

Innovative Medicine CHIBA Doctoral WISE Program

NEWSLETTER Vol.5

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# iMeC-WISE Program WISE

This program aims to nurture outstanding "knowledge professionals" responsible for creating innovative medicine. It is a new six-year graduate education program combining master's programs with a four-year doctoral program in advanced medical and pharmaceutical sciences. As innovators in medical advancement, this program cultivates students' advanced expertise, broad perspective, originality, and spirit of challenge through the cluster-based CHIBA educational system and a specialized curriculum designed beyond existing frameworks to create new medical knowledge and contribute to social implementation.

Advanced General Education



Prominent professors from various research fields are invited to give lectures, providing students with a valuable opportunity to broaden their perspectives

# **Rotation Training**



Visit multiple laboratories for several days to acquire cutting-edge technology and knowledge, which can be applied to research

# Retreat



Each group will present their English business plan in English, followed by an opportunity to hear from real entrepreneurs

# Tsuguko Tomita In charge of Retreat



Each team presented a variety of business plans, with particularly creative plans utilizing AI standing out. The instructors provided valuable feedback on each plan, offering a precious opportunity to deepen our practical perspectives. Additionally, this year, we were honored to have Mr. Sakuraba from Varinos Inc. give a special lecture, where he shared his entrepreneurial experiences and real-life examples. His lecture offered valuable insights into the importance of implementing research outcomes in society and the significance of social contributions through entrepreneurship. I would like to express my sincere gratitude to everyone involved in organizing this retreat.

# Practical English



Students can develop their presentation and conversation skills by presenting their own research in English.

# Kyogo Wagatsuma In charge of Advanced General Education



Through the organization of the advanced liberal arts lectures, it was very attractive to invite prominent professors in my field of interest. In addition, the lectures made it easier to interact with people in other fields by visiting their laboratories, which gave me the opportunity to expand my interests. Moreover, cooperating with a colleague to plan the lectures also provided me with new interests. In this era, when there is so much change and the importance of having a unique perspective through a wide variety of experiences is increasing, it was a valuable opportunity for me to hear directly from the professors about the insights they have cultivated throughout their careers.



# 5<sup>th</sup> year students







Shogo Yasuda Combined Master's and Doctoral Programs Department of Design and Drug Disposition Analysis of factors affecting Immunogenic cell death induced by Photothermal

Yasuhiro Igarashi

Combined Master's and **Doctoral Programs** 

Biostructural Chemistry

A novel antibody for high-resolution structure of P-

Department of

qp

therapy





#### Ayahito Kaneki

Combined Master's and Doctoral Programs Department of Pharmaceutical Chemistry Development of samarium-catalyzed reduction reactions using visible-light-antenna ligand

Tomohiro Isono Combined Master's and Doctoral Programs Department of Pharmaceutical Chemistry Development of metalcatalyzed regioselective C-⊢ functionalization of Indoles



Shigenori Baba Combined Master's and Doctoral Programs Department of Immunolog Cell-cell interaction analysis of TRM cells in tertiary lymphoid tissues



Nanako Yasujima Combined Master's and Doctoral Programs Department of Experimental Immunology Elucidating the role of CD69 on regulatory T cells in tissue and immune homeostasis



#### Yuki Ikematsu

Combined Master's and Doctoral Programs Department of Pharmacology Interaction and transport of dicarboxylates on renal tubular organic anion transporters (OATs)



#### BOYRAZ Direncan

Doctoral Programs Department of Experimental Immunology Study of the mechanisms of maintenance and differentiation of stem-like CD8 T cells in the tumor microenvironment



Doctoral Programs Department of Medical Immunology Development of a novel iPS-NKT cell therapy for malignant tumor



LIU YIJING **Doctoral Programs** Department of Innovative **Regenerative Medicine** Establishment of a novel 3D model to study atherosclerosis using human iPSC-derived immortalized cells



Saori Kami Doctoral Programs Department of Endocrinology, Hematology and Gerontology Clarification of the pathology of adrenal cortex tumors



LU JINGYU **Doctoral Programs** Department of Biochemistry Mechanism of Glioblastoma (GBM) cells multinucleation and drug resistance regulated by

E3 ubiquitin ligase MIB1



#### Takahiro Arano

Doctoral Programs Department of Respirology Mechanisms Regulating the Proliferation and Differentiation of Bronchoalveolar Stem Cells



#### Kohei Kusakari

Doctoral Programs Department of Immunology Functional analysis of pulmonary neuroendocrine cells in type 2 inflammation

#### Akihiro Kawai

Doctoral Programs Department of Ophthalmology Retinal circuit repair of the primate retinal fovea after transplantation of stem cell-derived retinal sheet



#### CHONGJIE ZHANG

Doctoral Programs Department of Design and **Drug Disposition** Development of mRNA enzyme nanomedicine to control tumor microenvironment and treatment of refractory peritoneal dissemination





# PhD graduates





#### Yuta Kaizuka, graduated September 2024

I spent four and a half years in the iMeC-WISE program and focused on pharmacokinetics as my main major and electron microscopy as my sub-major. Learning different research approaches in pharmacy and medicine gave me a multifaceted perspective on complex problems. In addition, the students' enthusiasm for research was inspiring, and they were always willing to collaborate and discuss research ideas. I value these connections and wish to maintain them after graduation. Lastly, I sincerely thank the professors and program staff who supported my research.



I specialized in software engineering and joined the iMeC-WISE program with the goal of solving challenges in the medical field through technology. The program provided valuable opportunities to experience various research settings. Additionally, visiting NVIDIA headquarters in the U.S. and learning about the latest machine learning AI technologies using GPUs greatly benefited my research. I sincerely appreciate the support of the professors and graduate school staff who made these experiences possible.



# Yuki Hayashi, graduated March 2025

For the last four years I have been engaged in immunology basic research while performing clinical work in allergic and collagen diseases. And I sometimes hit numerous barriers in my research, but this program helped me to gain many insights into my research from a broad perspective through visits to other laboratories, sub-majors, and the holding of iMeC-WISE Retreat. Finally, I would like to appreciate all the professors, academic staff, and program directors involved in this program for their support.



# Kiwamu Motoyoshi, graduated March 2025

Through the activities and programs of the iMec-WISE, I have had the opportunity to access a wide range of fields. In particular, the special lectures in the program were attractive because being able to make contacts with professors who are active not only in the field of medicine and pharmacy but also in the front lines of Chiba University and other universities. I believe that the program will become even more valuable as the number of students increases and a wider range of communication becomes possible.



# Masaki Yoshioka, graduated March 2025

The students participating in the iMeC-WISE Program are highly motivated, and it was a valuable experience for me to make connections with them through classes, practical training, and social gatherings. One of the advantages of this program was that I had opportunities to communicate with researchers in other fields, which helped me develop a more flexible mindset. I was also able to experience the bridge between research and business through this program. I would like to continue to work hard on my research based on what I have learned from this program.

### Kazuma Nakatani, graduated March 2025



I had the privilege of being part of this program for five years, starting from my first year as a master's student, and I gained many invaluable experiences during that time. In particular, presenting at overseas conferences was an extremely beneficial experience for me. I was able to directly observe global research trends and was greatly inspired by the differences I saw compared to Japan. Above all, the fact that presenting at overseas conferences led to my connection with a postdoctoral lab was a significant event for me. I am deeply grateful to the professors in charge of the iMeC WISE Program, the administrative staff, and program's students. Thank you very much.



### Norie Suzuki, graduated March 2025

During my five years as a member of the first cohort in the integrated Master's and Doctoral program, I gained valuable experiences. The program allowed me to interact with faculty and students from various fields, broadening my perspective. I discovered that despite different approaches, common elements exist across disciplines, which expanded the scope of my research. I am deeply grateful to the faculty for their guidance and to the graduate school staff for their support throughout these years.



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