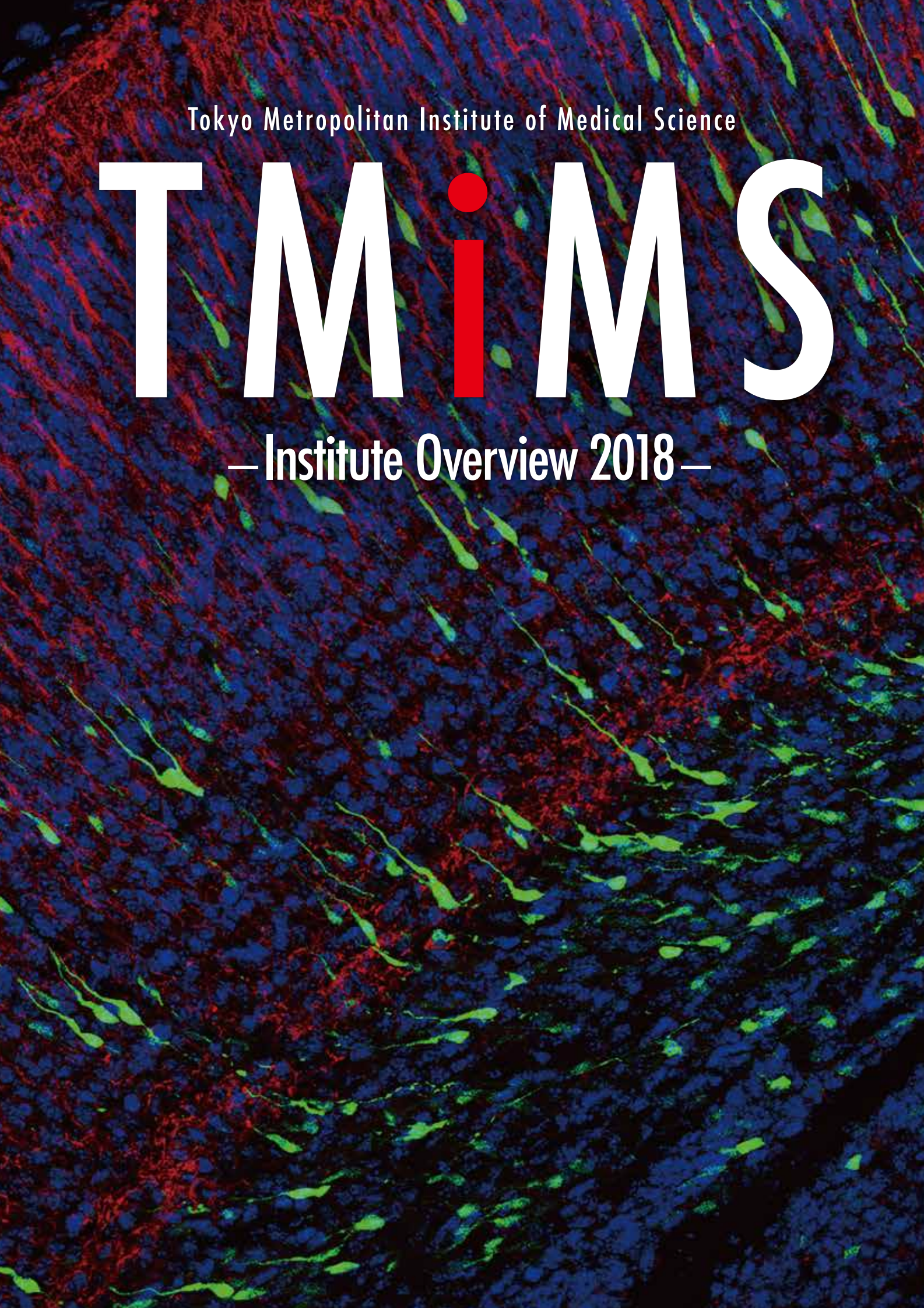
Tokyo Metropolitan Institute of Medical Science

TMiMS

–Institute Overview 2018–



Contents

Research Activities

Department of Genome Medicine

Department of Dementia and Higher Brain Function

Department of Brain Development and Neural Regeneration

Department of Psychiatry and Behavioral Sciences

Department of Sensory and Motor Systems

Department of Advanced Science for Biomolecules

Research Support

Message from Our Chairperson

Chairperson **Keiji Tanaka**

The metropolis of Tokyo is the nerve center of Japan. Developing Tokyo into a healthy welfare city will therefore go a long way toward building a prosperous future for Japan. The mission of the Tokyo Metropolitan Institute of Medical Science (TMIMS) is to promote research in the life and medical sciences to protect the lives and health of Tokyo citizens, with the goal of improving the health, medical care, and welfare of this metropolitan city. It is well known that Japan has the most rapidly ageing society in the world. Tokyo, which reflects Japan itself, is undergoing a steady increase in cancer and infectious diseases, which pose a threat to humanity, as well as lifestyle-related illnesses, neural and mental disorders, and various other health problems. Naturally, conquest of all of these diseases is a common goal of all humankind, and considerable efforts have been made at the national level. Even so, because Tokyo is one of the largest civilized cities in the world, it is also essential for the Tokyo Metropolitan Government to take the initiative in this endeavor. Besides, Tokyo has numerous problems unique to megacities. For instance, many people suffer from rare and intractable diseases that researchers often overlook. TMIMS has been actively working on these important problems, promptly and practically addressing health-related issues with the aim of protecting the health of numerous Tokyo citizens.

By the way, I am of the opinion that “research represents culture”. Accordingly, TMIMS aims to be acclaimed both academically and culturally for the knowledge and wisdom of its excellent researchers, with the ultimate goal of becoming a symbol of the culture of Tokyo, the foremost megalopolis in the world. Academic research is often roughly divided into top-down, exit-oriented applied research (of immediate use) and bottom-up, future-oriented fundamental research (seemingly not of immediate use). Balancing these two research strategies, TMIMS endeavors to operate the organization in a flexible manner in order to achieve additive and synergic effects. In fact, these two research strategies are not incompatible, but can work in a cooperative and harmonious manner. Throughout the history of science, we can find numerous examples of seemingly useless research suddenly becoming useful, resulting in great service to society.

Our medical researchers are energetically pursuing their research day and night to develop preventive medicine and new therapeutic methods to protect citizens’ health in the future. While TMIMS naturally takes on the role of educating young researchers who will help develop human knowledge and wisdom, it also seeks to generate concrete research findings that contribute to social prosperity. Accordingly, all the staff members of TMIMS are working on life science research, ranging from fundamental to practical, making the most of cutting-edge technologies to achieve their specific goals. It is vitally important that TMIMS grow to be the world’s top-notch research institute, and advancing and enriching its research power will eventually create an institute capable of rendering wide-ranging services to society. To this end, the entire staff of TMIMS will strive as one to help pursue incomparable fundamental research and pass the benefit of its research findings on to society, while recruiting and educating talented people to build up momentum.

We look forward to your further guidance and encouragement, which are indispensable for the further development of TMIMS. Thank you in advance for your continued support.

Message from Our Director

Director **Hisao Masai**

The Tokyo Metropolitan Institute of Medical Science (TMIMS) was established in April 2011 as a result of the merger of three institutes; the Tokyo Metropolitan Institute for Neuroscience, the Tokyo Metropolitan Institute of Psychiatry, and the Tokyo Metropolitan Institute of Medical Science, all of which had been founded in early- to mid-1970s with the support of the Tokyo Metropolitan Government and had been present at different locations in Tokyo. The scientists from three different disciplines came together in a new research building in a quiet residential area at Kamikitazawa in Setagaya-ku, about 15 minutes by train from Shinjuku.

The institute is under the continuous support of the Tokyo Metropolitan Government, and our aim is to advance medical research and improve the health and welfare of people living in the metropolises through collaborative research in basic life sciences, medical sciences, social medicine, and nursing. In a metropolis such as Tokyo, people suffer from various diseases and other health-related problems unique to urban life-styles. These include mental disturbances caused by stresses associated with daily life, diseases associated with longevity, and diseases caused by complicated genetic traits as well as infectious diseases caused by viruses such as hepatitis, influenza, and other outbreaks. We are studying these problems using a unique combination of disciplines, technology and expertise.

We conduct forefront basic research in various biological fields including genome and protein functions, stem cells and development, genetic diseases, brain functions, neurobiology, neurodegeneration, stem cells and development, virus infection, allergy, schizophrenia, and depression. Using the state-of-art and newest technology and equipment, we are identifying molecules and mechanisms responsible for various biological phenomena as well as for disease progression. These knowledges and technologies will be used to predict and prevent diseases, and develop new drugs and therapies that can be tailored to individual patients.

We also emphasize importance of sociomedical approaches, including large scale cohort studies aimed at identifying social and environmental factors associated with mental health of youths. We develop effective care and nursing systems for elderly people suffering from dementia, and provide those suffering from progressive and currently incurable diseases such as ALS (amyotrophic lateral sclerosis) with innovative care systems to improve QOL of these patients.

We will pursue research that will contribute to prediction, prevention, diagnosis, and treatment of various diseases, will improve the care of patients, and will help realize longer healthy life. We will also keep the people of the Tokyo Metropolises as well as those from other areas informed of our latest progress by having various outreach activities including public lectures, science café , and lectures/ classes to students. Through these efforts, we hope to serve as a leader and model institute for the life/medical science in the coming decades.

History

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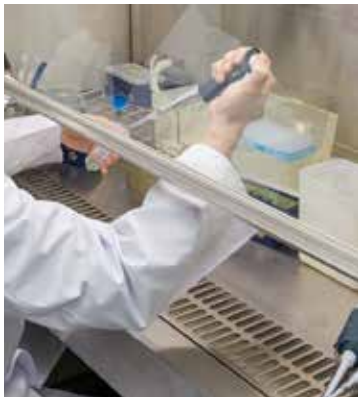
Our Mission



The mission of our institute is to pursue research that will lead to the development of solutions for health-related problems commonly observed in large urban areas and developed countries. Utilizing results from the forefront basic research on molecular and cellular mechanisms of biological pathways and disease pathology, we will collaborate with municipal hospitals and clinics to predict, prevent, and treat health problems. We will also identify causes of unsolved diseases and develop drugs and therapies for them. Our mission is also to provide help and care with those suffering from serious diseases such as ALS to better the patients' quality of life. It is also our mission to analyze the mental disturbances of the public and provide care and treatment.

Our Strategies

In a metropolis such as Tokyo, people suffer from various diseases and other health-related problems unique to urban life-styles. These include mental disturbances caused by stresses associated with daily life, diseases associated with longevity, and diseases caused by complicated genetic traits. We are studying these problems using a unique combination of disciplines, technology and expertise.

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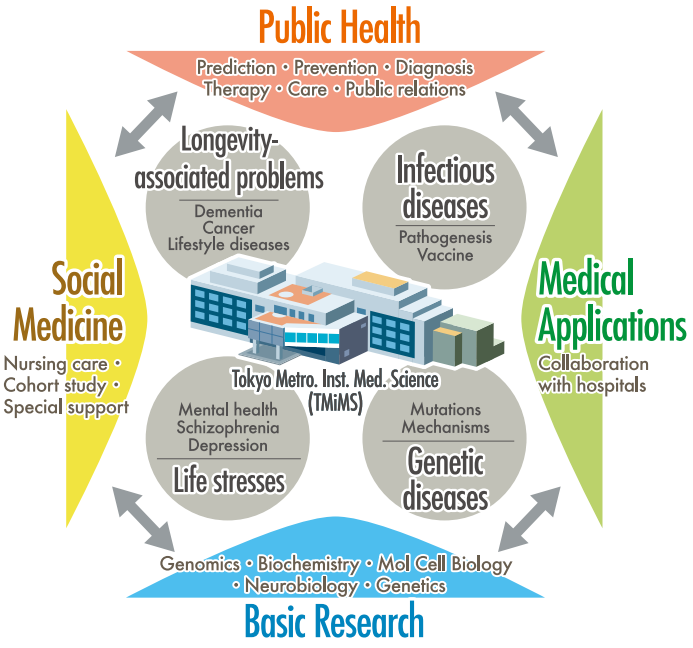


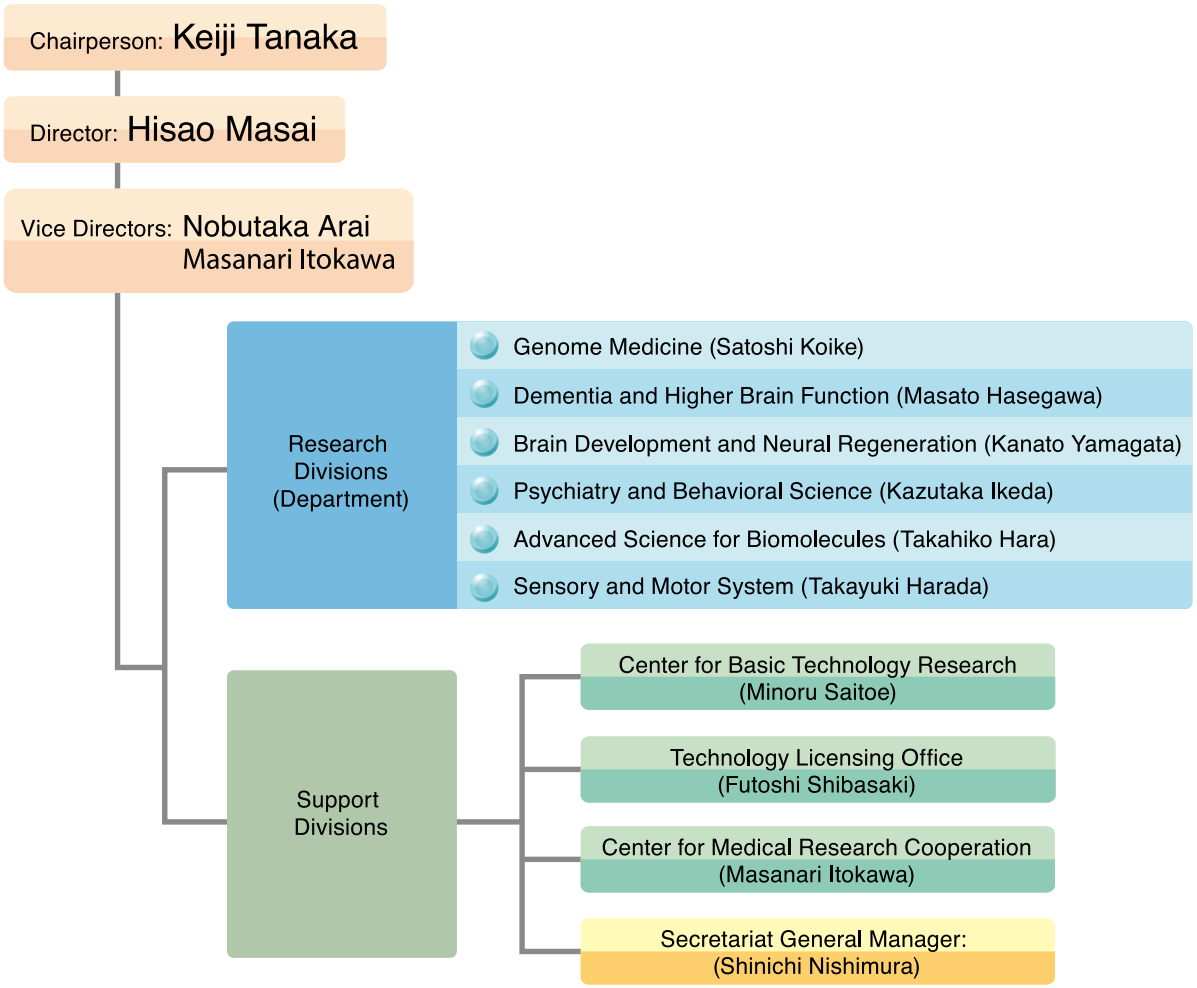
We are also combining sociomedical approaches with molecular and genomic approaches to discover unique and effective treatments for mental disorders. Our institute takes advantage of a multi-disciplinary structure to provide novel solutions to various health-related issues. Located in one of the biggest cities in the world, we hope to be a role model for medical research institutes in the coming decades.

Our Goals

To pursue research that will help prediction, prevention, diagnosis, and treatment of various diseases and improve the care of patients, leading to longer healthy life.

To serve as a leader and model institute for the life/medical science in the coming decades.

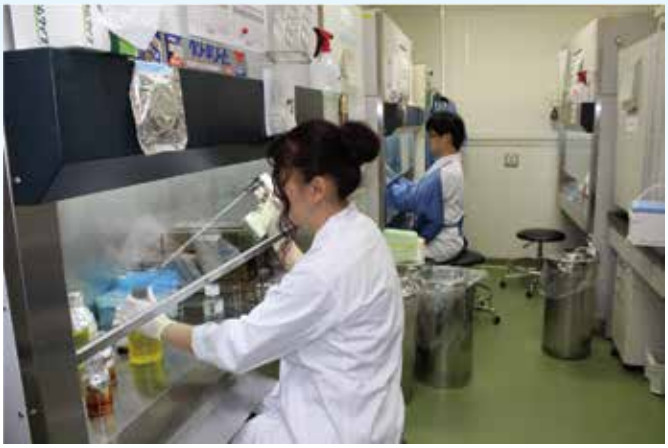
Organizational Chart

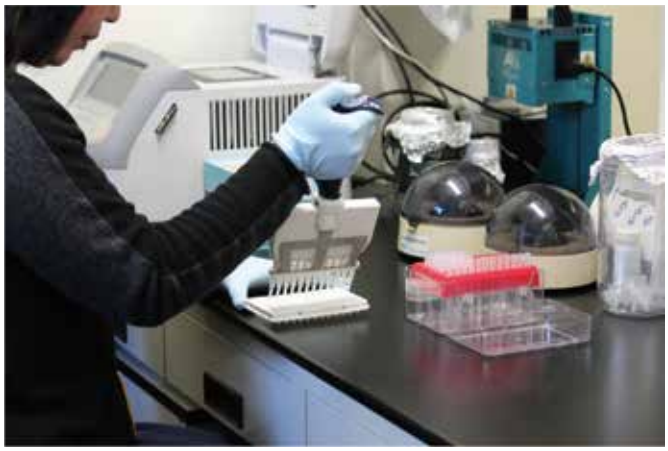


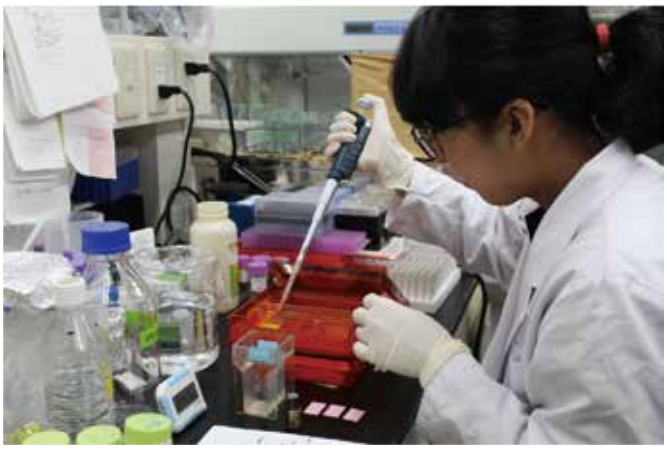
Our People at a Glance

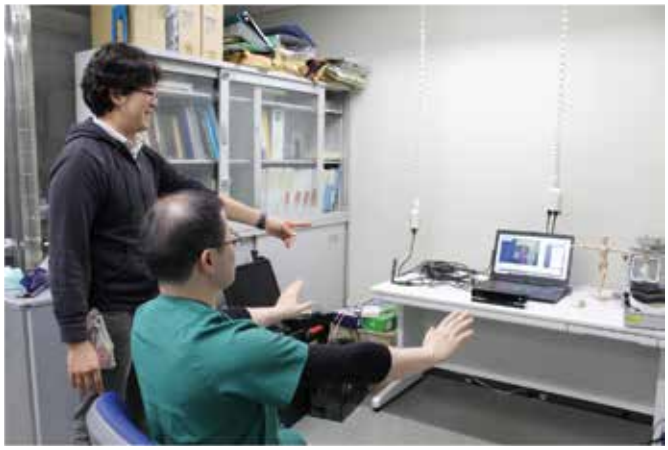
Position	Number
Researchers	157
Postdoctoral Fellows	57
Students	97
Visiting Scientists	145
Guest Scientists	130
Administrative Staffs	29
Total	615

As of October 1, 2018









Research Activities