

Message from the President



Tokyo Medical and Dental University (TMDU), located in the Ochanomizu/Yushima district in central Tokyo, is one of the most prominent medical research institutions in the world. Since its establishment in 1928 as the first National School of Dentistry in Japan, it has grown into a comprehensive medical university by expanding its research base into medicine and nursing. We have approximately 3,000 students in our graduate and undergraduate schools, which include the Graduate School of Medical and Dental Sciences, Graduate School of Health Care Sciences, Faculty of Medicine, and Faculty of Dentistry. We provide excellent learning opportunities to our students under the TMDU Vision, "Cultivating Professionals with Knowledge and Humanity, thereby Contributing to People's Well-being."

TMDU has two university hospitals on campus, one for medicine and one for dentistry. The medical hospital is the most popular teaching hospital among medical interns in Japan and plays an important role in clinical medicine. The dental hospital treats the highest number of patients with oral disease in the country. We also have two research institutes, the Medical Research Institute and the Institute of Biomaterials and Bioengineering, where researchers collaborate with industries to develop practical clinical applications for the benefit of society.

In 2018, we reorganized how research is done at TMDU in order to achieve groundbreaking innovations and practical applications that go beyond each research area. As a result, we launched the "Organ and Tissue Neogenesis Consortium," which will extend the scope of regenerative medicine to include the generation of new organs and tissues. Our hope is that this consortium will play a central role in boosting international recognition of this field by promoting collaboration among industry, academia and government both in Japan and overseas. Next, we established two other groups to enhance collaboration with industry, with financial support from the Ministry of Education, Culture, Sports, Science and Technology: the Medical Innovation Consortium to advance precision medi-

cine, genomic medicine and novel devices, and the Institute of Open Innovation. Also in 2018, we launched the Cultivating Unit for Innovating Medical Scientist, which selects excellent young researchers in various research fields at TMDU in an aim to encourage the next generation to pursue cutting-edge research.

Beginning in April 2018, we have activated two graduate programs to achieve higher levels of consolidated research. The first one is the "Medical Sciences Program for Preemptive Medicine," a graduate program for integrated preemptive medical and dental health care science to train specialists in the comprehensive analysis of medical big data, utilizing technologies such as IoT, AI and robotics. The second program, "Master of Public Health in Global Health (MPH) Course," aims to develop specialists capable of solving urgent world health issues using diverse programs, including international lectures, case studies, and field trips for overseas work.

TMDU is committed to fostering innovative research exchange at a global level. For instance, in 2018 we hosted a joint research symposium for TMDU, the University of California, San Diego (UCSD) and the University of Southern California (USC), which featured world-class experts from an array of medical and dental research fields. The exchange of ideas and knowledge created invaluable links between our universities and we expect to strengthen them in the future through a wide variety of active exchanges of students, professionals and research experiences.

In this booklet, we highlight outstanding examples of state-of-the-art research activities at TMDU, which are in a continuous state of evolution and refinement. Although these activities represent only a fraction of the research underway at our university, I am confident that these highlights will give you an idea of the exciting opportunities available here for collaboration and study, open to researchers and students worldwide.