



**MEXT Doctoral Program for
World-learning Innovative & Smart Education
Innovative Medicine CHIBA
Doctoral WISE Program**

iMeC

WISE



NEWS LETTER Vol.4

iMeC-WISE program

About the iMeC-WISE program

The iMeC-WISE program is characterized by innovative, comprehensive training focusing on close multidisciplinary mentoring by internationally renowned faculty from academia and industry. The program's six specialized fields provide excellent platforms for research and training using a wide range of state-of-the-art technologies in Biomedicine, Medical Engineering, Therapeutics, Drug Discovery, Sustainable Health Sciences, and Medical Informatics. Students must study two of the six specialized fields to acquire highly advanced research abilities and a broader perspective in an international environment.

Advanced General Education



In this class, we regularly have lectures by prominent professors. This is a valuable opportunity to listen to leading experts in their fields, and it is also a great encouragement for us to do our own research.

Kazuma Nakatani

In charge of
Advanced General
Education



One of the most fascinating aspects of being in charge of the Advanced General Education is the opportunity to invite and interact directly with professors whom I respect and admire. Although the invited professors are well-known and their achievements are readily available on the internet, the information and insights gained through face-to-face dialogue cannot be obtained online. It is a privilege of the position to be able to communicate directly with them and gain their perspective from a close standpoint. In particular, being able to hear about the difficulties professors face and their decision-making process in choosing a career has been an invaluable asset for me.

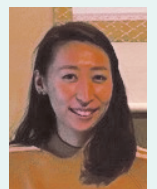
Rotation Training of iMeC-WISE



In this class, each student visited laboratories in his or her field of interest and gained specialized knowledge in each laboratory. There is a wide variety of research being conducted even within the same university, and it is sometimes unexpectedly connected to one's own research.

Kaori Tsuji

In charge of Retreat



This year the 3rd retreat was held with both online and onsite attendees same as a previous year. In the business plan presentations, each team introduced a wide range of topics that focused on not only issues in medical fields, but environmental issues based on their creative ideas thought outside the box. The presentations took the best advantage of each team's strength, which combined research of a specific area with new business possibilities. As a special lecture, Dr. Nishimura from Xcoo Inc. gave us a wonderful presentation about his career and business in the bioinformatics field. In the research presentations, it was encouraging listening to the presentations given by other students working hard in another field. This was a valuable opportunity to develop further in my research through active discussion with professors. Finally, I'd like to express my appreciation and thank to everyone involved in iMeC-WISE program and this retreat.

Retreat



At the retreat, each group gave a business plan presentation in English, and each individual gave a presentation on his or her research.

Practical English



In Practical English, students learned about presentation techniques through conversation and discussion.

Fourth Year Students

A total of 17 students, 6 in the Master's Program and 11 in the Doctoral Program

Master's Program



Daisuke Muto

Chiba Cancer Center
Research Institute,
Laboratory of
Evolutionary Oncology

Mechanism of autophagy activation
by NCYM in cholangiocarcinoma.



Masumi Sano

Department of
Chemical Pharmacology

The involvement of Ceramide Kinase
in the activation of Microglia.



Atsuyuki Ito

Department of chemistry
Graduate school of
Science and Engineering

Cryo-EM based structural analysis of
inhibitor complex of Bile Salt Export
Pump(BSEP).



Tomone Ikai

Division of Molecular
Immunology, Medical
Mycology Resreacch Center

Mechanisms of induction and regulation
of follicular helper T cells by intestinal
microorganisms.



Haruki Sasa

Department of Innovative
Medicine, Graduate
School of Medical and
Pharmaceutical Sciences

Elucidation of mast cell heterogeneity
for the development of food allergy
treatments.



Daichi Mori

Division of Molecular
Immunology, Medical
Mycology Resreacch Center

Mechanism of fucosylation of intestinal
epithelium by *Candida albicans* and its
involvement in inflammatory bowel
disease.

Doctoral Program



**Qiongyuan
Zhang**

Division of Molecular
Immunology, Medical
Mycology Resreacch Center

Characterize the genetic features of
pathogenic and homeostatic Th17
cells to identify the mechanism of
the development of IBD.



**Kyogo
Wagatsuma**

Department of
Artificial Intelligence
Medicine

Analysis of Electronic Medical Records:
Investigating the Interaction between
COVID-19 and Diabetes Using Statistics
and Artificial Intelligence Techniques.



**Joceline
Theda Kadarma**

Department of Plastic,
Reconstructive, and
Aesthetic Surgery, Graduate
School of Medical and
Pharmaceutical Sciences

Developing a new classification method of
keloid based on pathological characteristics
to prevent keloid recurrence.



Yusuke Suzuki

Division of Molecular
Immunology, Medical
Mycology Research Center

Functional analysis of USP10 in RLR-
mediated antiviral immune responses.



Shuhei Iwata

Department of Orthopedic
Surgery

Proteogenomic analysis of bone and
soft tissue tumors.



Tsuguko Tomita

Department of Respiriology
and Department of
Immunology

Internal Diversity of Pulmonary Neuroendocrine
Cells for a New Therapeutic Paradigm in Small
Cell Lung Cancer.



Yu Ikeda

Department of
Emergency Medicine and
Critical Care
Chiba University Hospital

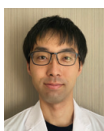
Developing a prediction model of
blood glucose level in critically ill
patients using machine learning.



Zhongwei Zhang

Department of Innovative
Medicine, Graduate School
of Medicine
Future Mucosal Vaccine
Research and Development
Synergy Institute, Chiba
University

Elucidation of the mechanisms of
mucosal protection via multi-organ axis.



Takaki Kitamura

Department of Orthopaedic
Surgery, Graduate School of
Medicine
Chiba University

Estimating the prognosis of neurogenic
lower urinary tract dysfunction (NLUTD)
of cervical spinal cord injury (SCI) using
artificial intelligence (AI).



Kohei Kakinuma

Department of Immunology

Elucidation of the role of the glycoprotein
serglycin in inflammatory lung diseases.



Lineth Mercado

Division of metabolic
physiology, Graduate School
of Medicine

Study the mechanism of beta-cell
mass regulation in pancreatic beta-cell
toward the search for new therapies
for type two diabetes mellitus.



Masahiro Nemoto, Department of Immunology (Medical Science), graduated September 2023



The iMeC-WISE program is well programmed to learn a wide range of knowledge regardless of the specialization. Depending on the sub-major, I studied completely different research methods, and the classes also contained cutting-edge talks on history, humanities, engineering, etc. Also, there were highly flexible programs and assignments, which required more from the students, but the financial support in completing those gave a big support and a truly fulfilling time. I would like to thank everyone who created and maintained such a great program and supported us.

Keishi Etori, Department of Allergy and clinical immunology (Medical Science), graduated March 2024



I think the biggest advantage of this graduate program is that students have many opportunities to learn about research being conducted in other laboratories in Japan and abroad, and are exposed to a wide range of fields through this program. I think this program is suitable for students who are even slightly interested in expanding overseas in their future careers.

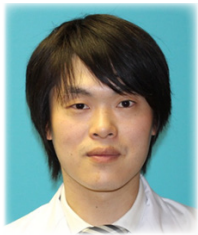
Finally, I would like to thank all the professors and graduate school staff for their guidance during my graduate studies.

Takahisa Hishiya, Department of Orthopedics (Medical Science), graduated March 2024



Through lectures and practical training covering various fields, I gained valuable knowledge beyond the field of medicine. One experience that left a lasting impression on me was the practical training session focused on developing a business plan for rehabilitation using Virtual Reality (VR), as well as visiting a company utilizing VR technology in the medical field. The guidance and support from my mentors, the iMeC-WISE program staff, and my colleagues were invaluable throughout my journey. I express my sincere gratitude to everyone of them. Moreover, the iMeC-WISE program provided me with numerous opportunities for meaningful encounters, which I consider to be a priceless asset.

Atsushi Sasaki, Department of Respiriology (Medical Science), graduated March 2024



I have been working on research in the Department of Immunology while belonging to the Department of Respiriology. It was a valuable experience for me to conduct research in other fields while collaborating with other students. It has been an immensely stimulating four years for me because the students of the iMeC-WISE Program are excellent. I want to take this opportunity to thank all the professors, academic staff, and program directors involved in completing the program.

Takamasa Ishino, Department of Gastroenterology (Medical Science), graduated March 2024



I entered the iMeC-WISE program as a first-year student after working as a gastroenterologist for 4 years. I could understand the significance of research in society by learning from multiple perspectives in addition to working on my own research project. Thanks to the iMeC-WISE program, I was able to study abroad in Okayama and engage in various research projects with many other institutions. Although it was not easy, I feel that I was able to spend meaningful days. I would like to express my sincere gratitude to all the professors, academic staffs, and family members involved in my completing the program.

Shodai Suzuki, Department of Biochemistry (Pharmaceutical Sciences), graduated March 2024



During my four years in iMeC-WISE program, I have experienced numerous valuable activities. Engaging in activities such as planning the special lectures and studying in a sub-major has allowed me to participate in discussions with professors and students from diverse backgrounds, beyond the fields of medicine and pharmacy. This not only contributed to building a network of researchers but also made me realize the importance and excitement of conducting research with a multidimensional perspective. While research posed various challenges, this program enabled me to develop the resilience from failures and find joy in challenging difficulties. I believe that these experiences will serve as significant assets in my future career as a researcher. I'd like to thank professors, students, and administrative staff who have supported me throughout this journey.