

Newsletter

School of Dentistry
Showa University

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Towards the Future

by Professor Takashi Miyazaki: Dean, School of Dentistry, Showa University



It is a great pleasure to be associated with the publication of the first issue of the Showa University School of Dentistry Newsletter. In 1977 the School of Dentistry was the third school established at Showa University. Our 30th anniversary ceremony was celebrated on November 4, 2006. One outstanding characteristic of our university is the contribution that we make to society regarding the management of health through the collaboration of professional teams. Our students from the medical, dental, pharmaceutical sciences, and

nursing and rehabilitation fields study and work together on the road to becoming professionals in their respective areas. They learn to cooperate with each other to solve problems in the health sciences fields.

Showa University has made a great effort in facilitating international cooperation in both education and research. To date we have contracted sister relationships with 8 dental schools in foreign countries. During our 30-year history more than 123 researchers from Showa University have traveled to schools and facilities around the world to engage in research for at least a year. The Showa University School of Dentistry has also received many foreign guest scientists; every year over 100 researchers from abroad visit our school. After these researchers finish their studies at Showa University and return to their home countries, they often become professors, deans and directors of their own schools.

During the past few years our dental

school has made great strides in improving our methods and techniques of education. In cooperation with our foreign sister schools, we have endeavored to introduce PBL (Problem-Based Learning) into our curriculum. This has helped to successfully advance our teaching skills and provide a curriculum that meets the needs of our students.

In addition, in an effort to produce internationally active dentists and to contribute to dental health worldwide, we have established elective courses or seminars for students who wish to study in foreign universities. Every year we send about 10 students to sister schools to enhance their education and clinical skills.

I hope that this newsletter provides readers with information and an introduction to the activities regarding our School of Dentistry. We look forward to expanding our cooperation and collaboration activities with other foreign schools and researchers in the near future.

Academic Philosophy and Goals in School of Dentistry

by Professor Yuji Sato: Chair of Educational Affairs

For the progress and the future of society, dentists should treat patients using a holistic approach; that is, judgments regarding treatment must be made based on our knowledge from the life sciences, medicine, pharmacology, etc., and take into consideration not just dental aspects but those of the whole body. Teamwork from a wide variety of backgrounds is needed to treat all types of dental problems. The School of Dentistry, therefore, advocates the following three educational targets:

1) Dentists need to develop good social and communication skills so that they can play active roles as members of a team, as well as develop good relationships with their patients and patients' families based on mutual trust.

2) Dentists need to diagnose and treat oral disorders in relation to health of the whole body.



3) Dentists need to identify dental problems and design the best possible treatments. This requires that life-long learning play a major role in the career of a dentist.

To achieve these objectives, our dental school has created a new curriculum designed to ensure that our students be given the opportunities to develop these skills. Together with our faculties of medicine, pharmaceutical sciences, and nursing and rehabilitation sciences, PBL (Problem-based learning) has been incorporated into our curriculum. With

PBL, learning has a spiral tendency; that is, students experience, learn, train and experience again, while focusing on patients as the center of learning.

In addition, we have incorporated overseas exchange programs into our curriculum to offer our students the opportunity to enhance their education at foreign universities. These exchange programs are carried out during the summers of the 2nd-4th years and as an elective during the 6th year. To help foster strong relationships between students and faculty, as well as help build communication skills, all of our students spend their 1st year of study living in student dormitories at our campus in Fujiyoshida, at the base of Mt. Fuji. These innovations in our curriculum are unique to our university and help provide our students with the best education possible.

Meeting Educational Objectives Through Problem-Based Learning

by Professor Masanori Nakamura: Department of Oral Anatomy and Developmental Biology

In 2003 the School of Dentistry at Showa University initiated PBL or Problem-Based Learning, a method based on the notion "learning to learn." This study technique offers our students opportunities to seek solutions to real problems in the dental field, as well as to work and cooperate with others. In Japan, Showa University has become a leader in PBL instruction. As a way of introducing PBL into our dental curriculum, the following coordinated units have been integrated into our courses of study: the Oral Ecosystem, the Structure of Teeth and the Oral Cavity, Pulp Biology, the Orofacial Structure and Function, and Orofacial Diseases and Dental Practice. These units comprise one-fifth of the educational objectives. In the process of creating our

new PBL curriculum, we sought advice and know-how from the University of Adelaide, the University of Hong Kong, the University of Southern California, Gifu University, and Tokyo Women's Medical University.

As most of our students are not familiar with learner-centered education, we offer PBL orientation; in addition, in December 2005 we introduced our web-based PBL support system, which the majority of our students have reported helps them communicate with their facilitators. Since 2007 we have offered our first-year students interdisciplinary PBL by expanding our program to include students from our four faculties: Medicine, Dentistry, Pharmaceutical Sciences, and Nursing and Rehabilitation Sciences.



International Symposium: New Frontiers in Education

by Professor Masanori Nakamura: Department of Oral Anatomy and Developmental Biology

The Showa University International Symposium for Health Science Education was held at Showa University Kamijo Memorial Hall on August 1-2, 2007. The main theme of this symposium was "New Frontiers in Educational Technology, PBL and OSCE." Invitations were extended to prominent education specialists of the medical, dental and pharmaceutical fields from the United States, Canada, Australia, Hong Kong, Thailand and Japan. Concerning PBL in the dental sciences, a symposium on the "Application of Principles of Adult Learning Theory using Problem-Based Learning" was given by Professor Charles Shuler (Dean, University of British Columbia, Canada), and another on the "Integration and Connectedness in Dental Education through PBL" was presented by Professor Esmonde Corbet (University of Hong Kong). Professor David Newble (Flinders University, Australia) spoke about "Making an OSCE Valid and Reliable" in the OSCE session. Members of the

four faculties of Showa University as well as those of other Japanese universities attended to discuss topics regarding the present status and the future of education. The day before the symposium, the three invited speakers conducted a satellite symposium for the School of Dentistry to assess our current curriculum and offer advice for improvement.

The School of Dentistry at Showa University is the first to introduce PBL in Japan. We are currently trying to integrate PBL and other clinical and basic educational strategies into our four faculties by creating interdisciplinary education. Our goals are to improve education while setting a standard for a new style of teaching in the medical, dental and pharmaceutical fields.



Faculty and Student International Exchange Program

by Professor Tomohiro Okano: Director of Showa University Dental Hospital

The Showa University School of Dentistry has developed several international research projects, which include faculty exchange programs. In addition, we also sponsor an international student program to foster a broader understanding of clinical dental practice and to promote dental research. Our dental faculty and students are sent to overseas institutions

while we are also extremely happy to accept foreign students as part of our elective program. In the past we have accepted students from many countries including the United States, Australia, the United Kingdom and Hong Kong. We have also sent our staff and students to the U.S., Australia, China, Germany and Taiwan.



Tianjin Medical University, China, 2004. 10. 15



Dalian Medical University, China, 2003. 9. 12



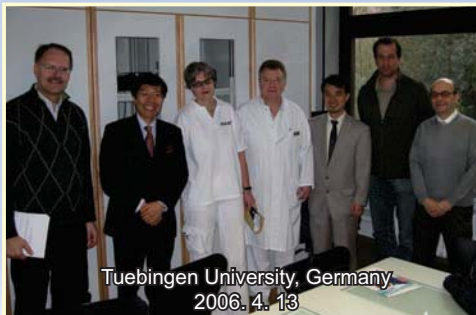
Adelaide University, Australia 2005. 3. 30



Shanghai Jiao Tong University, China, 2005. 4. 29



U. S. C., United States 2006. 2. 2



Tuebingen University, Germany 2006. 4. 13



Taipei Medical University, Taiwan 2007. 12. 15



Hong Kong University, China 2008. 2. 15

60th Anniversary of Dalian Medical University

by Professor Matsuo Yamamoto: Department of Periodontology

Since 2004 the Showa University School of Dentistry has participated in an exchange program with the School of Dentistry at Dalian Medical University in China. Professor Miyazaki, Dean of the School of Dentistry at Showa University, Professor Okano, Director of the Showa University Dental Hospital, and Professor Yamamoto, Chairman of the Department of Periodontology and Chairman of



the International Exchange Program, participated in the celebration of the 60th anniversary of the founding of Dalian Medical University.

Dalian is just 4 hours by plane from Japan, and because of its location, Dalian has become home to many Japanese companies. Many people in Dalian, therefore, speak Japanese making it easier to establish a joint relationship with the medical university there. In fact, several Dalian University dentists who have carried out studies and acquired a degree at the Showa University School of Dentistry, have returned to Dalian and been promoted to full professor. Dr. Hu Shuhai, the Professor of Prosthodontics at Dalian Medical University School of Dentistry, is a former Ph.D. graduate of Showa University.

Dr. Hu Shuhai is currently in charge of his university's exchange program and is collaborating with Showa University in an effort to expand our cooperation. As a result, some of our 4th and 6th-year dental students have chosen to visit Dalian Medical University as an elective course of study. This exchange program provides our students with the chance to enhance their dental knowledge and skills, as well as reflect on medical and dental care in Japan from another viewpoint. We look forward to continuing our student and faculty exchanges with Dalian Medical University.



Exchange Program between Showa University, Tokyo and Eberhard-Karls-Universitaet, Tuebingen, Germany

by *Dr. Christoph Goldammer*

After Dr. Daisuke Higuchi from Showa Dental Hospital studied in our dental clinic in the Department of Prosthodontics in Tuebingen for one year, it is now my turn to continue this program. My name is Christoph Goldammer and I am an Assistant Professor at the Dept. of Prosthodontics in Tuebingen. After I graduated, I started to work at the dental clinic of Eberhard-Karls-University. It is very important for me to treat patients, to research dental materials and to teach students.

I started to work at Showa University on the 1st of October and will stay in Tokyo for one year. During this time I will go on with my research concerning the fatigue behavior of zirconia, a new kind of dental material to make fixed partial dentures. This material shows excellent results in the field of esthetic dentistry and provides treatment for patients without using any kind of metal. This is very important if the patient has any kind of allergy against metal alloy. However, for the routine use of this material,

we must obtain data concerning its long-term behavior. Without this information it is not reliable to use zirconia like a ceramic veneered metal alloy core because of the risk it may fail. So it is very important to collect more data to reduce any kind of risk.

Now I am working at Prof. Miyazaki's Department of Oral Biomaterials & Technology. I am very thankful that he gave me the opportunity to stay and work here at Showa University.

I am looking forward to being here for one year and to improve my knowledge about dentistry. Therefore, special thanks to Prof. Miyazaki and Prof. Weber, the head of my department in Tuebingen, who made this exchange possible.



Overseas Training of Students

University of Adelaide, Australia Study Abroad Program by Misaki Takei (6th-year student)

In 2005 when I was a 4th-year student, I and two other students from Showa University were the first to participate in a three-week summer exchange program with the School of Dentistry at the University of Adelaide, Australia where we attended PBL dental classes and observed some basic clinical training.

Last year two students from Adelaide visited Showa University for one week. The Australian students had the opportunity to observe dental implant procedures at Showa Dental Hospital, as well as visit some of our basic science departments. I and other Showa University students enjoyed exchanging ideas about our dental studies, as well as life in our respective countries.

In the spring of 2007, I was given the chance to return to Adelaide. This time I was not a stranger; I felt more comfortable because I was now familiar with the campus and I had friends there. I observed the prosthodontics, orthodontics, oral surgery and general dental practice departments at Adelaide Dental Hospital (ADH), as well as attend a graduate school seminar for orthodontics students. My visits to the University of Adelaide provided me with the chance to enhance my dental education, as well as establish friendships with foreign students. I would like to express my thanks to Professors Miyazaki, Yamamoto, Sato, Dr. Kataoka and other doctors for giving me this opportunity to study abroad.



Summer at the University of Southern California by Akihiro Ando (4th-year student)

Last summer I was given the opportunity to visit the University of Southern California School of Dentistry (USC) as an international exchange student. I was able to stay there for only one week since I had to return to take exams at Showa University. However, it was a great opportunity to actually see what dentistry in the United States is like.

Dr. Eugene Sekiguchi, an associate dean of USC and a former president of the American Dental Association, hosted my visit and gave me a tour and introduction to the campus and the dental clinics. Dr. Sekiguchi is very kind and friendly, so it was easy to see why literally everyone at USC respects and loves him. Within the week, I had also become a fan of his. I also joined an orientation program for 1st-year students, a PBL class for 2nd-year students, and observed the White Coat Ceremony.

Although I spent just a short time at USC, I had the chance to interact and make friends with many students and faculty members. I look forward to some point in my career as a dentist when I will be able to see them again.



Faculty Studies Abroad

Research at Tuebingen University, Germany

by *Dr. Daisuke Higuchi*
(Dept. of Prosthodontics)



Tuebingen with a population of 85,000 is located in the southwest area of Germany. "Attempto" or "I will try it," is the motto of Tuebingen University established in 1477 by Duke Eberhard. Today the university is composed of 14 faculties with 20,000 students. Professor Heiner Weber of the Prosthetic and Implant Department of Tuebingen Dental Hospital invited me to join his staff from August 2006 to July 2007 to conduct research regarding "Implantology and Prosthodontic Appliances." In addition, the German government acknowledged my dental license from Japan and permitted me to treat patients in the dental hospital. It was a great experience for me because I had the opportunity to become familiar with the dental treatment system of Germany. I would encourage anyone who has the chance to study abroad to accept the challenge and adopt the motto "Attempto." Finally, I would like to thank Professors Tadaharu Kawawa and Takashi Miyazaki and others of Showa University for allowing me this wonderful opportunity.

Research at University of Sydney, Australia

by *Dr. Yo Shibata*
(Dept. of Oral Biomaterials & Tech.)



I recently returned from Sydney, Australia where I spent one year as a visiting researcher. The Faculty of Dentistry at the University of Sydney, the oldest dental school in Australia, has been involved in the training of dental practitioners for 100 years. The faculty members are involved in exciting and innovative research projects mainly in the areas of biomaterials, jaw function and orofacial pain, oral medicine, oral pathology and orthodontics. While in Sydney I studied biomineralization of metallic biomaterials and calcified tissues in the Biomaterials Unit coordinated by Professor Michael V. Swain. I successfully conducted research on the micromechanical property recovery of human carious dentine and published a paper in the Journal of Dental Research. I am grateful to Professor Swain and his colleagues for their kindness and friendship, and for taking care of me and my daily life needs. It was a great pleasure and honor for me to have had the opportunity to study with them, and I look forward to future collaboration between the Biomaterials Unit in Sydney and Showa University School of Dentistry.



Ph.D. Program: Application Information

Showa University's Graduate School of Dentistry Ph.D. course is now accepting applications from international students.

The course that will start in April 2008 offers basic and clinical dental research.

For further information, please visit our English Web site: <http://www.showa-u.ac.jp/>



Postgraduate Dental Research Program for Foreign Scholars

The School of Dentistry at Showa University is accepting applications from foreign students who wish to enhance their clinical skills, as well as collaborate with research projects. During the past 20 years more than 110 students from several countries have completed research programs at our university. Students are expected to be highly motivated and understand the objectives of the program. Our university provides accommodations close to Showa University and a scholarship of 100,000 Japanese yen/month. All interested applicants should contact the chairperson of the department.

For details, visit our website: <http://www.showa-u.ac.jp/>

Country	Year		
	1984 -1993	1994 -2003	2004 -2007
China	24	30	7
Bangladesh	6	10	10
Brazil	7	0	0
Others	17	2	1

Number of foreign scholars who have completed programs

Showa University Dental Society

Every July and December the School of Dentistry at Showa University holds a meeting to report the latest research carried out in our clinical and basic science departments. Dental education and updates regarding clinical dentistry are also presented. A well-known researcher or therapist is always invited as a special lecturer. Not only current staff, but also alumni and students participate.



The 27th Regular Meeting December 1, 2007 Tokyo, Japan Program

Special Lecture

Dr. Masato Minabe
(Executive member of The Japanese Society of Periodontology)
[Microbiological risk assessment and control of implant treatment for periodontal patients]

Research Activities: Lecture

Professor Satoru Shintani (Department of Oral & Maxillofacial Surgery)
[Aiming toward ideal oral cancer treatment]



Oral Sessions

- Orthodontic treatment by the use of a temporary anchorage device associated with corticalosteotomy
Takuhiro Oshiro (Dept. of Orthodontics)
- Clinical investigation of a temporary anchorage device
Norio Tanaka (Dept. of Orthodontics)
- Visceral noxious stimulus suppresses c-Fos expression in the nucleus of the solitary tract produced by a sweet solution
Masako Maeda (Dept. of Physiology)
- Role of Thy-1 in collagen phagocytosis by human gingival fibroblasts
Kenichi Takano (Dept. of Periodontology)
- Mechanism of osteoclast formation induced by octacalcium phosphate (OCP), a biomaterial for the regeneration of hard tissues
Masamichi Takami (Dept. of Biochemistry)
- Reactive-oxygen-species-dependent change in pH is a key factor for matrix degradation in interleukin-1-treated chondrocytes
Kentaro Yoshimura (Dept. of Biochemistry)
- Shear bond strengths of dental cements for luting to zirconia ceramics
Kenichiro Takeuchi (Dept. of Oral Biomaterials & Tech.)
- Vital teeth bleaching with KTP laser.
Junichi Kinoshita (Dept. of Clinical Cariology & Endodontology)
- Feeding and swallowing training by the dental hygienist
Kunie Hiyama (Dental Hygienist Office)
- The current status of perioperative oral health care in Showa University Northern Yokohama Hospital
Rikuo Masuda (Dept. of Dent. Anesthesiology)
- A clinical study of patients with temporomandibular disorders at a temporomandibular disorder clinic from September 2004 to December 2006
Yugo Abe (Dept. of Prosthodontics)
- Patient survey of dentists in the postgraduate clinical training course; Returnee patients in the department of comprehensive dentistry
Akiko Ikeda (Dept. of Comprehensive Dentistry)
- Screening of cell growth inhibitors in oral cancer cells with a SCADS inhibitor kit
Tatsuhito Nagumo (Dept. of Oral & Maxillofacial Surgery)
- Pre-surgical simulation using a three-dimensional model for oral and maxillofacial diseases
Nazuki Takahashi (Dept. of Oral & Maxillofacial Surgery)
- A survey of patient referral letters from general dental practitioners
Yasuhiro Horikawa (Dept. of Pediatric Dentistry)
- The oral health condition and lifestyles of first-year students at Showa University
Naomichi Murata (Dept. of Hygiene & Oral Health)



Hatanodai Campus



Fujiyoshida Campus



Dental Hospital
(Senzoku Campus)

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Inquiries



SCHOOL OF DENTISTRY, SHOWA UNIVERSITY

1-5-8 Hatanodai, Shinagawa-ku, Tokyo 142-8555, JAPAN

Telephone: +81-(3)-3784-8000

Websites: Showa University <http://www.showa-u.ac.jp/>
School of Dentistry <http://www10.showa-u.ac.jp/~dent/>



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