo-ku, Tokyo<br>〒113-8510<br>03-3813-6111 |
| Faculty of Medicine<br>University Hospital of Medicine                                                                                                                                                                                                                                                                                    | 5-45, Yushima 1 chome, Bunkyo-ku, Tokyo<br>〒113-8519<br>03-3813-6111 |
| Faculty of Dentistry<br>University Hospital of Dentistry                                                                                                                                                                                                                                                                                  | 5-45, Yushima 1 chome, Bunkyo-ku, Tokyo<br>〒113-8549<br>03-3813-6111 |
| University Library / Health Service Center<br>Human Gene Sciences Center<br>Research Center for Frontier Life Sciences<br>Instrumental Analysis Research Center for Life Science<br>General Isotope Center / Animal Research Center<br>Information Center for Medical Sciences<br>Center for Education Research in Medicine and Dentistry | 5-45, Yushima 1 chome, Bunkyo-ku, Tokyo<br>〒113-8510<br>03-3813-6111 |
| School for Dental Technologists                                                                                                                                                                                                                                                                                                           | 5-45, Yushima 1 chome, Bunkyo-ku, Tokyo<br>〒113-8549<br>03-3813-6111 |

Surugadai Campus (1) ■ Grounds (sq. Metre) : 5,047 m<sup>2</sup> ■ Buildings (sq. Metre) : 17,946 m<sup>2</sup>

|                                              |                                                                               |
|----------------------------------------------|-------------------------------------------------------------------------------|
| Institute of Biomaterials and Bioengineering | 3-10, Kanda Surugadai 2 chome, Chiyoda-ku, Tokyo<br>〒101-0062<br>03-5280-8000 |
| Medical Research Institute                   | 3-10, Kanda Surugadai 2 chome, Chiyoda-ku, Tokyo<br>〒101-0062<br>03-5280-8050 |

Surugadai Campus (2) ■ Grounds (sq. Metre) : 532 m<sup>2</sup> ■ Buildings (sq. Metre) : 2,156 m<sup>2</sup>

|                              |                                                                               |
|------------------------------|-------------------------------------------------------------------------------|
| International Student Center | 3-21, Kanda Surugadai 2 chome, Chiyoda-ku, Tokyo<br>〒101-0062<br>03-5283-5855 |
|------------------------------|-------------------------------------------------------------------------------|

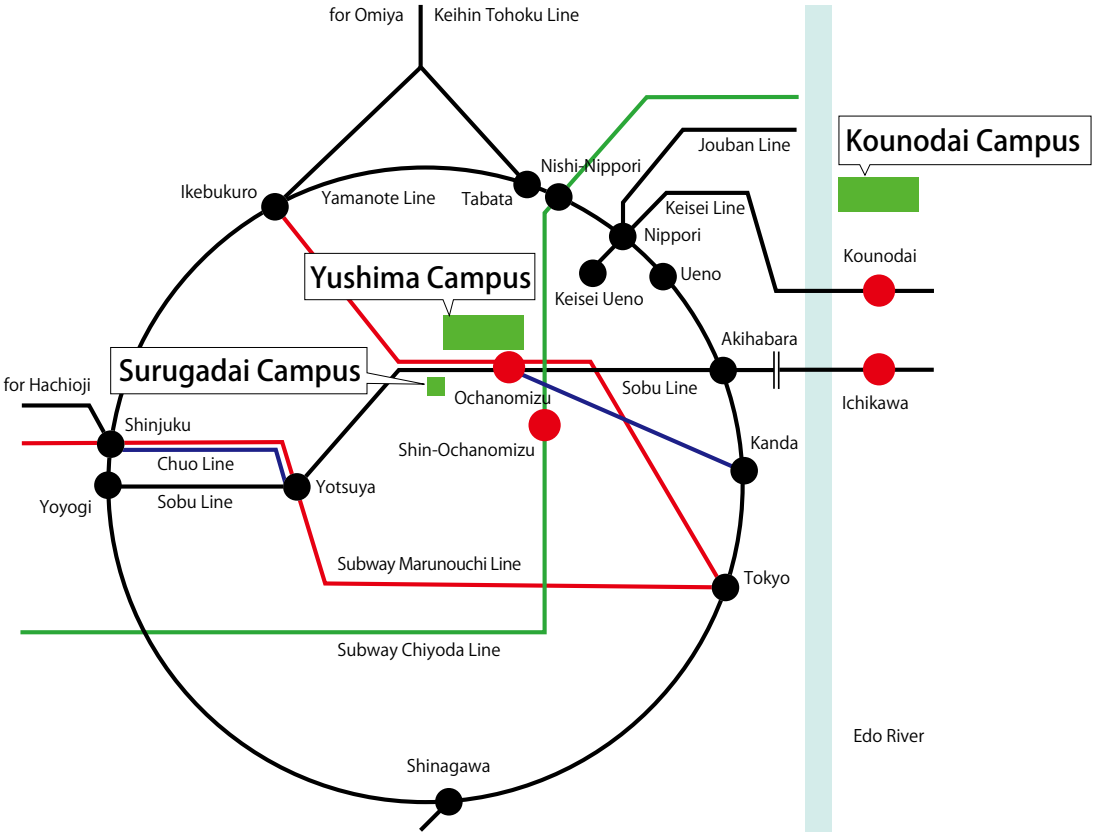
Kounodai Campus ■ Grounds (sq. Metre) : 60,938 m<sup>2</sup> ■ Buildings (sq. Metre) : 13,993 m<sup>2</sup>

|                                                                                                          |                                                                                      |
|----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| College of Liberal Arts and Sciences / Kounodai Branch Library<br>Health Service Center, Kounodai Branch | 8-30, Kounodai 2 chome, Ichikawa-city, Chiba Prefecture<br>〒272-0827<br>047-300-7103 |
| International House<br>International Student House                                                       | 8-1, Kounodai 2 chome, Ichikawa-city, Chiba Prefecture<br>〒272-0827<br>047-371-7936  |

| Name                          | Address                                                 | Grounds<br>(sq. Metre)          | Buildings<br>(sq. Metre) |
|-------------------------------|---------------------------------------------------------|---------------------------------|--------------------------|
| Toda Boat-House               | 60, Todakoen 1 chome, Toda-city, Saitama Prefecture     | 691 m <sup>2</sup>              | 478 m <sup>2</sup>       |
| Akakura Resort House          | Akakura-Onsen, Myoko-city, Niigata Prefecture           | 1,655 m <sup>2</sup>            | 334 m <sup>2</sup>       |
| Tateyama. Oga-Resort House    | Oga, Tateyama-city, Chiba Prefecture                    | 4,334 m <sup>2</sup>            | 839 m <sup>2</sup>       |
| Hakusan Residence Housing     | 36-3, Hakusan 2 chome, Bunkyo-ku, Tokyo                 | 495 m <sup>2</sup>              | 96 m <sup>2</sup>        |
| Wakamiyacho Residence Housing | 26, Wakamiya-cho, Shinjuku-ku, Tokyo                    | 995 m <sup>2</sup>              |                          |
| Tonoyama Residence Housing    | 50-3, Chuo 1 chome, Nakano-ku, Tokyo                    | 1,960 m <sup>2</sup>            | 1,815 m <sup>2</sup>     |
| Etchujima Residence Housing   | 3, Etchujima 1 chome, Koto-ku, Tokyo                    | 18,136 m <sup>2</sup>           | 28,492 m <sup>2</sup>    |
| The Ossuary (Nokotsu-do)      | 10-1, Kounodai 3 chome, Ichikawa-city, Chiba Prefecture | (115)                           |                          |
| Total                         |                                                         | 139,975 m <sup>2</sup><br>(115) | 268,393 m <sup>2</sup>   |

\* Surugadai Campus (1) indicates the Institute of Biomaterials and Bioengineering and Medical Research Institute and Nurses Dormitory.  
\* Surugadai Campus (2) indicates Surugadai Clinical Laboratories.  
\* The numbers in parentheses independently show temporary or long-term rental grounds and buildings.

Location



Yushima Campus  
Surugadai Campus

JR Line Ochanomizu Sta.  
Subway Marunouchi Line Ochanomizu Sta.  
Subway Chiyoda Line Shin-Ochanomizu Sta.

Kounodai Campus

Keisei Line Kounodai Sta.  
Sobu Line Ichikawa Sta.



Symbol of Tokyo Medical and Dental University

- This is the symbol of Tokyo Ikashika Daigaku (Tokyo Medical and Dental University), which has the following meaning:
1. This symbol is designed to show the history of development of Tokyo Medical and Dental University. This shape represents the plum blossom ; it is the symbol of Yushima Tenjin (Yushima Shrine) which exists in the same location as the University. Tenjin is the God of Knowledge.
  2. The center circle of this symbol, the core of the flower, was the emblem of the former Tokyo Koto Shikaigakko (Tokyo National School of Dentistry) and the 5 petals around the core show the present University which has developed from that school.
  3. The 5 petals express the Faculty of Medicine, Faculty of Dentistry, College of Liberal Arts and Sciences, Institute of Biomaterials and Bioengineering , and Medical Research Institute, and these 5 petals, which join together to make the flower bloom, represent the activity of the University.
  4. The bold outline of these 5 petals suggests further development and progress in the future.