



博士課程教育リーディングプログラム
免疫システム調節治療学推進リーダー養成プログラム

NEWS LETTER



Nurture of Creative Research Leaders
in Immune System
Regulation and Innovative Therapeutics

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Boehringer Ingelheim Partnering Event Japan

Mariko Morii, First Year Member,
Department of Molecular Cell Biology

Takuya Honda, First Year Member,
Department of Molecular Cell Biology

We participated in Boehringer Ingelheim (BI) Partnering Event Japan in November 14th, 2013. In the event, each Participant from BI, ventures and venture capitals gave presentations and discussed with each other the subject of the purpose of business collaboration.

The topics of panel discussion were two. First, what development stage is appropriate for collaboration between venture capital businesses and large pharmaceutical companies. Second, the capital recovery period which venture capital expect is too short for venture's business plan. These presentations and discussions were very interesting for us and gave us a new perspective.

We were glad to talk with other Participants in the reception.

Leading Forum 2013

Yuki Morimoto, First Year Member, Department of Otorhinolaryngology, Head and Neck Surgery

- I participated in the Leading Forum 2013 which was held in Osaka on the 10th and 11th of January 2014. I
- was particularly involved with the Students Forum "Next Visionary."
- There were five themes at the tournament: [1] New Devices [2] Sustainability of Resources of the
- Infrastructure [3] Social Inequality - Health Issues [4] Overcoming Social Inequality [5] Japan and/or Global,
- Now and Future. Judging was based upon (1) originality, (2) ambitiousness, (3) impact, (4) logicity and (5)
- presentation skills, in the first, second and finalrounds.
- I had a strong desire to pursue new ideas that break the status quo. I then formed a team with the students
- from the other Leading Graduate Schools. Our team was comprised of four members: Ms Rieko Tsuji from
- Tokyo Institute of Technology who is studying Electric Wave Communication of the Electronic Equipment, Mr
- Tatsuyuki Matsudaira from University of Tokyo who is studying Internal Material Transportation, Mr Yu
- Fukusato from University of Tokyo who is studying New Medical Devices, and me. I am involved with Clinical
- Medicine research. We named our team "TOCO" which is an acronym taken from the two letters of each of
- the words "Total Coordinate," which meant that we sought to answer the questions with contributions from
- each of our respective specialities.
- Our team aimed at a solution for the soaring medical expenses. We suggested establishing a venture capital
- company that would create a system to improve the diet of the people.
- To summarize we presented a sustainable dietary modification
- system that was patterned after a game. Our scheme was to
- reduce medical expenses by advocating lifestyle diseases in
- patients. A user would wear a calorie measurement device
- with an advertising display function for 24 hours, and if the
- user's calorie ingestion was within the recommended range,
- any advertising revenue would be returned to the user.
- I was able to understand the significance of discussing with
- persons from other fields and to know how to charm audiences
- with my presentation style, and also in order to realize my
- long-term goals I will continue to reflect upon what I can do and
- what I must do now.



Contact	 CHIBA UNIVERSITY	Leading Graduate School at Chiba University TEL.+81-43-226-2817 FAX.+81-43-226-2005 E-mail: lgs-jimu@chiba-u.jp URL: http://www.isrit-igp-chiba.jp 1-8-1 Inohana Chuo-ku Chiba-city, Chiba 260-8670 JAPAN
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National Institutes of Health (NIH) visit report (10/23/2013 - 11/22/2013)

Sarkar Md Murshed Hasan, First Year Member, Department of Immunology

This report is based on my first visit to National Institutes of Health (NIH), Bethesda, Maryland, USA as an NIH special volunteer.

Dr. Jinfang Zhu, chief of the Molecular & Cellular Immunoregulation Unit, the Laboratory of Immunology, the National Institute of Allergy and Infectious Diseases organized the visit, which included observing, learning and supporting their experiments of effector T cell differentiation in vitro and in vivo.

During the visit, I joined five weekly seminars and meetings, which included three laboratories (Dr. William Paul, Dr. Ethan Shevach and Dr. Zhu)-combined data seminars and journal discussion meetings, Laboratory of Immunology and Laboratory of Systems Biology-combined data seminar, Immunology Interest Group seminar and NIH Wednesday Afternoon Lecture. In addition to learning more about research, I also joined NIH Research Festival from the 6th to 8th of November, 2013. I experienced a special lecture from Randy W. Schekman Nobel Laureates in Physiology or Medicine 2013.

NIH visit provided me the opportunity to enhance my research skills and also encourage me to advance my knowledge. It will help me to work in a highly collaborative research environment with leading scientists and clinicians.



National Institutes of Health

WHO- BSPH Training Report

Kenichi Sakamoto, First Year Member,
Department of Clinical Cell Biology and Medicine

Togo Iwahana, First Year Member,
Department of Cardiovascular Medicine

Takuya Honda, First Year Member,
Department of Molecular Cell Biology

Mariko Morii, First Year Member,
Department of Molecular Cell Biology

Through these training programs at the World Health Organization (WHO) in Geneva and at the Berlin School of Public Health (BSPH), Charité in Berlin, I recognized that recently the WHO and public health began to regard non-communicable diseases (NCDs) as a very important issue in association with the epidemic of obesity and diabetes even in developing countries.

It was very exciting that I could touch on the discussion about global preventive medicine by specialist of medicine, public health, and sociology.



World Health Organization

2014 Course Orientation

On the 11th of April, 2014, Course Orientation for the newly enrolled students to the Program 'Nurture of Creative Research Leaders in Immune System and Innovative Therapeutics' for the academic year 2014 was held in the School of Medicine Large Conference Room located on the second floor in the main building. Students of the 2013 and 2014 classes; Program Coordinator Dr Toshinori Nakayama; Program Sub-coordinator Dr Tetsuichiro Saito; Chairman of the Admissions Selection Committee Dr Takashi Miki; Board of the Admissions Selection Committee Dr Toshihiko Murayama; Chairman of the Public Affairs Committee Dr Yutaka Tamura, and other faculty staff attended this course orientation.

The course orientation started with an address by Dr Nakayama, and each of the new students was presented with a certificate of having passed the entrance examination.

The details of the curriculum were then explained to the students.

Then the staff and students were introduced individually, and there were presentations by three students of the class of 2013, with Yuki Morimoto in the chair: Kenichi Sakamoto talked about the training program at the Berlin School of Public Health (BSPH), Charité University; Takuya Honda talked about the training program at the World Health Organization (WHO); Sarkar Hasan talked about his internship at the National Institute of Health (NIH).

This first day must have been full of satisfaction to the new students.



The 3rd Chiba-Uppsala Academia Joint Workshop

Koo Nagasawa, First Year Member, Department of Pediatrics

I participated in the 3rd Chiba-Uppsala Academia Joint Workshop which was held on 20th and 21st of February 2014. I had the opportunity to give a presentation about our research, "Involvement of respiratory tract microflora in host immune responses after respiratory syncytial virus (RSV) infections". We will recruit infants who need hospitalization due to RSV infections. We will then divide them into two groups, treating one group with antibiotics but not the other group. After that we will compare nasopharyngeal microflora and host immune response to RSV in the two groups. I was questioned about something that affects microflora in infants. I answered that eating affects microflora. However, I realized that vaccines also affected microflora. That question made me realize important things to our study.

Through this experience, I found that making a presentation in English was very difficult. On the other hand, the fact that many experts showed interest in our research and have many questions made me motivated.





Hiroki Sonehara

<Affiliation>
Department of
Reproductive Medicine

●Theme

Molecular Genetic analysis of Germ Cell Tumor of the Ovary

●Goal

Goal of my study and training course of Leading Graduate School at Chiba University is to get the knowledge about newly developing therapeutics for dealing with accumulating data of Human genomics and deriving personalized medicine as well as necessary skills about obstetrics and gynecology.

●Message

I hope to maximize the chances of learning from great mentors at Leading Graduate School and produce good result of my study.



Takeshi Yamamoto

<Affiliation>
Department of
Pediatrics

●Theme

The expressions and those change of Complement receptors of naïve T cells and basophils of food allergy patients.

●Goal

Today, there are a huge number of children with allergic diseases. However, there are not many translational researches so much in the field of pediatric allergy and clinical immunology. So, I aim at the breakthrough, and I hope my research findings into providing better care of children with allergic diseases.

●Message

I make use of having learned in LGS and want to play an active part in the world. Then, I contribute to the development of Japanese pediatric care, especially in allergology and immunology.



Eri Komai

<Affiliation>
Department of
Clinical Cell Biology
and Medicine

●Theme

Investigation of the cross talk mechanisms of epigenetics & transcriptional factor network with focusing p53 and GATA3

●Goal & Message

I would like to elucidate the mechanistic insight of aging and inflammation, and hope my research findings will be applied to the novel therapeutic targets for metabolic disease.



Risa Yamazaki

<Affiliation>
Laboratory of
Chemical Pharmacology

●Theme

Clarification of cellular signaling in pulmonary fibrosis.

●Goal

I think basic research is essential for finding critical targets of diseases including pulmonary fibrosis. I hope my work will help the development of new therapy for fibrosis. I also want to improve my English conversation skill in order to cooperate with other foreign researchers.

●Message

I'm appreciate to have such a opportunity and to learn with other MD and PhD students from various fields. Everything in this program is new and exciting to me.



Shintaro Ide

<Affiliation>
Department of
Clinical Cell Biology
and Medicine

●Theme

Investigation of the roles of a transcription factor Tcf21 in diabetes nephropathy.

●Goal

Although there has been large improvements in management of blood glucose, how to control complications is still a big question. By making a big progress in this field, I would like to become a great Physician-scientist who are making a progress all over the world.

●Message

I am confident that Learning Graduate School program will expand the possibilities for my career pass as a doctor,



Tetsuya Kanai

<Affiliation>
Department of
Neurology

●Theme

Reconstruction of immunotherapy for Myasthenia gravis

●Goal

Some reports showed EAMG model rats had functional defects of regulatory T cells and increasing of IL-17. We hypothesized anti-IL17-antibody makes EAMG model rat get better by maintaining the equilibrium Treg and Th17 cells.

●Message

Talented colleagues and senior staffs strike me, so I will study hard to break through a new treatment of Myasthenia Gravis.



Aiko Saku

<Affiliation>
Department of
Allergy and Clinical
Immunology

●Theme

The number of peripheral CXCR4+ CD4+ T cells is regulated in a IL-6 dependant manner and relates to the efficacy to Tocilizumab(TCZ) treatment in rheumatoid arthritis(RA).

●Goal

The purpose of this study is that first is to address whether the number of CXCR4+ CD4+ T cells is used as a biomarker of TCZ-responder in RA patients and second is to determine the mechanisms of CXCR4 in human peripheral CD4+ T cells.

●Message

I have being able to have exchanges with people in various fields, then I am inspired everyday.



Tomohide Tamachi

<Affiliation>
Department of
Frontier Surgery

●Theme

I'm not decided yet, but I'm interested in molecular characteristics of cancer cells.

●Goal

I'd like to understand the mechanism of metastasis and surrounding environment. Those researches will contribute to inhibit metastasis of cancer or develop new drug delivery system.

●Message

I have a research experience only in engineering field, so your advice will help me a lot. Thank you.



Eishika Dissanayake

<Affiliation>
Department of
Pediatrics

●Theme

The prevalence of childhood allergic diseases is on the rise. There is increasing evidence that environmental factors exposed to during pregnancy and the early neonatal period deeply influence the susceptibility to allergic diseases.

●Goal

To understand how environmental factors including the maternal cytokine milieu, intestinal microbiota and immunoactive substances in breast milk affect the development of allergic diseases.

●Message

This study will contribute to the understanding of the origins of allergic diseases and thus their possible prevention.



Seitaro Nakagawa

<Affiliation>
Department of
Dermatology

●Theme

Difference of NETosis between ANCA positive and negative vasculitis

●Goal

When neutrophils meets microbes, they emit DNA containing net to trap various pathogens. It is called Neutrophil extracellular traps; NETs. Recently, NETs have been reported to play pathogenic role in autoimmune diseases, because autoantigens like nucleic acid constituent are exploded to immune system. Anti-neutrophil cytoplasmic antibody (ANCA) positive vasculitis is also suggested to be concerned with NETs. We will analyze the difference of ANCA positive and negative vasculitis.

●Message

I have lots of things I want to challenge. It is a huge chance for me to join LGS program. I want to do good researches which will benefit many patients.



Yuki Yoshi Mita

<Affiliation>
Department of
Otorhinolaryngology,
Head and Neck Surgery

●Theme

Development of new treatments for allergic diseases

●Goal

I am right now working in Fukushima (far away from Chiba) as an otorhinolaryngologist. I'm hoping to gain experiences here that would be useful for my future research.

●Message

In this program, people from different fields, specialties, countries are gathered as one. I'm willing to improve ourselves through friendly rivalry, and to do my best to dispatch researches that would lead not only Japan, but also the world.



Huizi Li

<Affiliation>
Department of
Radiotherapy

●Theme

Advanced high LET external and internal radiation therapy: Towards to personalized medicine against cancer

●Goal

Although local tumor control has improved with external radiotherapy, the control of metastatic cancer, which has large affect patient's prognosis, is still not enough. My research is aiming to provide better therapeutic technology from basic study investigating the radiological mechanism.

●Message

If you aim high, then broaden your horizons. With the favorable study environment provided in this program, you can do it.



Miaki Uzu

<Affiliation>
Department of
Geriatric Pharmacology
and Therapeutics

●Theme

To improve anti-cancer effect of sunitinib by modulating expression of connexin in cancer cells.

●Goal

Connexin is a component of intercellular channel and known as a tumor suppressor. I will investigate whether connexin enhances anti-cancer effect of sunitinib and reveal its mechanism.

●Message

I'd like to learn a clinical perspective through this leading graduate school program and conduct my research with it. I'm looking forward to working with you.



Naofumi Seira

<Affiliation>
Laboratory of
Chemical Pharmacology

●Theme

The effects of hypoxia inducible factor-1 α on EP4 prostanoind receptor expression in human colon cancer HCA-7 cells

●Goal

I'd like to be the top level researcher of the world.

●Message

This program will give me an opportunity to communicate with people having different research backgrounds and to learn the latest studies and techniques. I'd like to be a world-widely needed researcher by taking advantage of the experiences learned from this program.