

## TMDU's research vision: To benefit humanity by bringing together the wisdom of diverse disciplines for pioneering research

At Tokyo Medical and Dental University (TMDU), our goal as Japan's only comprehensive medical university goes beyond the production of impressive research results. We are committed to passing on those results in a way that benefits medical care and human health. In order to link our advanced and creative research and groundbreaking medical treatment technology to society at large, we focus not only on basic research but also on the social benefits it can bring. In other words, TMDU considers the key points to be how the results of basic research can be applied to clinical practice, how they can improve medical care, and how they can contribute to the health and well-being of society.

TMDU researchers belong to the Graduate School of Medical and Dental Sciences, the Graduate School of Health Care Sciences and two unique institutes, the Medical Research Institute and the Institute of Biomaterials and

Bioengineering. At the same time, our researchers work in close association with many clinical departments and divisions of our two University Hospitals, the Medical Hospital and the Dental Hospital. TMDU has succeeded in forming many alliances between academia and industry to achieve research results that benefit patients. For example, recently, two venture companies have been established. One is Rena Therapeutics, which aims to bring heteronucleic acid technology to the practical level, aiming to deliver nucleic acid medicine to patients as quickly as possible through technical licenses to pharmaceutical companies and licensed drug candidates. The other is Riverfield, which has developed a new surgery support robot. In addition, we are promoting our international research collaboration. In fact, some 277 international students from 42 countries are currently learning at TMDU's graduate schools, which are the highest

ranked among medical graduate schools in Japan.

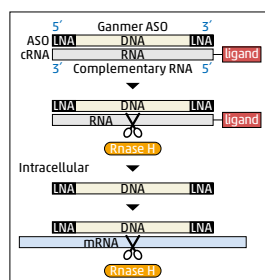
In our brochure last year, *Research Activities 2016*, we introduced genome research and regenerative medicine as the fields of study to be emphasized. The theme this year is "research diversity," and our key areas of focus include tissue engineering, inflammation, autophagy, neurodegeneration, synovial stem cells, and more. In addition, we introduce professors researching biocompatible materials and sensors required to monitor the human body's status. Additionally, several top professors of Ophthalmology and Dentistry share their remarkable recent work, and four of our young researchers share the good results they have achieved in the face of pressure and difficulties.

We hope that this brochure will serve as a first step to inform readers about TMDU's broad and deep research.

### TMDU Venture Businesses



#### Rena Therapeutics, Inc.



**Establishment** January, 2015

**Executives** Founder & Chairman Junichi Yano, PhD  
 President & CEO Jun Sasaki  
 Founder & Director Takashi Yamamoto  
 Founder & Scientific Adviser Takanori Yokota, MD, PhD, TMDU

**Business** Development of heteroduplex nucleic acid medicine

**Mission** We address unmet medical needs by "Hetero-Duplex Oligonucleotide (HDO)," a novel class of nucleic acid medicine. HDO possesses a unique structure and allows effective drug delivery and chemical modifications.

**Website** <http://www.renatherapeutics.com/index.html>



#### Riverfield, Inc.



**Establishment** May, 2014

**Executives** CEO Daisuke Haraguchi, PhD  
 Executive Director Kenji Kawashima, PhD, TMDU  
 Executive Director Junichi Sakata  
 Executive Director Kotaro Tadano, PhD, Tokyo Tech

**Business** Research and development of robotic surgical systems

**Mission** To offer the global market high-quality medical devices based on reliable technology

**Website** <http://www.riverfieldinc.com/>