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Cultivating Professionals with Knowledge and Humanity

President's Address

Let Us All Strive Together for the Better of the Future

Takashi Ohyama, DDS, PhD
President, TMDU

At this time, I would like to let everyone know about our plans for "university management in the years to come." six years have already passed since national universities were transformed into semi-independent "National University Corporations" in 2004. During this time, we at TMDU have made our utmost efforts to set and achieve high goals. We have initiated many plans concerning education, research, medical care, business management, and other objectives that were included in the first stage of our current midterm objectives and planning initiative.

As a result of the achievements we were able to attain during the four-year period from 2004 to 2007, we received the following evaluation from the National University Corporations Assessment Committee:

"TMDU, as a major graduate school-centered university, is enhancing its educational and research functions as a world-class medical and dental university, and is pursuing the goal of cultivating medical professionals who are rich in internationalism. In order to realize its aims, TMDU is devoting its surplus fund, which it generated from reexamining the management of its medical and dental hospitals, to the university's educational, research, and medical practice areas, with complete focus on the enhancement of its medical practices. This kind of cyclic reformation policy is being reinforced under the leadership of the university president. The attained achievements during the midterm plan are satisfactory in every aspect."

In fact, we received high marks in our evaluation for "attained achievements being satisfactory in every aspect" for the fiscal year 2008 as well. Additionally, we were awarded a high rating from the general evaluation conducted by the National University Corporations Assessment Committee, which rated us as 8th among the 86 national universities in Japan.

I am grateful to all the TMDU teaching and administrative staff, as these achievements were only possible due to your daily and continuing efforts. Nevertheless, I believe that there is a lot more that can and should be accomplished.

As we approach the 2nd stage of our midterm plan, which will begin this April, we are working on a strategy to identify what we, as a medical and dental institution, can uniquely carry out in terms of planning/international exchange, education, research, medical care, and administrative operations, thereby further clarifying our missions, our unique nature, and our branding.

To this end, we will have a faculty development (FD) meeting in April, where we will discuss the 2nd stage of our midterm plan, so that all TMDU staff will be able to understand our objectives and plans and work together to achieve them.

In conjunction with these objectives, we chose "Cultivating Professionals with Knowledge and Humanity" as a summary of our mission statement. Our mission includes the cultivation of mastery based on knowledge on one side, and the cultivation of a healing heart, endowed with the ability to deeply understand and communicate with patients, on the other. Working together to achieve our mission necessitates that we make best use of the wisdom and energy of all of our staff and utilize innovative ideas and methods.

Now, according to information released by the Ministry of Education, Culture, Sports, Science, and Technology (MEXT), our budget for the upcoming fiscal year is just under 5.6 trillion yen, which is a healthy 5.7% increase over that of the previous fiscal year. Despite this good news, we will still be in difficult budgetary circumstances because the operational subsidy that the government provides for National University Corporations has decreased by 0.9% compared to the previous year. Our university, in particular, faces a severe budgetary situation as the amount allocated to graduate school education reform in the promotion of science budget in that overall subsidy decreased by 28%, a reduction that will adversely affect us. Nevertheless, we must continue to pursue our mission with zeal.

Next, concerning how to use the "operating surplus" that former President Akio Suzuki built up, we have been systematically carrying forward plans and projects, including the completion of the construction of the Medico-Dental Research Building II, now rechristened "M&D Tower", the performing of maintenance on campus facilities including the library, lecture halls, and conference rooms, and newly

creating rooms for our graduate students as well as conducting repair and reconstruction projects campus-wide. Moreover, we were able to use additional financial resources, amounting to approximately 370 million yen, which remained after various business operations were completed. This financial resource was allowed to be used for "expenses such as education & research and those relating to replacing aging facilities & equipment for medical care" as per a decision made by our management council in a meeting held last December. We are primarily employing this money for the partial demolition of Building #3 and the attached former University Hospital of Medicine (as the complex is not as quake-proof as it should be). With these actions we can expand the parking lot adjacent to the University Hospital of Medicine and also enable more convenient access to M&D Tower as well as to the University Hospital of Medicine, thereby benefiting the patients who visit us as well as TMDU faculty, staff and students.

Thanks to your cooperation and understanding, construction of M&D Tower, a seven-year-long project, was finally completed last August. TMDU members and departments are moving into their new spaces there, and the building will be completely finished by the end of March. This new building was designed for the integration of basic and clinical sciences, without limitation to a particular framework of an individual field of research, and features facilities that accommodate joint efforts by medical and dental departments as well as open laboratories for educational-and research-oriented work. The building thus manifests an integrated use of shared space. From December, our school symbol and full name have been illuminated, via an LED array, from the crown of this magnificent building.

In order to put forward our mission globally we have established three research centers abroad, beginning with the opening of the "Research Center for Emerging and Re-emerging Infectious Diseases" at the Noguchi Memorial Institute for Medical Research in Ghana. This center was opened last March, and two full-time TMDU researchers are now posted there. As you well know, the Noguchi Memorial Institute for Medical Research is named for Dr. Hideyo Noguchi, who ended his career while in West Africa while researching the pathogen for yellow fever. We'd like to inherit his enthusiasm and dedication if at all possible. We had the good fortune to open this research center in Ghana by making an agreement with the University of Ghana and the Research Institute of Tuberculosis. Without a doubt, working with our partners at this collaborative center as we educate and train professionals to serve the local and global communities, and carry out research, will be a very worthwhile endeavor.

Secondly, we concluded an agreement that will lead to the opening of the "Latin American Collaborative Research Center" (LACRC). LACRC will function as a base for education and research in Latin America. Our partner in this collaboration is Clinica Las Condes (CLC), a major private hospital in the Republic of Chile. We are planning to send a researcher to LACRC in April and we will hold the opening ceremony for the official launch of LACRC in August.

To be sure, for the past 15 years we have been conducting a training course with JICA entitled "Early Diagnostics for Cancers of the Gastrointestinal Tract" for doctors in Central and South America. Though this course has been completed, we were strongly urged by our counterpart in Chile to preserve the course so as to continue the development of professionals and technicians in the region. Our response to this request was to establish LACRC. It is my hope that this center will contribute to the ability of doctors and researchers in Chile to improve the state of early detection and treatment of colorectal cancer in Latin America, and to utilize Japanese knowledge and technology in early detection, diagnosis and treatment.

Chile has experienced a 1.6-fold increase in colorectal cancer in the past 10 years and is thus focusing on developing the ability of doctors to detect colorectal cancer early and provide rapid cures. Since it suddenly became highly possible that this project would be elevated to a national project, we were, upon request of the health minister of Chile, beseeched to accordingly revise our Memorandum of Agreement (MOU) and we did so, making an agreement at the national level with the Ministry of Health of Chile.

Lastly, we held the signing ceremony for the agreement to establish the "Chulalongkorn University – Tokyo Medical and Dental University Research and Education Collaboration Center, Thailand" at Chulalongkorn University last November. Through this center, we will promote academic exchange in the medical and dental areas with Chulalongkorn University, in association with our research institutes, the Medical Research Institute and the Institute of Biomaterials and Bioengineering. These activities will be pursued by implementing interview examinations for a select group of international students, encouraging the exchange of researchers and students, supporting joint research and educational projects, holding international conferences, seminars and symposia, and forming an international network of healthcare/medicine professionals. We are also planning to support our TMDU alumni in Thailand through this center.

With these projects, we, with support and assistance from the Embassy of Japan, the Ministry of Education, Culture, Sports, Science, and Technology, and the Japan International Cooperation Agency, are honored and pleased to represent Japan and are greatly enthusiastic at the opportunity to live up to the high expectations of each country concerned. I am confident regarding these endeavors, as we will be supported by our qualified teaching staff at TMDU, who will be helping to staff and manage these overseas projects and who will ensure their success. With the understanding and cooperation of the entire TMDU community, we will make our utmost efforts to enhance these overseas bases of activity.

In aiming for the promotion of international exchange, we also decided to increase the number of students eligible for the overseas training program from four to nine, and to give the students an opportu-

nity to perform independent research as part of this program. Needless to say, we are continuing to send students and faculty members to Harvard University and Imperial College London as before. In the years ahead, we should consider sending graduate students and young researchers abroad as well.

Lastly, I'd like to touch upon our future objectives.

In the coming years, we'd like to actively promote the following activities. First, in terms of planning and international exchange: enhancement of our three overseas bases, establishment of the Media Center, including its presence in the library, and expansion of our Public Relations office. 2nd, with respect to education: a formulation of a model curriculum for medico-dental education, and the expansion of the School for Dental Technicians from the present two-year system into a four-year bachelor's degree program. 3rd, with respect to research: structural reform of our graduate school, including its organization and staffing, and follow-up and support for projects that vie for competitive funds. 4th and finally, in terms of medical care, creation of an outpatient sports medicine clinic, qualitative progress of co-medical staff in the University Hospital of Medicine and the University Hospital of Dentistry, efficient personnel interchange, and the strengthening of our partnerships with affiliated hospitals.

We have also decided to set up child-care facilities on campus (in Building #6) in order to support our staff members and students and help them realize an appropriate work-life balance. The facility will open under the name of "Waku Waku Hoikuen" ("Happy Happy Nursery") from April of this year.

Lastly, I would like to mention again our core mission statement, "Cultivating Professionals with Knowledge and Humanity." We chose this as our core mission statement as it sums up how we are striving to strengthen our educational and research functions as a world-class medico-dental graduate school-centered university. We also aim to foster the development of medical professionals who have a rich sense of humanity and international character. To pursue this aim, we are vigorously pushing forward to reexamine the business operations of the University Hospital of Dentistry and the University Hospital of Medicine, and we are doing our best to improve the quality of the education, research and medical care that TMDU provides to its community.

In closing, I would like to say that, for the coming year, with all our ambitions and challenges, I greatly look forward to and rely upon your understanding and cooperation, as we work together to stride into the future.

TMDU's Core Mission Redefined:
From our Trustee of Planning/International Exchange

Sei Sasaki, *MD, PhD*
Trustee of Planning/International Exchange, TMDU

TMDU's Mission

"Cultivating Professionals with Knowledge and Humanity"

We are very pleased to officially announce TMDU's core mission statement. As an educational institution, TMDU's main task is to educate leading professionals — specifically, physicians, dentists, researchers and educators — who will work in various medical and dental fields. We all know that broad, deep knowledge and honed, specific skills are necessary in order to properly treat patients, and that we must therefore actively continue to acquire knowledge and advance our ability every day in order to practice our profession.

However, no matter how strongly we dedicate ourselves to the acquisition of knowledge and technical skills, efforts to these ends are not nearly sufficient. We must never forget that we have to treat patients, not just do our best to cure diseases. In other words, we must understand and treat our patients holistically. Thus, a deep sense of humanity is essential for health care professionals to have and employ as they communicate with patients, understand their problems and support their recovery. Regardless of technical advances, medical cures are found, and find full effect, in the deep, heart-to-heart communication between a health care professional and his or her patient. Thus, as educators, we must help our students not only acquire knowledge, but also develop a high standard of morality and gain the ability to deeply sympathize with patients.

Our mission statement thus encapsulates our desire to produce professionals with a high standard of knowledge and a deep sense of humanity, and to in turn exemplify these ideals as we cultivate those qualities in our students. By fulfilling our mission as stated, we at TMDU can contribute positively to the welfare of the world.

New and dignified

"M&D Tower"

The Research Building that was under construction at the Yushima Campus is almost completed. The new 26 floored Building's dignified appearance is surely to become the new symbol for TMDU. The neon lit up at the very top of the building has already become a landmark of the area. We have named the building the "M&D Tower" in hope that the medical and dental faculties develop through both unification and rivalry.

TMDU at night

LED lights are used for the lighting, highlighting the University name and our symbol mark, the flower of "Ume".

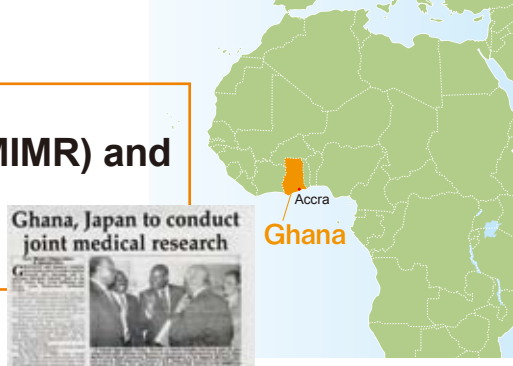
A Robust New Logo for TMDU:

As one of our initiatives is to help TMDU make a striking impression, we have designed a new logo to highlight our school name and character. The artistic connection of the "M" and "D" in TMDU represents the close collaboration and tight integration of the medical and dental faculties, while the bold shape and blue color of the characters manifest our vigor and self-confidence.

Noguchi Memorial Institute for Medical Research (NMIMR) and TMDU Research Collaboration on Emerging and Re-emerging Infectious Diseases

Nobuo Ohta, MD, PhD
Professor
Environmental Parasitology, TMDU

Koichi Ishikawa, DVM, PhD
Professor
Molecular Virology, TMDU




Ghana, Japan to conduct joint medical research

Newspaper reporting joint research project on infectious diseases between NMIMR and TMDU.

P3 laboratory for research on viral infections and tuberculosis at NMIMR.

Research collaboration project between Noguchi Memorial Institute for Medical Research (NMIMR), the University of Ghana and TMDU officially launched in April, 2008. This research project is supported by the program of the Ministry of Education, Culture, Sports and Science (MEXT) to promote research on emerging and re-emerging infectious diseases. Under the agreement between the two institutions, TMDU appointed 2 researchers (Virology and Parasitology) to stay at NMIMR in March, 2009, and collaborative research works have started. The launching ceremony, hosted by the Director of NMIMR and the President of TMDU was carried out on August 26, 2009 inviting representatives from the Japanese and Ghanaian Government. Outline of research activities is summarized.

Infectious diseases have raised global concern on human health and welfare since the last decade of 20th century. Not only HIV/AIDS, malaria and tuberculosis, various infectious diseases are emerging and re-emerging any place in the world. It is a serious issue for both developed and developing countries. To overcome the situation, strengthening of research on infectious diseases is essential in Japan, however, we have faced a big barrier. Though infectious pathogens need not to carry passports to pass the border, researchers on infectious diseases are requested to carry passports when they go abroad. Pathogenic microorganisms can be onboard without boarding pass, but researchers have to purchase air-tickets to the destinations. This hinders the smooth implementation of research on infectious diseases. Research center for the collaboration located in Ghana is an important foothold for Japanese researchers in the field of infectious diseases.

NMIMR-TMDU collaboration scheme was established under the MEXT program in 2008, just 80 years after the passing of Dr. Hideyo Noguchi in Accra, Ghana. Launching ceremony was carried out in August, 2009 inviting representatives of the both Japanese and Ghanaian Governments. Under the presence of Deputy Minister of MEXT, Japan, Minister of Education of Ghana, the Ambassador of Japan, Vice Chancellor of University of Ghana and other distinguished guests, launching of the NMIMR-TMDU Research Center was declared. Ghanaian newspapers reported this ceremony and TMDU activities are noticed among biomedical researchers at University of Ghana.

Researchers dispatched from TMDU to NMIMR to promote leading-edge research on HIV/AIDS and parasitic diseases. To provide information for better antiretroviral therapy (ART) formulation in Ghana, we have evaluated the current ART by determining viral loads, counts of CD4-positive T lymphocytes and mutations that lead to resistance to antiretroviral drugs. The human immunodeficiency virus (HIV) epidemic in Ghana is gradually showing a sign of stabilizing situation two decades after it was identified in 1986 at NMIMR by collaboration with Japanese researchers. The current national antenatal adult prevalence is 2.2% and the estimated adult HIV prevalence is 1.7% (NACP 2008). Antiretroviral drugs have become increasingly available, accessible and relatively affordable in Ghana over the last seven years. The site for collection of blood samples for the project is the Koforidua Government Hospital since Koforidua has a high HIV prevalence rate.

The samples are collected from HIV-infected patients who are on ART at the hospital. The samples are collected on a weekly basis to enhance efficient monitoring of the patient's health. The patient's blood samples are brought to NMIMR for plasma and peripheral blood mononuclear cell (PBMC) separation. The viral RNAs are extracted from each sample and determined for the viral loads by in-house quantitative RT-PCR, since HIV-infected patients on anti-retroviral therapy are expected to have suppressed (low) viral loads. Detected viruses are sequenced using a genetic analyzer and the results are compared with the standard sequences to find any mutations which are likely to cause resistance to antiretroviral drugs. Over 1000 samples have been collected so far in Koforidua and the results show that the majority (above 80%) of the patient's viral loads are well controlled by the ART, however, a few of the patients had mutations that are likely to cause resistance to the ART. A report of these patient's mutations will be sent to the hospital for better ART formulation. The information about mutations will also be of great help for facilitating diagnosis of drug resistance

The launching ceremony of HMIMR-TMDU research project held on August26, 2009.

and planning a second-line ART for Ghanaian patients.

Another Japanese researcher, Dr. Takashi Suzuki is involved in parasitological research. Human African trypanosomiasis (HAT), also known as sleeping sickness, is a life-threatening disease caused by *Trypanosoma brucei* parasites transmitted by infected tsetse flies. Estimates by WHO suggest that there are 300,000 to 500,000 infected people throughout Africa. In addition 60 million people in Africa continent are at risk of this disease. Currently no vaccine is available. No satisfactory treatment is available because of severe side-effect and poor efficacy of existing drugs. Thus in this project, we try to find a novel drug target for chemotherapy of this parasitic disease. Tentatively, "movement-related" gene is the target. In sillico selection of "movement-related" gene of trypanosome protozoa, homologues were identified. Knock-down analysis was applied to those genes, and several candidate genes were isolated which are critically related to the parasite survival. Knock-down analysis of one of 'movement-related' genes caused growth-elimination of *Trypanosoma* cells, therefore, validity of this gene will be investigated as a target for chemotherapy of HAT.

NMIMR-TMDU research project will be expanded to the next five years under the 2nd phase of the MEXT program. Scope of the program is to promote research and development of human resources. TMDU will play a central role to fulfill the responsibility and tight partnership with Ghanaian colleagues leads health and welfare of the people in the two countries through improvement of research capacities of infectious diseases.

International Activities

Latin American Collaborative Research Center, Tokyo Medical and Dental University, Santiago, Chile

Yoshinobu Eishi, MD, PhD
Professor
Human Pathology, TMDU

Fig.1 LACRC is located on the 3rd floor of the CLC main building.

Fig.2 TMDU President, Dr. Takashi Ohyama (center), visited Santiago in July 2009 and agreed to a collaboration in the national project proposed by the CLC and the Chilean Minister of Health, Dr. Alvaro Erazo (2nd from right). The project leader, Dr. Francisco Lopes is rightmost. The CLC hospital director, Dr. Jaime Mañalichi (2nd from left) is the incoming Minister of Health.

What is the Latin American Collaborative Research Center?

Currently, Tokyo Medical and Dental University (TMDU) is collaborating with the Clinica Las Condes (CLC) in Santiago, the capital city of Chile, in order to support the Chilean national project for the early detection, diagnosis, and treatment of colorectal cancer (CRC). The Latin American Collaborative Research Center (LACRC) has been established within the CLC (Fig.1) as one of TMDU' s overseas activity centers, according to the agreement between TMDU, CLC, and the Chilean Ministry of Health.

LACRC will be a base of TMDU activities not only for supporting the CRC project in Chile but also for collaborating in clinical and scientific research. Research activities in the fields of molecular biology, translational research, and pathology will be focused on collaborative, multi-center, and transverse research projects including the CRC screening program.

LACRC will begin working from April 2010. TMDU will dispatch selected faculty members in stages. Dr. Takashi Ito, a brilliant young pathologist who has recently won the TMDU research award, will be the first TMDU faculty member to start working there. In the near future, LACRC will include an endoscopist, a molecular biologist, and a research technology specialist, as core members for our collaborative activities.

In the year 2010, the Republic of Chile cerebrates the 200th anniversary of the nation's foundation. The Chilean government has already begun a project titled "Becas Chile" in which they will provide an oppotunity for many young Chilean doctors to study abroad. TMDU will support these doctors in their clinical and research training in Japan, in conjunction with CLC and LACRC. At the same time, TMDU is planning to enable TMDU 4th year medical students to perform research (project semester scheme) in LACRC under the supervision of CLC professors.

CLC and TMDU have a common policy to expand our activities in Latin America. For 15 years, TMDU had provided a JICA training course. A total of 146 doctors completed the course, and many of these doctors are now working in various Latin American countries. TMDU expects that these doctors can work together in LACRC, supported by JICA as a follow-up training scheme.

TMDU has just begun providing the academic support for CRC project in Chile. LACRC should be a support center for the project. Collaborative research will be done in the CLC advanced research center. In the research center, many doctors and students from CLC, TMDU, and the University of Chile will be working together.

LACRC will provide overseas experience for TMDU faculty and students. TMDU doctors, working hard in the hospital, will be given a chance to concentrate on research. TMDU researchers can proceed

Fig.3 CLC mission members visited TMDU in November 2009 and agreed to the establishment of LACRC. At the signing ceremony, many TMDU professors heard explanations regarding the purposes and future of TMDU and CLC activities.

Fig.4 TMDU Trustee, Dr. Morita (leftmost) and Dean of Faculty of Medicine, Dr. Ohno (2nd from left) discussed with CLC doctors the operational capacity and future possibilities of LACRC in December 2009.

with their own research topics independent from TMDU professors. TMDU students will be motivated in their research and international activities through such an early exposure.

TMDU will dispatch professors to the annual training course held in CLC in order to share Japanese medical knowledge and technologies with Latin American doctors. LACRC will invite many Latin American graduates from TMDU-JICA training course. Working together in LACRC will reinforce our partnership with these Latin American doctors.

Expected benefits for TMDU by developing activities in LACRC would be:

1) From an educational perspective, TMDU activities in LACRC will support the development of international doctors and researchers through the TMDU program to provide overseas experience in LACRC.

2) In the field of research, LACRC will help to develop clinical and scientific research through interdisciplinary collaboration using materials and databases obtained from community-based projects.

3) As international fieldwork, TMDU can contribute to resolving one of the worldwide public health problems through the international dissemination of Japanese medical knowledge and technology.

TMDU activities leading to the establishment of LACRC

Over a period of 15 years (1991~2006), TMDU had provided a JICA training course for three months every year for Latin-American doctors (146 doctors total) on histopathological diagnosis of early esophageal, gastric and colorectal cancers. During the course, the doctors learned advanced technologies and knowledge for early diagnosis and treatment of gastrointestinal cancers and came to understand that cancer screening for asymptomatic people is essential for detecting such early cancer lesions.

TMDU Professor Kyoichi Nakamura and his colleagues including Drs. Morio Koike and Yoshinobu Eishi had been working in Santiago (1992~1997) for a Latin American training course in digestive diseases organized by Professor Pedro Llorens and supported by JICA. During the course, many Latin American doctors learned endoscopic and pathologic techniques and knowledge of digestive diseases focusing especially on gastric cancer.

In 1996, Uruguayan doctors (TMDU-JICA course graduates) including Dr. Eduardo Fenocchi launched a pilot study in Montevideo, Uruguay (population three million), directed by TMDU and funded by JICA, introducing the Japanese CRC screening method with immunological fecal occult blood test (IFOBT). The results of the pilot study were published in 2006, and the national program still continues, although the screening size remains limited.

In 2007, Chilean doctors including Dr. Francisco Lopes in CLC launched a small pilot study (3,500 people) of CRC screening with IFOBT. Based on the results, CLC and Chilean Ministry of Health planned to implement a large national project with academic support from TMDU. TMDU received a letter of intention; that is, an official application from CLC requesting TMDU support for the Chilean national project to reduce the currently-increasing mortality rate of CRC. TMDU has basically agreed with the proposal as of the end of 2008. Responding to the CLC proposal, Dr. Takashi Ohyama, TMDU President, visited Santiago to meet Mr. Alfredo Schönherr, chief executive officer of CLC, and Dr. Alvaro Erazo, Chilean Minister of Health. On 15th July 2009, they signed a memorandum of understanding (MOU) between TMDU, CLC, and the Ministry of Health for their collaboration in the national project (Fig.2). TMDU and CLC have also signed an MOU for collaboration in the training course to be held in CLC every year for five years.

According to the MOU, TMDU mission members visited CLC at the end of August 2009 to attend the symposium for early diagnosis and treatment of CRC. They were also involved in many meetings to discuss several research topics on which they can collaborate in future, including a prospective randomized trial which would be the world's first study for elucidating the effectiveness of the IFOBT-related method to reduce the mortality rate of CRC.

When CLC mission members visited TMDU on 4th November 2009, they signed a MOU for the establishment of LACRC in CLC (Fig.3). According to the MOU, CLC shall provide an office and an official secretary to TMDU at no expense, and from April 2010 TMDU shall dispatch research staff to LACRC for the purpose of further collaborative activities. It is understood and mutually agreed that the establishment of LACRC is for the purpose of improving public health and promoting the welfare of Latin Americans through joint research and the maintenance of a partnership between TMDU and CLC.

According to the establishment of LACRC, the TMDU mission, including Dr. Kikuo Ohno, Dean of Faculty of Medicine, and Dr. Ikuo Morita, Trustee of Research, visited CLC at the end of December 2009 (Fig.4) to discuss TMDU activities in LACRC and future possibilities for this TMDU overseas research center. At the meeting with the Chilean Minister of Health, Dr. Erazo proposed to provide a national budget for the pilot study of CRC screening in the Santiago metropolitan and 5th regions. The Minister requested TMDU to dispatch professional colonoscopists to participate in the CLC training program for young Chilean doctors who will be later involved in the national project.

At the end of January 2010, the TMDU mission, including Dr. Yasuyuki Yoshizawa, Trustee of Medical and Dental Treatment, visited Santiago to sign an agreement between TMDU, CLC, and the Ministry of Health for collaboration to operate the large national program of CRC

screening in Chile. This Program, which will involve a group of 72,000 people for 5 years, will classify participants by risk levels and by age (older than 50 years old), and will have the purposes: **1)** To reduce CRC mortality by 50% by the year 2020. The measurement to be used is "potential mortality", and reduction is to be from 12/100,000 inhabitants at present to 6/100,000 inhabitants or lower by 2020.
2) To develop a standardized model in Chile for CRC screening and cost-effective treatment for colorectal tumors.
3) To create an effective and low-cost prevention and treatment model for this pathology, with such a model able to be incorporated as an Explicit Guarantee in Health (GES). The measurements will rely on an estimate of Ch$ 2,500,000 for each avoided colon cancer case and a cost-effectiveness ratio of 1 : 5 pesos ($) spent in the program.

Comments from Chile regarding the agreement between TMDU and CLC

Dr. Francisco Lopes *Chilean Project Leader*

Chile, a long country with more than 16 million people, has one of the fastest growing economies and most stable democracies in South America. It is located on the Pacific Ocean side of South America and at present is recognized as “the doors to South America” .
Japan has a long history of medical contribution to Chile, mainly in the area of screening gastric cancer. During the 1980s, TMDU developed a national screening program for early detection of gastric cancer, which settled the basis of early diagnosis and treatment for this disease. Several doctors from Chile and South America were trained by TMDU professors with the support of JICA.
Cancer is the 2nd leading cause of death in Chile, a rate which is similar to other developed countries. In fact CRC mortality rate has increased more than 50% during the last 10 years. CLC, a leading medical institution in Chile and Latin America, decided to run an ambitious project in order to decrease the CRC mortality in Chile.
The first step was to look for a prestigious foreign university with substantial experience in cancer prevention and screening. Dr. Yoshinobu Eishi (TMDU) and Dr. Francisco López (CLC) met in 2007 and they shared a passion for CRC screening. two years later an important agreement to reduce the CRC mortality in Chile was signed between TMDU, CLC and the Chilean Ministry of Health (July 15th, 2009).
This agreement establishes a five year cooperation in a national program for CRC screening. CLC developed a national network (COLO RED) with various universities and medical centers which will be the platform for this national project. TMDU will provide academic support to standardize endoscopic and pathologic techniques as well as providing professors for the teaching project.
The plan is to schedule a Latin America Annual Meeting and also to develop an endoscopic and pathologic teaching center. In order to accomplish this aim, TMDU will have an office in CLC which will be called LACRC. Several TMDU professors will visit this office during 2010 and the international meeting will be held in August 10-13, 2010.
The first research project will be called CECO (cost-effectiveness screening in colorectal cancer) and the main aim is to reduce CRC mortality. We need to assess 72,000 people from different Chilean cities and also to analyze the cost-efficacy of CRC screening in Chile. Several researchers from other Chilean universities will participate in this major project which will also analyze several risk factors of developing CRC (folic acid, vitamin D, etc.).
Researchers and medical students from TMDU will join in this national project under the supervision of CLC professors. Conversely, CLC staff will visit TMDU to update their knowledge and to participate in common research projects.
The experience obtained in this colon cancer project must be applied to other digestive tumors (esophagus, gastric, etc.) allowing for the feature creation of a National Institute of Early Diagnosis and Prevention of Digestive Cancer. At the same time, Chile might open South American doors to TMDU in order to apply this concept in other countries.

International Activities

Signing Ceremony for the Establishment of “CU - TMDU Research and Education Collaboration Center” in Thailand

Yoko Kawaguchi, *DDS, PhD*
Professor
Oral Health Promotion, TMDU

Tokyo Medical and Dental University (TMDU) and Chulalongkorn University (CU) agree to cooperate in a spirit of mutual understanding and goodwill and to strengthen their ties of friendship, through a long history of close mutual cooperation. Therefore both universities agree to establish a TMDU overseas office at CU which will serve to promote academic collabora-

tion and scholarly exchange between the two institutions more actively.

On November 23, 2009, a signing ceremony for establishing the "CU - TMDU Research and Education Collaboration Center" was conducted at the Head Office Building of CU main campus, Bangkok, Thailand. 12 members from TMDU visited CU and attended the ceremony. Prior to the ceremony, all the delegates from each institution in TMDU participated in the seminar and introduced various research and education activities to the CU executives, using DVD and slides. All the members discussed and explored the possibility of future collaborative research projects with related institutions between TMDU and CU.

In the signing ceremony, Professor Ohyama, President of TMDU, made a speech in fluent Thai language. He explained the background, purpose and expected roles of TMDU office. He also appreciated the great support and kind cooperation of the CU members. He concluded that the TMDU office will definitely contribute to promote the future academic collaboration between two universities. All the Thai participants were surprised at his warm and sophisticated messages, as his Thai pronunciation was perfect. After the two presidents' speech, Professor Takashi Ohyama, and Professor Pirom Kamolratanakul (President of CU) signed the memorandum of understanding between the two universities for the establishment of the TMDU office".

TMDU office "CU-TMDU Research and Education Collaboration Center" is planning to set up in the Dental Faculty Building, as there has been a long history of agreement-based collaboration between two dental faculties. In 1991, dental faculties in TMDU and CU agreed to sign the academic affiliation. Since then lots of collaborative projects such as "Training program for young staff in CU", "Research project on maxillofacial disorders", "Japan/Thailand Core University Program in Dentistry", "Dental Public Health Training for Southeast Asia", and "Young researchers exchange program" have been conducted both in Japan and Thailand. About 20 years history of academic collaboration between two dental faculties contributed to the mutual understanding and good academic relationship.

Among 29 dental schools in Japan, TMDU accepted the highest number of international students into the PhD program in the field of dentistry. Up till now there have been a total of 86 Thai students who studied in TMDU and received PhD degree in dental sciences. These TMDU alumni members are the precious human resources to establish dental health care network between Japan and Thailand. Because they know two countries' dental situations and also they can speak both Japanese and Thai language. At present about 20 TMDU alumni dentists (PhD holders) are now working as academic staffs of Faculty of Dentistry in CU. TMDU offers the continuous support for these alumni members and conduct some joint research, after they go back to Thailand.

Through these close mutual academic cooperation in dental field, Associate Professor Wacharaporn Tasachan (Dean, Faculty of Dentistry, CU) kindly offered us the space for TMDU overseas office in the 11th floor of Dental Faculty Building, Chulalongkorn University.

The role of TMDU office "CU - TMDU Research and Education Collaboration Center" is the following.

- Information center of TMDU research and education activities
- Support and selection of international students (interview examination)
- Support and selection of exchange scholars / students
- Support of joint research projects
- Support of joint teaching projects : education (undergraduate / post graduate course)
- Support of joint conferences
- Establish and maintain a health care network
- Support of TMDU alumni members
- Support of joint cultural programs etc.

TMDU appointed Dr. Atiphan Pimkhaokham as a coordinator of this center. He finished the PhD program at TMDU and is now the Assistant Professor and Vice Dean in Planning & Development and IT, Faculty of Dentistry, CU. We believe this center will serve to promote academic collaboration and scholarly exchange and facilitate and up-grade research development, health service delivery and education techniques between the two institutions.

This center is the 3rd overseas office of TMDU, following Ghana and Chile, and the first overseas office in Southeast Asian Region. We will commence the collaboration activities in the field of dentistry in Thailand through this center. We will then expand the collaboration countries in Southeast Asia and include medical disciplines in future years. This center will contribute to the establishment of heath care networks as well as an international research and education center in Southeast Asia.

A new role: Activating and linking people with and within a global university

Ikuko Morio, DDS, PhD
Director
International Exchange Center, TMDU

For international activities at TMDU, the year 2009 was truly characterized by the keyword "change." In April 2009, the TMDU International Student Center (ISC) was reorganized, given many new responsibilities, and re-christened as the "International Exchange Center", or IEC. With this report, I' d like to detail how TMDU is using the newly-formed IEC to cover a much wider range of international activities than those that were envisioned at the time the ISC was established in 2000.

International Education

1) Japanese Language Education

Though the name of the Center has changed, the provision of Japanese language education and various kinds of support for our international students remains the core function of the IEC. Since most of the Japanese language classes are taught at the Surugadai campus or the Konodai campus, our finely-textured Japanese language lessons may not be very well known to our faculty, administration or domestic students. In short, we offer two kinds of courses, namely the "Special Preparatory Intensive Program in Japanese Language and Culture for Graduate Students" (SPIJ course program, or Kenshu course program) and "Supplemental Japanese" classes (Hoko course program).

As we all know, learning a foreign language successfully requires much perseverance, passion, and especially appreciation of the culture of the country where it originated, or a country where it is spoken natively. To facilitate students' understanding of Japanese culture and society, the IEC organizes several one-day excursions and field trips throughout the year to help students learn about and appreciate Japan and Japanese culture. On the academic side, the full-time Japanese language education experts at the IEC develop various learning materials that are designed for international students who are studying medicine and dentistry in Japanese. The materials developed include those that utilize ICT ("Information and Communication Technologies") materials, for example, downloadable worksheets and web-based resources such as interactive dictionaries.

2) English courses for international and Japanese students

Some of our international students have a good command of Japanese but need to improve their English ability in order to study the latest developments in their discipline. Thus, the IEC offers Basic English courses for its international students. The importance of improving English abilities is also keenly felt among Japanese students. Accordingly, the IEC offers special English courses for graduate students (international and Japanese), including "Preparation for Presenting a Paper in English" and "Writing Papers in English: Introductory Level".

3)Support system for international students

The IEC Counseling and Guidance Section helps international students adjust to life in Japan and deal with problems that may come up from time to time. This responsibility is shared with the Student Support Center, which was set up in 2009, and with whom we will cooperate closely.

A large part of how the IEC assists newly arrived international students is in the management of our tutor system. In January 2010, we organized, for the first time, a workshop devoted to helping international students and their tutors learn how to make the most of the opportunity to be a tutor or to have a tutor.

4) Providing Information and counseling to students on study abroad

The IEC will give advice to students (both Japanese and overseas students) who wish to study abroad.

5)Linking international students and TMDU faculty members / students / administrators

The IEC is eager to promote activities and volunteer organizations that support our international students. We look forward to working with partners who will help us strengthen the ties between our international students and the various communities to which they belong.

To promote external strategies of TMDU

1) Facilitating and coordinating international activities of various divisions of the university

While each division of TMDU has been actively engaged in international exchange in the past decade, it was decided that it was now necessary to set up unified procedures and promote coordination for the most effective implementation of our international endeavors.

2) Liaising with overseas offices

The IEC will liaise closely with the following three overseas centers in Ghana, Chile and Thailand.

3) Encouraging promising students and young researchers to attend TMDU

With the cooperation of many departments, we organized the first International Summer Program (ISP) in September 2009. We will continue to organize future ISPs so as to support TMDU's efforts to appeal to young people around the world. We are also registering our university with international university evaluation organizations so as to help more potential students become aware of the opportunities that await them at TMDU.

4) Database of former international students for networking

The IEC has begun to form a database of its international alumni. One aim of this

project is to be able to easily network people in an area where we hope to undertake an international project. This informational infrastructure will also be conducive to helping set up or support TMDU Alumni organizations around the world. To let a TMDU international student alumni register with us, please visit our website.

In closing, I'd like to say that the faculty and staff of the IEC understand the magnitude of expectations and responsibilities that are the base for these newly added responsibilities. In order to accomplish our mission, we must rely upon, and will greatly appreciate, close coordination with related divisions of the university. To be sure, in Autumn 2010 the IEC will move to the 4th floor of Building No. 1, a change which will further deepen our communication with other members of the university community.

Thank you for your continued cooperation and support!

International Summer Program 2009

Bringing together students and young scientists from Asia

Why do we encourage international students to attend TMDU? A major reason is that, in our global community, we are expected to play an important role in cultivating professionals who will use their skill to serve their patients with humanity and improve health conditions in various parts of the world. Educating international students is thus a crucial factor in our effort to fulfill our mission as a global health science education and research institution.

Do you know how many international students currently study at TMDU? Currently we have approximately 200 international students, and nearly all of our "ryugakusei" are in the graduate school. Given the strength of the education, research, and health care service offered at TMDU, and our determination to lead the world in the health science field, we should strive to accept an even larger number of international students. We understand that silence is not golden in this respect, and accordingly decided to directly appeal to promising students and young researchers who are interested in studying outside their home country.

Under the leadership of Professor Sei Sasaki, Trustee of Planning/International Exchange, preparations for the first International Summer Program (ISP) began in 2008. With the main theme of "Recent Advances in Cancer Research," the inaugural ISP, consisting of a summer course and an international symposium geared for Asian students and young researchers, was planned through the efforts of the working group chaired by Professor Yasuhito Yuasa. ISP 2009 was then successfully held on September 6-9, 2009 in close cooperation with the International Exchange Center.

Dr. Minetta C. Liu (Georgetown University Hospital, USA), Dr. Charlotte L. Bevan (Imperial College London, UK), and Dr. Michael S. O'Reilly (M. D. Anderson Cancer Center, USA), and many of our leading faculty members in cancer research, offered lectures on fundamental and clinical aspects of the ISP theme. The three invited overseas lecturers also presented aspects of their current work in the international symposium portion of the ISP 2009 program. In addition to these highly inspiring lectures, selected invited young scientists and TMDU international students made poster presentations at the very lively and well-received poster sessions. In addition, a campus tour, a half-day city tour and other social functions facilitated interaction between the participants, the invited speakers and our faculty, and among the participants themselves.

We received applications for ISP 2009 from 76 students and young researchers, who applied from 15 Asian countries. From these applications, we selected 35 students and young researchers, representing 11 countries, as invited participants. In addition, 12 students and researchers joined ISP 2009 from Japan and abroad. The feedback from the participants was very positive; however, the four-day, activity-packed program seemed to make some of the participants think it might have been even better to stay a bit longer at TMDU.

Will this summer program help us recruit young brilliant minds from abroad? It is too early to tell. For the moment, just let me add that several students who participated in ISP 2009 have already applied for "Advanced Oral Health Sciences Course 2010", one of our graduate programs.

To maintain the momentum that ISP 2009 provided to our international education and outreach efforts, we are now organizing ISP 2010. Our 2nd ISP will have the theme "Infection and Immunity" and will be held in early September, 2010. Detailed information on ISP 2010 will be available from the website of the International Exchange Center in the early part of the year.

http://www.tmd.ac.jp/TMDU-e/isc/index.html

ISP 2009 Working Group

Prof. Yasuhito Yuasa (Chair), Prof. Kazunari Akiyoshi, Assoc. Prof. Kevin Cleary, Prof. Johji Inazawa, Prof. Hiroyuki Kagechika, Prof. Hajime Karasuyama, Prof. Akinori Kimura, Prof. Masanobu Kitagawa, Assoc. Prof. Takatoshi Koyama, Prof. Yoshio Miki, Prof. Masahiko Miura, Prof. Ikuko Morio, Assoc. Prof. Yoko Okita, Prof. Ken Omura, Prof. Philip Tromovitch, Assoc. Prof. Tomoko Yamazaki, and Assoc. Prof. Masamichi Yasuno.

TMDU FAMILY IN THE WORLD

Letters from Overseas

Dear colleagues and friends of TMDU

It is my pleasure to write again an impression after eight years since I finished my PhD course at a great university. I remember very well when I was enrolled as the first Mongolian PhD student at the Tokyo Medical and Dental University (TMDU) in 1997. Using this opportunity, I would like to convey my sincere eternal gratitude to Emeritus Professor Hasegawa Shigeo, my tutor Assistant Professor Takayuki Masuda and former Dean Kazuhiro Eto and staff of TMDU.

At the final year of my study at TMDU, I wrote my impression titled “Hijiribashi” (old stone bridge which connects TMDU and Ochanomizu station) at TMDU’s magazine “Hiroba”. I finished it with a saying of my great ancestor Chinggis Khaan that “conquering the world on horseback is easy; it is dismounting and governing that is hard”.

After coming back to Mongolia, it wasn’t easy to transform and bring changes for the betterment in the field of dental education due to 40 years of long history rooted and based on the former Soviet Union educational system. But we had a vision driven dream which became a starting point to move forward. Since that time more than 80 dental school staff and dentists from whole Mongolia have been trained and training at different Japanese dental schools and clinics through many different institutional and governmental channels.

Now our dental school became a leading academic institution in the dental education field in Mongolia, where almost 100% of faculty staff (approximately 40 staffs) trained and educated in Japan through short and long term study courses. Without the support of Japanese colleagues and friends we would not have been able to reach such a success in the human resource policy of our institution. As a result of growing cooperation, number of Japanese and Mongolian dentists involved in the exchange program every year is rapidly increasing. Today, our friendship serves as an excellent opportunity for Japanese people to gain a better understanding of Mongolia and the efforts of our colleagues are rewarded.

Dental care and service given by graduates of our School of Dentistry to Mongolian people is upgrading and advised wisely by the Japanese professors and friends. Using these efforts and ties of excellent partnership, the School of Dentistry, Health Sciences University of Mongolia (HSUM) has played a pioneering role in raising the level of dental professionals at the local as well as international stage in different area of

dentistry through joint research and partnership.

After all, now the Hijiribashi, built together with my teachers between Japan and Mongolia is growing and becoming a symbol of beauty and prosperity like a Rainbow Bridge. Today HSUM with all alumni from TMDU is in the forefront in the latest and best in the field of dental education because of the energetic and determined efforts coupled with outstanding friendship that we witness. Today we are proud of those graduates of TMDU, who have been playing an important role for the progress of dental science in Mongolia.

Last November, I was elected as the President of Asian Academy of Preventive Dentistry (I am a Prosthodontist by profession but as chief dentist of Mongolia doing nationwide preventive work). It is my privilege to serve this prestigious organization which was founded by Asians, including Japanese giants of preventive dentistry like Professors Osamu Sakai, Tatsuo Watanabe and others. I hope that future cooperation will give for all of us chances to experience quite exciting and beneficial times: encouraging and stimulating activities in the enhancement of oral health in Asia.

I, as an alumni of TMDU, sincerely hope that time spent in TMDU will enrich your life and lead all of you to the road of best achievements to become better students, better teachers. It will inspire you to serve and strive for our common purpose: development of dentistry in the area of higher education and research in our nations and in the world!

Finally, I would like to express my sincere heartfelt gratitude once again to all professors, colleagues and friends of TMDU for the great investment in me and in Mongolian dentistry through friendship, constant support. Without it we would not have been to successfully go forward and make initial steps in making our dream come true.

Bazar Amarsaikhan

Professor
Dean of School of Dentistry,
Health Sciences University of Mongolia
President Elect of Asian Academy
of Preventive Dentistry

Letters from Overseas

Fruitful Collaboration with TMDU

Hello! My name is Jorge Zeredo, from the University of Brasilia, in Brazil. Since about one year ago, I am being invited to TMDU periodically and for short periods to collaborate as a guest scientist. These short visits have been a great chance for me to try new technologies, work alongside top scientists, and participate in leading research projects. TMDU has a special, thriving atmosphere of learning and research. The combined diversity of departments, laboratories, and research institutes help to provide plentiful opportunities for information exchange. In addition, outstanding facilities along with a hard-working and good-natured staff help to ensure successful outcomes for our experiments even under tight working schedules.

It was back in 1998 that I started out as a research student at TMDU and in the following year got into the doctorate course. I had recently graduated Dental School in Brazil at age 22, and after sitting examinations and being selected at the Japanese Embassy in Brasilia, I came to Japan for postgraduate studies with a full scholarship from the Monbukagakushou. I had a wonderful time, studied and learned more than ever before in my life, and five years flew by. A few factors were of paramount importance for the successful and uneventful completion of my doctorate. One was being accepted into the (1st) Department of Orthodontics, which felt at the time and still does feel to me whenever I visit there like a belonging to a big, big family. I cherished the department's atmosphere of mutual cooperation, trust, and camaraderie. I could always count on the unconditional support of my colleagues and teachers. Likewise, I was often asked to help in somebody else's experiment, sometimes as an assistant, sometimes as a research subject, and always took profit (although not always without pain!) from these experiences. I did not realize it at the time, but by helping out my fellow colleagues, I incidentally learned about their topics and methods of research – and also made some good friends along the way. And at last but not least the authoritative guidance from my tutors Dr. Kunihiko Otsubo (Orthodontics) and Professor Kazuo Toda (Cognitive Neurobiology, now in Nagasaki University). Upon graduation, in 2003, Professor Toda kindly invited me to join his Laboratory at Nagasaki University, where I stayed for five years as an assistant professor, and about one year ago I transferred to the University of Brasilia in my hometown of Brasilia, where I now work as an associate professor.

TMDU-JAXA joint experiment on gravitational physiology. Parabolic flight operated by Diamond Air Service (DAS), Nagoya-Komaki Airport (Jan. 2010).

Even after I left TMDU, I have been able to conduct fruitful collaborations here for years with Dr. Yasuhiro Kumei (Biochemistry), Dr. Tadachika Yabushita (Orthodontics), Dr. Akira Aoki (Periodontology). In the near future I hope to contribute to the establishment of an official two-way route of collaboration between TMDU and the University of Brasilia, and extend the opportunities I have had to young, motivated dental students from both sides to widen their horizons, and reciprocally propel the contributions from both schools further into a world-class level of dental research.

Finally, I would like to thank the financial support by Dr. Kumei and the invaluable suggestions from Dr. Hisayuki Ojima (Cognitive Neurobiology) for my current project. Also, and most importantly, I would like to acknowledge the long time support and encouragement from Professor Ikuko Morio (Dental Education Development), and the overall supervision and kind acceptance into the Department of Biochemistry by Professor Masaki Yanagishita.

Jorge Zeredo

Associate Professor
University of Brasilia

Letters from Overseas

A Truly Memorable Experience

As part of the BSc degree at Imperial College London, each student undertakes a three month research project. I was lucky enough to take part in the exchange program with four other students at Tokyo Medical and Dental University. My research project involved investigating the role of the receptor RAGE (receptor for advanced glycation end-products) in diabetic vasculopathy, working under the excellent supervision of Professor Hirata and Yoshimoto Sensei in the Clinical and Molecular Endocrinology department. I learnt about a variety of different techniques and thoroughly enjoyed my time in the laboratory.

I could not have asked for a nicer or more welcoming laboratory, who introduced me to all the culinary delights of Japan, including yaki-udon, okonomiyaki, shabu-shabu and the 'oishii' or delicious tako-yaki! As well as providing me with invaluable help and support in my project, they regularly took me out during my free time; shopping trips, visits to Ueno Park to see the cherry blossoms, and they even endured my Karaoke singing!

During my stay, I also spent one week travelling around Japan by Shinkansen. My trip included a visit to my super-visor's hometown of Osaka, the breathtaking shrines in Kyoto, including the infamous Kinkaku-Ji and Kiyomizu-Dera, as well as the Gion district, where I was fortunate enough to get tickets to the popular Miyako Odori or geisha cherry blossom dance. It was incredibly relaxing to soak in the onsen of Hakone, with its magnificent views of Mt Fuji. I had a wonderful time in Miyajima, home to the famous 'floating' torii or Itsukushima-Shrine, and it was overwhelming to learn about the details of the atomic bomb in Hiroshima.

From the moment I arrived in Japan, I felt at home, and I' d like to thank all the staff and students at TMDU who made my time truly memorable. Great food, great hospitality and a beautiful country – it was most definitely one of the best experiences of my life and I would love to return to Japan one day!

Nalinie Joharatnam

Student of the Imperial College London
Exchange Oversea Student (Year2008)

Harvard Medical School October 27th to November 26th in 2009

Creation of Human-Friendly Medical Engineering Field and Its professional Education under the Cooperation among Medicine, Dentistry and Engineering

I spent one month in Professor Charles A. Vacanti's laboratory at Harvard Medical School (HMS) from October 27th to November 26th in 2009 as the Study Abroad Program of Creation of Human-Friendly Medical Engineering Field and Its professional Education under the Cooperation among Medicine, Dentistry and Engineering.

My experience at HMS was life changing, full of encounters with many energetic people. During the stay, I learned about the primary cell culture from various tissues and tried to form spheres out of it. Other than experiments, I had lots of discussions, especially with Professor Koji Kojima who is the assistant professor of anesthesia at HMS. He often said "Scientific data is the most reliable language", referring from Professor Charles N. Serhan. I was very moved by the strong motivations Professor Kojima and other researchers had whom I met in HMS. Their passion for curing people with a novel medical technology /treatment method, which that broadened my perspective, and made me realize passion enables researchers to avoid persisting in their own field. I also joined study sessions held by Japanese Researchers' Academic Network of Greater Boston (JaRAN) on weekends, and sat lectures given by notable speakers at Massachusetts Institute of Technology and Harvard University, such as Professor George Whitesides' lecture for example. I met many energetic, hard-working, strict but open-minded people there, and enjoyed the discussions held with different issues and views they had. I realized how communication is important to discover a new territory without prejudice, which often comes from the one-way affection toward one's own field. Living and studying, in an exciting environment strengthened my passion in bringing science and health care together. All in all, this experience at HMS was a great challenge for me academically as well as mentally. Finally, I would like to express my appreciation to Leroy D. Vandam / Benjamin G. Covino Professor Charles A. Vacanti for accepting me, and Professor Koji Kojima for all the arrangements he made for me at HMS. I feel grateful to faculties and staffs of Creation of Human-Friendly Medical Engineering Field and Its Professional Education under the Cooperation among Medicine, Dentistry and Engineering (Jinzai program) and Ministry of Education, Culture, Sports, Science and Technology for giving me this opportunity.

With Leroy D. Vandam / Benjamin G. Covino Prof. Charles A. Vacanti

Rie Fukaya
Graduate Student, Applied Functional Molecules
Institute of Biomaterials and Bioengineering, TMDU

The National Cancer Institute October 31st to December 6th in 2009

Sharing Experiences Internationally

About NCI

From Oct. 31 2009 to Dec. 6 2009, I had studied abroad under Dr. Terrence R Burke, Jr. who is the head of Bioorganic Medicinal Chemistry Section at NCI-Frederick, MD, USA.

The National Cancer Institute (NCI) is the biggest research center of cancer in the world. It is one of the contents of The National Institute of Health (NIH), which is a part of the U.S. Department of Health and Human Services, and is the primary federal agency for conducting and supporting medical research. NCI has several campuses and the main campus is at the Bethesda, MD, USA.

Building 376

Dr. Burke

Dr. Burke's lab

Dr. Burke is the head of Bioorganic Medicinal Chemistry Section at NCI-Frederick. He was a lab member of Professor Tamamura at NCI-Bethesda once. Then, Professor Tamamura introduced his lab to me.

His research is investigating new potent inhibitors toward HIV-integrase focused on phosphatase area. I have synthesized a potential inhibitor toward Yersinia pestis protein tyrosine phosphatase.

Dr. Burke's lab is made up with six members who come from various counties. Almost all members are non-native speaker of

English, so I felt quite relaxed in speaking English. I learnt a lot through experiments and sharing ideas with people with different backgrounds and different experimental techniques.

Finally

The NCI-Frederick life was a great experience. I was not able to carry out this program safely without the kind support from everyone. I would like to express my gratitude toward them.
And, finally, I would like to appreciate "Jinzai katsuyo committee" for their great support.

With lab members

Aiko Ogawa

Graduate Student, Medicinal Chemistry
Institute of Biomaterials and Bioengineering, TMDU

University of Erlangen-Nürnberg August 30th to September 21st,
German Cancer Research Center September 22nd to October 4th in 2009

Chance to See the World

I stayed in two institutes in Germany. The 1st institute, I had studied under Professor Jutta Eichler, Laboratory of Medicinal Chemistry, Department of Pharmacy, University of Erlangen-Nürnberg (Friedrich-Alexander Universität Erlangen-Nürnberg, FAU) in Erlangen, Germany from Aug 30th to Sep 21st in 2009. Next I had studied under Dr. Ulrich Tschulena, Functional Profiling, Division of Molecular Genome Analysis, German Cancer Research Center (Deutsches Krebsforschungszentrum, DKFZ) in Heidelberg, Germany from Sep 22nd to Oct 4th.

Days at University of Erlangen-Nürnberg (FAU)

FAU is a university in the cities of Erlangen and Nuremberg in Bayern, Germany. It is the second largest state university in Bayern, having 11 faculties, such as Law, Medical, Philosophical, Science, etc. In Professor Eichler's lab, there are nine researchers: Professor Eichler, a postdoctoral fellow, technicians and Ph.D students. And several undergraduate students from the Department of Pharmacy were there to do practical work as summer students. Professor Eichler's lab focuses on the exploration and inhibition of protein-protein interactions based on synthetic mimicry of protein (peptides and scaffold peptides) binding sites. I had synthesized seven peptides by the automatic solid phase synthesizer. I had learned a lot from the differences in the way of synthesizing peptides between Eichler's lab and our lab.

Days at German Cancer Research Center (DKFZ)

DKFZ is the largest biomedical research institute in Germany, and they are investigating the mechanisms of cancer. There are eight researchers in Dr. Tschulena's lab, scientists, technicians and Ph.D students.
They are aiming to identify cancer-relevant genes by utilizing RNA interference. I had learned some biological techniques from technicians, such as cell culture, apoptosis assay, etc.

Finally

The days in Germany had given me wonderful treasure. I realized the importance of speaking out what I want to say or do, in my own words, and not letting others to guess. The training had not been carried out safely without the kind support from everyone as I could not speak a word of German. I would like to thank everyone who had helped me. Finally, I give my great appreciation to the "Jinzai katsuyo committee" for giving me a great chance to see the world.

With lab members

With Dr. Tschulena and technicians

With Ph.D students

Chie Hashimoto

Graduate Student, Medicinal Chemistry
Institute of Biomaterials and Bioengineering, TMDU

Helsinki University of Technology September 5th to September 10th in 2009

Conquering Fear for English

Background

Finland has a population of about five million people and is almost the same size as Japan in land area. It is blessed with its plentiful forest and lake. Helsinki University of Technology is located in Espoo next to the capital, Helsinki. This university has four faculties with 30 departments. The university campus is one of the popular sightseeing spots, because most parts of the campus was designed by the world-famous architect, Aalto,

Wedding ceremony

Gasik's Laboratory

I had studied in Professor Gasik's lab. Their main subject is thermodynamic analysis for metals and alloys. This technique is very important for the development of metallic biomaterials.
I would like to report my life and results of my research in Finland.

Study in Professor Gasik's lab

I examined thermodynamic analysis on Zr-Nb, Zr-Nb-Pt and Zr-Nb-Pd alloys using differential scanning calorimeter (DSC) and dilatometer (DIL). As DSC and DIL analysis, the mechanical properties and corrosion resistance of Zr based alloys can be improved by heat treatment.

It was quite hard to convey my idea as all results were discussed in English. When I couldn't understand some technical term I did not hesitate to speak out and ask the meaning, so my English vocabulary and conversational skills has improved dramatically.

Life in Finland

I stayed in Finland for a month and realized it is very safe place to live. On weekdays, I usually worked out at the gym or ran around a lake and took a sauna at the university after research. Two or three times a week, I went bowling or drinking with my Finnish friends. My friends are very friendly and talkative. They tried very to understand exactly what I meant regardless of my poor English. The discussions I had with the other foreign students gave me a very precious memory.
One of the difficulties in Finland was that all products were explained in Finnish or Swedish. Therefore, I always had to carry a Finnish-English dictionary.

Acknowledgements

I have earned a valuable experience through the Musya-Syugyo program. Also I was able to conquer the fear for English through research works in English and my life in Finland. In the future I would like to attend to English lectures actively and express my opinions in English.
Finally, I would like to express my gratitude for all the staffs that helped me through with the program.

Ryota Kondo
Graduate Student, Metals
Institute of Biomaterials and Bioengineering, TMDU

Ecole Normale Superieure October 4th to November 1st in 2009

Discover Cultural Differences

My study in ENS

From Oct. 4th to Nov. 1st in 2009, I studied abroad under Professor Christophe Tribet, Pôle Chimie Biophysique, Ecole Normale Superieure in Paris. ENS is an elite higher education institution (graduate school) for advanced undergraduate and graduate studies, and a prestigious French research center. Professor Tribet's research themes are: photostimulables polymers, interfaces polymer / membranes and stabilization of protein. Recently, he investigated the binding of protein onto the polymers by capillary electrophoresis (CE).
Our laboratory has reported that cholesteryl group-bearing pullulan (CHP) form stable, monodisperse hydrogel nanoparticles (~30 nm) by self-assembly in dilute aqueous solution. CHP nanogel binds various proteins, so, I evaluated the complexation constant (K) by CE. During my stay, I attended the seminar and discussed with some researchers where there were many international researchers from every country in ENS and I could communicate in simple English.
In France, most shops are closed at 7:30 p.m., therefore, almost all professors and students go home before 6:00 p.m. What I felt most strongly is that French researchers use time as efficiently as possible. I would like to apply what I have learned in the future.

Life in Paris

The ENS is just a few-minute walk from my studio. So, I went shopping to supermarket and small shops on my way home. On weekdays, I went to lunch with laboratory members or Japanese friends and we drank wine at lunchtime! On weekends, I went to the museum, walked in beautiful parks, and visited sightseeing spots with friends. Professor Tribet and his wife took me to the Château de Chantilly, it was the most enjoyable day!! We discussed many things … politics, economics, environment and so on. I feel my English speaking skills improved a lot from this experience.

Finally

By knowing the university and society of France, I discovered many differences between France and Japan. I'd like to apply this experience in my life now-on. I am grateful to the Jinzai-yousei committee for giving me the chance to study in ENS and I appreciate their support.

Asako Shimoda
Graduate Student, Organic Materials
Institute of Biomaterials and Bioengineering, TMDU

Press-release

ANKRD1 Mutations Cause Hypertrophic Cardiomyopathy and Dilated Cardiomyopathy

Professor Akinori Kimura and Assistant Professor Takuro Arimura in the Department of Molecular Pathogenesis, Medical Research Institute found ANKRD1 mutations in the patients with hypertrophic cardiomyopathy or dilated cardiomyopathy and revealed the functional alterations caused by the mutations in relation to the pathogenesis of hypertrophic and dilated cardiomyopathy. These findings were published in The Journal of the American College of Cardiology 54(4):334-342, 2009 and 54(4):325-333, 2009, respectively.

Cardiomyopathy is caused by functional abnormality of cardiac muscle. Functional abnormality involved in its etiology includes both extrinsic and intrinsic factors, and cardiomyopathy caused by the intrinsic factors is called as primary or idiopathic cardiomyopathy. There are several clinical types of primary cardiomyopathy including hypertrophic cardiomyopathy (HCM) and dilated cardiomyopathy (DCM). HCM is characterized by left ventricular hypertrophy associated with diastolic dysfunction and often accompanied by sudden cardiac death in young, while DCM is associated with ventricular dilation with systolic dysfunction manifested with heart failure. Because family histories consistent with autosomal dominant inheritance are found in 50-70% of HCM patients and 20-35% of DCM patients, gene mutations cause at least in part of HCM and DCM.

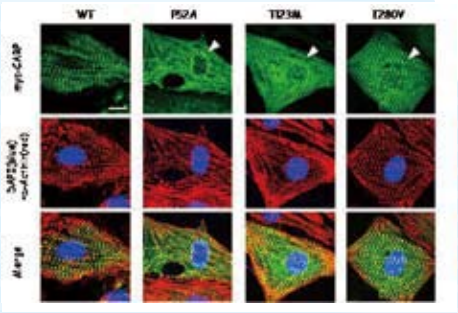


Figure 1 CARP protein with HCM-associated mutation showed intra-nuclear or perinuclear localizations in transfected rat cardiomyocytes.
GFP-tagged wild-type (WT) or mutant CARP genes carrying HCM-associated mutations (P52A, T123M or I280V) were transfected to neonatal rat cardiomyocytes. WT-CARP protein was not found in the nuclei, while mutant CARP proteins were found at intra-nuclear or perinuclear regions as indicated by arrowheads. Upper; localization of GFP-tagged CARP, middle; localizations of actinin (red) and nuclei (blue), lower; merged image of upper and middle images.

Linkage studies and candidate gene approaches during the last two decades have explored the disease genes for hereditary primary cardiomyopathy, i.e. mutations in genes for sarcomere components, Z-disc components, I-band components or membrane components cause cardiomyopathy. The most notable finding was that mutations in the same disease gene can be found in different clinical types of cardiomyopathy including HCM and DCM. However, mutations in the known disease genes could be found in about 60% of familial HCM and 15% of familial DCM patients in Japan, suggesting there are other disease genes to be identified.

We have searched for mutations of a candidate disease gene ANKRD1 encoding for cardiac ankyrin repeat protein (CARP) in the patients with HCM or DCM who had no mutations in the known disease genes. In a world-wide collaboration with many investigators, we could identify three different mutations (Pro52Ala, Thr123Met and Ile280Val) in HCM patients and three different mutations (Pro105Ser, Val107Leu and Met184Ile) in DCM patients. Functional studies of these mutations have revealed that the HCM-associated mutations increased the binding to both titin N2-A domain and myopalladin. In addition, mutational screening of titin N2-A region in other HCM patients have revealed two different mutations (Arg8500His and Arg8604Gln) that increased binding to CARP, demonstrating that the increased binding of CARP and titin N2-A was closely associated with HCM. Furthermore, transfection of EGFP-tagged CARP gene with or without the HCM-associated mutations revealed that the mutant CARP proteins localized to perinuclear or nuclear regions, which is resembling to the distribution of CARP protein in the stretched cardiomyocytes (Figure 1). These observations have suggested that the altered distribution of mutant CARP protein render the cardiomyocytes to be more susceptible to stretch response and hence hypertrophy.

On the other hand, DCM-associated CARP mutations did not show apparent abnormality in the cellular localization. However, myoblastic cell lines transfected with the DCM-associated mutant CARP genes showed the decreased expression of genes involved in the stretch-response. These observations shed lights on the novel disease genes and pathogenesis of hereditary cardiomyopathy, i.e. the altered stretch response of cardiomyocyte is a fundamental mechanism involved in the cardiomyopathy and that mutations associated with HCM and DCM showed opposite functional changes of CARP protein, gain of function and loss of function, respectively.

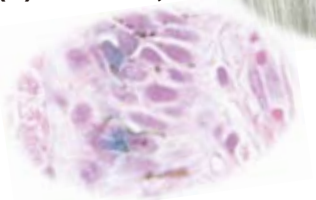
Akinori Kimura, MD, PhD
Professor, Molecular Pathogenesis
Medical Research Institute, TMDU

Takuro Arimura, DVM, PhD
Assistant Professor, Molecular Pathogenesis
Medical Research Institute, TMDU

Press-release

Stressed-out DNA Turns Black Hair Gray

Those annoying graying hairs that tend to crop up with age really are signs of stress. Professor Emi Nishimura's group have revealed that the kind of "genotoxic stress" that does damage to DNA depletes the melanocyte stem cells (MSCs) within hair follicles that are responsible for making pigment-producing melanocytes. These new findings may open up a new avenue for future strategies to prevent hair graying and other signs of ageing. These discoveries were published in Cell. 137(6):1088-99, 2009 and Cell Stem Cell. 6(2): 130-140, 2010.



The DNA in cells is under constant attack by exogenously- and endogenously-arising DNA damage such as by reactive oxygen species, mutagenic chemicals, ionizing radiation in addition to spontaneous errors. It is estimated that a single cell in mammals can encounter from 1,000 to 100,000 DNA damaging events per day. Long-lived stem cells have more chance to accumulate these defects and pass them on to their progeny. Consequently, cells have elaborated ways to repair damaged DNA and prevent the lesions from being passed on to their daughter cells. Once stem cells are irreversibly damaged, the damaged stem cells need to be eliminated to maintain the quality of the stem cell pool. It was unclear whether tissue stem cell systems have a specific mechanism for maintaining stem cell quality. We found that excessive genotoxic stress triggers differentiation of melanocyte stem cells to efficiently eliminate the damaged population from the stem cell pool.

We previously identified "melanocyte stem cells" (MSC), which supply mature melanocytes required for hair pigmentation (Nishimura EK et al. Nature 2002). We subsequently found that physiological hair graying is caused by incomplete self-renewal/maintenance of those MSCs (Nishimura EK et al. Science 2005). However, it was still not known why self-renewal of MSCs becomes defective during the course of ageing. Accumulation of DNA damage is currently implicated in somatic stem cell ageing as well as appearance of age-related phenotypes, while little is known about the fate of stem cells under the genotoxic stress and its overall outcome. To examine the major fate of MSCs after excessive DNA damage sufficient to induce hair graying, we tracked the fate of MSCs after DNA damage caused by irradiation. We found premature stem cell differentiation but not stem cell apoptosis nor senescence was the major fate of MSCs after irreparable/excessive genotoxic stress.

In this study, we discovered that hair graying, the most obvious ageing phenotype, can be caused by the response to genomic damage via a process of stem cell differentiation, which suggests that physiological hair graying can be triggered by the accumulation of unavoidable DNA damage associated with aging. We further found that the "caretaker genes" such as ATM (ataxia telangiectasia mutated) serves as a so-called stemness checkpoint, protecting against MSCs differentiation. That's why people with premature aging syndromes caused by mutations in care taker genes undergo premature graying. In addition to the aging-associated stem cell depletion typically seen in melanocyte stem cells, qualitative and quantitative changes to other body stem cells have also been reported. Consequently, stressed–out DNA in stem cells not only turns black hair gray but may be more involved in other age-related changes. We are now trying to understand the cellular and molecular mechanisms of stem cell maintenance. We hope that we can apply the knowledge we will gain not only for developing anti-ageing but also in the prevention and treatment of other age-related diseases such as cancer.

Emi Nishimura, MD, PhD
Professor, Stem Cell Biology
Medical Research Institute, TMDU

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Cell. 137(6):1088-99, 2009
2. Nishimura EK., Suzuki M, Igras V, Du J, Lonning S, Miyachi Y, Roes J, Beerman F, Fisher DE.
Key Roles for Transforming Growth Factor β in Melanocyte Stem Cell Maintenance
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Mechanisms of hair graying: incomplete melanocyte stem cell maintenance in the niche
Science. 307(5710):720-724. 2005

Joining JDR Team Dispatched to Disaster Area after Earthquake in Padang, West Sumatra Province, Republic of Indonesia

After an earthquake hit the city of Padang on the coast of Indonesia's Sumatra Island on September 30, 2009 (Magnitude: 7.6), the Japan International Cooperation Agency (JICA) formed a Japan Disaster Relief (JDR) medical team on the request of the Japanese government. The team was dispatched to the affected area, and I joined the team as a medical doctor.

The medical team is comprised of 23 members, including medical doctors, nurses, pharmacists, and radiation technologists. The team departed for the disaster area in two groups on October 1, one day after the earthquake. The team set up tents and started to treat patients in the city of Pariaman, 30 km north of the city of Padang, West Sumatra Province. Medical institutions in the area were damaged by the earthquake, with some buildings having partially collapsed. As a result, the local medical institutions were unable to provide sufficient medical services to affected people. The tents of the JDR medical team were visited by not only those who had been injured in the earthquake, but also those who were suffering bronchitis, palpitations, and insomnia caused by stress. The team examined 1,447 patients in about 10 days. The team also treated patients with a high degree of urgency and seriousness. They accepted 27 emergency patients who were brought in by ambulance and conducted 29 surgical operations. Myself, as an emergency doctor, examined many disaster victims, administered medications, conducted surgical operations, and cast broken bones in the tents under very high temperatures.

30 Sep 2009 - A 7.6-magnitude earthquake in West Sumatera leaves at least 75 people dead and thousands trapped under rubble.

A rescue team, which was dispatched concurrently, unfortunately could not find and rescue any survivors. According to The World Health Organization (WHO), the total number of casualties is 791,844 people, which breaks down as follows: dead: 1,117, seriously injured: 788, slightly injured: 2,727. The total number of damaged houses and infrastructures stands at 111,225.

Tomohisa Shoko, MD, PhD
Assistant Professor,
ER Center
University Hospital of Medicine, TMDU

TMDU On-Campus Nursery "WAKU WAKU Hoikuen"

The TMDU On-Campus Nursery aims to help staff members and students who are managing both parental duties and work/study responsibilities achieve "work-life balance".
Currently, the nursery is scheduled to open after April 2010.

Hisashi Taniguchi, DDS, PhD
Professor
Maxillofacial Prosthetics, TMDU

Activities of Support Measures Committee for Female Researchers

Mission1
- To provide work environments that allow coordination with childbirth, child rearing and care-giving
- To promote research offices that are women-friendly

Mission2
- To provide support based on the needs of researchers
- To conduct lifestyle and work surveys for both men and women

Mission3
- To promote research that focus on gender differences
- To cultivate female researchers who can lead the next generation

Mission4
- To provide university-wide support for women
- To revitalize the entire campus

Career Support Activities
Career Counseling Room, Industry-Academic Linkage, Exchange Meetings, Online Forums

PR & Survey & Seminar Activities
Conducting a variety of surveys, holding seminars and symposiums, publishing newsletters

Employment & Working Condition Activities
Promoting positive action, Support measures for next generation, Harassment measures

Home-Based Research Activities
Home-based work support

Research Support Personnel Assignment Activities

Sick Child Care Activities
Child Care, Sick Child Care, Support for Long Term Care, Child Care Surveys

Increase the ratio of female professors to 20% by 2020

Location & Facilities

Location	Yushima Campus, Bldg No.6, 1st floor
Building type	Reinforced concrete, fireproof
Facility floor space	208m^2
Facility management	Independently contracted nursery organization, "Pigeon Hearts Corporation"

Name of nursery

After collecting ideas for the nursery's name, it has been decided to be named "WAKU WAKU Hoikuen".

Number of children to be admitted (Quota by age range)

Regular users

Regular users are those who use the facility 5 days a week (Monday~Friday)

Maximum capacity 27 children

Allocation Under one year old:**9** one~two years old:**9** ;
two~three years old:**6** three years and up:**3**

Day-by-day users

Day-by-day users can use the facility when capacity is available. But, this project in the first year (FY2010) is not yet concrete.

Notes:

1. Age is measured as of 1st April of the current year.
2. The TMDU On-Campus Nursery receives a subsidy from the Ministry of Health, Labor and Welfare. Due to eligibility constraints of this assistance program, students may use only up to one-half of the allotted quota (the number is based on the actual number of children attending the nursery).

Hours of Operation

Basic hours of operation

7:30a.m. ~ 6:00p.m.

Extended hours of operation

7:00a.m. ~ 7:30a.m. & 6:00p.m.~8:00p.m.

Hours of operation for day-by-day users

In principle, within the “Basic hours of operation”.

Days closed

The nursery is closed on Saturdays, Sundays, national holidays, and over New Year’s holiday. (29 December –3 January)

Users & eligibility

Users

Staff members and students (both undergraduate and post graduate in principle) of TMDU.

Eligibility

Children can be admitted to the day nursery if;

*Both parents have a full time job or they are studying during the day and therefore unable to look after their children by themselves;

*The family is unable to use a recognized nursery near their place of residence.

Eligible Children

The day nursery will be able to care of children who are at least 57 days old until elementary school age.

Children must be of sound mind and body so as to get along with the other children in the nursery.

Fees

Basic monthly fee	Approximately ¥70,000
Extended hours fee	To be announced
Temporary hours fee	To be announced

When a regular user is permitted to send two or more children, the fee for the second and any additional child will be charged at the rate of one-half of the basic fee.

Criteria for selection (Regular Users)

1. TMDU will give priority to those who are not able to send their children to recognized nursery in their neighborhood, or who would have much difficulty using another nursery.
2. Selection is done annually.

Schedule of selection (Regular Users):

Recruitment for admission in April 2010 & Application process To be announced

Deadline for submission of the application form:

To be announced (likely—early March, 2010)

Recruitment for admission in May or thereafter: To be announced

Provision of Information

TMDU will announce the commencement of the application period, as well as provide for the distribution of application forms and other information, via the On-Campus Nursery website.

Person in Charge

Ms. Ishida, Staff Section, General Affairs Division

Floor Plan of “WAKU WAKU Hoikuen”

Editorial Summary

We are pleased to bring you the Vol. 2 of **TMDU Annual News**. This issue covers events that had taken place at Tokyo Medical and Dental University (TMDU) from April 2009 till March 2010.

The TMDU President, Takashi Ohyama, DDS, PhD in a new-year message delivered on January 4th 2010 disclosed the outcomes of evaluation received from the National University Corporation Assessment Committee. The TMDU has received high marks and was rated as eighth among the 86 national universities in Japan. We are now approaching the 2nd stage of the mid-term plan which will begin in April where precise plan has been laid out to carry out the mission of the university.

The Trustee of Planning and International Exchange, Sei Sasaki, MD, PhD announced that we have chosen ***"Cultivating Professionals with Knowledge and Humanity"*** as a school mission. The mission statement encapsulates the desire to produce professionals with a high standard of knowledge and a deep sense of humanity. As a symbol of TMDU, the research building shown in the cover of this issue completed and given a name **"M&D Tower"** to unite medical and dental schools, will be officially disclosed to faculty members on April 10, 2010. A new logo for TMDU to highlight our school name and character has been finalized.

Internationally, TMDU has established three overseas research centers, first one with the University of Ghana Noguchi Institute for Medical Research on emerging and re-emerging infectious diseases. Update on this project was provided by Professors Nobuo Ohta and Koichi Ishikawa. The second one is the Latin American Collaboration Center at Clinica Las Condes in Santiago, Chile for screening, diagnosing, and treatment of early colorectal cancer, updated by Professor Yoshinobu Eishi together with Chilean Project Leader Dr. Lopes. The third one is the Chulalongkorn University-TMDU collaboration center for research and education in Thailand reported by Professor Yoko Kawaguchi.

To activate and link people with and within a global university, the International Student Center was re-organized and re-christened as International Exchange Center (IEC) under the direction of Professor Ikuko Morio. The International Summer Program 2009 organized by the IEC focusing on "Recent Advances in Cancer Research" was held in September 2009 bringing together students and young scientists from Asia.

We have received alumni letters from Professor Bazar Amarsaikhan of Mongolia University, Professor Jorge Zeredo of Brazilia University, and Nalinie Jaharatnam of Imperial College London. We express sincere gratitude for their taking time to write alumni letters. Report on study abroad "Mushashugyo" program highlighted experiences of five students in US and Europe.
A total of seven press-releases of top rated researches have been conducted so far, from which we introduced one by Professors Akinori Kimura and Takuro Arimura on hypertrophic and dilated cardiomyopathy, and another by Professor Emi Nishimura on stressed-out DNA turning black hair gray. Thank you for their contribution.

The rescue mission in the disaster area after earthquake in Padang, West Sumatra Province, Republic of Indonesia, was reported by Dr. Tomohisa Shoko, Assistant Professor of the ER Center of the University Hospital of Medicine. Finally, on-campus nursery "waku-waku hoikuen" that will be opened in April, 2010 was introduced by Professor Hisashi Taniguchi for those who need child care while working on the TMDU campus.

The Editorial Office expresses many thanks to those who took special time in writing articles for this issue. If you have any suggestions and news to be included in the future issues of **TMDU Annual News**, please feel free to contact Professor Setsuo Takatani, Director of Public Relations at the following address.

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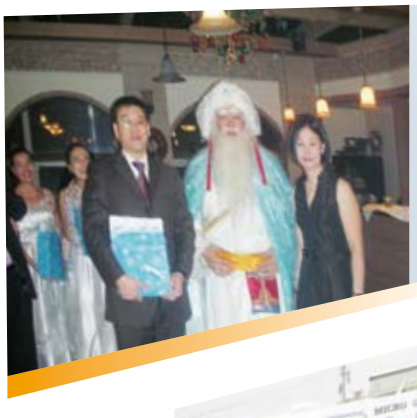

Open Windows Leading to the Global World

TMDU's activities are reported through the open windows to the world.
The window represents TMDU as the Global base for its speedy exchange of information.