



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

NEWS LETTER



number **4**
2015 summer





1st LGS Winter Camp

Yuki Morimoto, Class of 2016
Department of Otorhinolaryngology

We held the "1st LGS Winter Camp" in Kazusa Akademia Park, Chiba, from February 14th to 15th, 2015. This was our first attempt to hold such an event, and it included 1) students' presentation of creative business models, and 2) lectures by invited speakers from foreign countries. This year's presentation theme was "Novel strategies against infectious diseases in 2050." Five teams of 5 had engaged in energetic debate to prepare solid plans since the autumn of 2014.

On the first day, each team presented their strategic plan, and then improved it based on the discussion following the presentation.

On the next day, all teams presented their revised plans. The best strategy was selected by a vote in consideration of originality, feasibility, and sustainability.

Although all teams worked out elaborate and innovative plans, "Team MKYNM", which suggested the infection control precaution using the eyewear system to visualize strong pathogens, won first prize.

Away from the routine research lives, we could discuss more deeply about the therapeutics of the medical and pharmaceutical fields in a relaxed setting. We also talked about our future dreams and images we held of global leaders. The camp gave us the opportunity to strengthen the tie among students of this program. I believe our program continues evolving to offer such events and prospects.



LEADING GRADUATE SCHOOL AT CHIBA UNIVERSITY

10 Leaders
Chiba University

February 14-15, 2015
Kazusa Akademia Hall 201A

1st LGS Winter Camp

PROGRAM

Saturday, February 14, 2015

13:00-13:30 Registration MC: Yutaka Tamura

13:30-13:35 **Opening Remarks** MC: Yutaka Tamura
Takashi Tokuhisa (President, Chiba University)

13:35-14:00 **Outline of Leading Graduate School Program** MC: Yutaka Tamura
Toshinori Nakayama (Program Coordinator, Leading Graduate School, Chiba University, Department of Immunology, Graduate School of Medicine, Chiba University)

14:00-16:00 **Session 1: Provisional Presentation** MC: Yuki Morimoto
14:00-16:05 Leading Graduate School Students
Provisional Presentation (English) (15 min Presentation, 10 min Discussion) x 5 teams

16:05-16:20 Coffee Break

16:20-17:00 **Session 2: Lecture & Discussion** MC: Yutaka Tamura
16:20-17:00 Makio Iwashima (International Advisory Board, Leading Graduate School, Chiba University, Van Kampen Cardiovascular Research Laboratory, Loyola University Chicago, Stritch School of Medicine)

17:00-17:50 **Session 3: Progress Presentation** MC: Yuki Morimoto
17:00-17:50 Leading Graduate School Students
Shunpei Satoh (Department of Immunology) "Cross-Interactive Meeting"
Mariko Mori (Department of Biologic Cell Biology, Kumamoto General Hospital & Univ. Kumamoto)
Toshiyuki Iwama (Department of Cardiovascular Medicine, "WIND" Internship)
Hiroki Iji (Department of Radiotherapy, "TRIVEN Summer Program")
Koji Nagasawa (Department of Pediatrics, "California Internship")

17:50-18:10 **Session 4: Presentation & Discussion** MC: Yutaka Tamura
17:50-18:10 Gene Lay (DVM, Founder, President and CEO BioLegend)

18:10-19:00 Check-in (Chiba Akademia Park Hotel)

19:30-20:30 Dinner (Chiba Akademia Park Hotel)

20:30-21:30 Discussion Meeting (Chiba Akademia Park Hotel)

Sunday, February 15, 2015

9:00-10:00 **Session 5: Group Discussion** MC: Yuki Morimoto
9:00-10:00 Leading Graduate School Students

10:30-11:15 Coffee Break

10:30-11:15 **Session 6: Final Presentation** MC: Yuki Morimoto
10:30-11:15 Leading Graduate School Students (Final Year Members)
Final Presentation (English) (10 min Presentation x 5 teams)

11:00-11:10 **Closing Remarks** MC: Yutaka Tamura
11:00-11:10 Haruki Nakaya (Executive Program Officer, Leading Graduate School, Chiba University, Vice President, Chiba University)

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Research presentation

Chairman of the Admissions and Curriculum Committee
of the Leading Graduate School
Takashi Miki, MD, PhD

The 'Qualifying Examination' for the Leading Graduate School students at Chiba University takes place for promotion to the third year of our Program entitled "Nurturing of Creative Research Leaders in Immune System Regulation and Innovative Therapeutics." Promotion depends on three evaluative criteria: (1) Score of AA for English language proficiency, (2) Research presentation in English (3) Group presentation in English on a mock business plan.

On March 4th and 5th, 2015, the second of these took place in the School of Medicine. Because the content of the research is confidential, the presentations were not open to the public. Fourteen first-year students gave the presentation of their research results in English, and three boards of examiners assessed their presentations in detail using the following five criteria:

- A. Research Theme / Research Plan / Summary of Execution
- B. Research Results
- C. Preparation for, and Delivery of, the Presentation
- D. Question and Answer Session
- E. Language Evaluation

All of the fourteen students received a grade high enough to exceed the pass mark of 60%.



RaQualia Pharma Inc. Internship

Maiki Uzu, Class of 2017
Department of Clinical Pharmacology and Pharmacometrics

I participated in RaQualia Pharma Inc. Internship program in February 2015. RaQualia Pharma Inc. is a venture company founded in 2008, which specializes in early development of drugs.

In this program, we determined the indication for a compound that Raqualia Pharma Inc. is currently developing and created an initial development plan to obtain Proof of Concept (POC). Although I had already studied drug development procedures in lectures at university, I learned a lot through discussion with RaQualia Pharma Inc. staff. For example, I thought that clinical trials are conducted after all pre-clinical tests are done. But in reality, there are two types of pre-clinical tests: one that must be completed before clinical trials, and the other performed in parallel with clinical trials. Therefore, it was difficult for me to arrange the time schedule for pre-clinical tests.

Also, I learned how to decide the criteria of the first dose or of the interval of the dose increase in the first-in-human test. All of this information was really informative and was not taught in on-campus lectures.

We held a series of discussions over target and control populations, and required results to obtain POC in order to make a presentation on the final day. We had a very hard but precious experience through this internship.



An introductory meeting with the class of 2018

Huizi Keiko Li
Class of 2017

The orientation program for the class of 2018, "Nurture of Creative Research Leaders in Immune System Regulation and Innovative Therapeutics," was held in the Large Conference Room of the School of Medicine on April 11th, 2015. The program coordinators, committee members and other faculty staff welcomed 12 newly enrolled students.

Our program sub-coordinator, Dr. Tetsuichiro Saito gave the opening remarks and the curriculum guidance. Dr. Yutaka Tamura then provided a detailed introduction of course subjects. Dr. Ryoji Yagi followed with an explanation of the RIKEN summer program. After awarding each new member with a Passing Certificate, a white lab coat and a personal computer, Dr. Toshinori Nakayama announced the Students of the Year from the class of 2016: Ms. Mariko Morii and Mr. Yuki Morimoto.

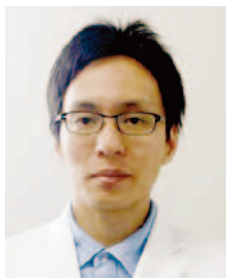
Part II of the orientation was the LGS student meeting. The class of 2017 organized this year's meeting, and I was honored to be a facilitator.

Five volunteer students from the classes of 2016 and 2017 gave presentations on the following programs:

- 1) La Jolla USA training
Yuki Haga (Class of 2016)
- 2) WHO-Charite training
Risa Yamazaki (Class of 2017)
- 3) RaQualia training
Naofumi Seira (Class of 2017)
- 4) Winter camp
Takeshi Yamamoto (Class of 2017)
- 5) Cross interactive meeting (CIM)
Shunpei Satoh (Class of 2016)

After all LGS students gave self-introductions, we had a question and answer session among students. It was a very short time but meaningful time to get to know each other.





Masanori Fujimoto

<Affiliation>
Department of
Clinical Cell Biology
and Medicine

●Theme

Exploration and functional analysis of p53 related linc-RNA on iPS/ES cells.

●Goal

To complete a novel and interesting work through graduate course is my goal. Without forgetting to think about what I can do as a MD-PhD scientist, I want to challenge a subject, which can lead to a novel treatment in the future.

●Message

In this program, we can listen to precious cutting-edge stories from talented scientists and learn from precious experience. By utilizing these opportunities, I'll do my best for my carrier as a researcher.



Ola Mohammed
Kamel RIZQ

<Affiliation>
Department of
Cellular and
Molecular Medicine

●Theme

New targets for the treatment of multiple myeloma (MM).

●Goal

Multiple myeloma is an incurable hematologic malignancy. I hope my current research could provide the rationale for novel treatment strategies to improve patient outcome in MM.

●Message

Joining LGS is a great opportunity to learn and conduct research with some of the finest graduate students in Japan and the world.



Hiroyuki Amagai

<Affiliation>
Department of
Frontier surgery

●Theme

The acquisition of the operation maneuver and the knowledge.

●Goal

I am working as a general surgery. I would like to acquire the operation maneuver and the knowledge that would be useful for my future research.

●Message

In this program, I would like to enjoy cultural and educational exchange with people in various fields.



Tomoyuki Ishigami

<Affiliation>
Department of
Medicine and Clinical
Oncology

●Theme

No definitive project determined yet.

●Goal

I want to do the basic research to improve clinical practice.

●Message

Leading program is a good opportunity to improve myself. So I will do my best.



Ryouhei Otani

<Affiliation>
Department of
Neurology

●Theme

Elucidation of new molecular networks in neuroimmunologic disorders based on micro-RNA expression profile

●Goal

I hope that my research will be a key to understand the complex immune response in neuroimmunologic disorders including multiple sclerosis, and thus it would help in the treatment of these diseases.

●Message

I will cherish simple questions and awareness in daily practice to relate to my research.



Toshio Kanno

<Affiliation>
Department of
Immunology

●Theme

Association between immune responses and cell metabolism in CD4⁺ T cells

●Goal

I think enhancement of the basic research is important for high quality medical care. I would like to be an open-minded researcher and to contribute to improvement of healthcare.

●Message

I have been communicating with researchers from a variety of fields and spending a great time in this program. I would like to make further efforts to acquire knowledge and the way of thinking from them.



Jin Kumagai

<Affiliation>
Department of
Clinical Cell Biology
and Medicine

●Theme

Investigation of the role of CXCL12 in adipose tissue

●Goal

I'd like to disclose the relationship between brown adipose tissue and CXCL12, so that I can contribute to the therapy of diabetes mellitus.

●Message

I'd like to take advantage of my opportunities, and make my research life satisfying with my colleagues.



Takuya Nakagawa

<Affiliation>
Department of
Otorhinolaryngology
-Head and Neck Surgery

●Theme

Epigenetic
Mechanisms of HPV
Associated
Oropharyngeal cancer

●Goal&Message

Through my clinical
experience, I felt it is
important to develop
innovative therapies
to treat more
patients.

This program will play
a bridge between
basic and clinical
medicine.

In addition, this is a
good chance for me
to study abroad.

My goal is to work in
international
environment to
expand my ability.
I would like to achieve
my goal in this
Leading Graduate
Program.



Mami Negawa

<Affiliation>
Medical Immunology

●Theme

The role of immune
checkpoint inhibitors
on NKT cell-based
immunotherapy.

●Goal

I'm interested in the
development of
immune therapy to
eliminate the immune
exhaustion in
patients with
malignant diseases.
I would like to
elucidate the role of
immune checkpoint
molecules in immune
exhaustion and clarify
the synergistic
effects of immune
checkpoint inhibitors
in combination with
NKT cell-based
immunotherapy.

●Message

Being a part of LGS
members is very
challenging and
exciting experience
for me.
I'd like to make use of
this opportunity to
discuss with LGS
teachers and
colleagues from
various backgrounds.
I'll do my best!



Masashi Fukuta

<Affiliation>
Department of
Allergy and Clinical
Immunology

●Theme

Role of Sox12 in
colitis and regulatory
T cell (Tregs)

●Goal

Sox12 gene is
upregulated in the
Tregs from
DSS-induced colitis.
I would like to
determine the role of
Sox12 in colitis by
using Sox12
knockout mice.

●Message

Through activities in
the LGS program, I
hope we can
stimulate each other
to get over difficulties
and challenges.



Tatsuma Shoji

<Affiliation>
Department of
Microbiology and
Molecular genetics

●Theme

Investigation of the
role of rRNA
modification:
Streptococcus
pneumoniae virulence
and host immune
system

●Goal

By using
S. pneumoniae, I'm
examining the
hypothesis that rRNA
modification is
responsible for
regulation of gene
expression.
This study has a
potential to
contribute to
providing a novel
insight into
pathogenicity of
S. pneumoniae and
host immune
response.
I aim to be a
researcher who can
serve to develop a
new treatment by
constructing a theory
hidden behind
infection.

●Message

I will do my best
using this valuable
opportunity.



Takeshi Susukida

<Affiliation>
Biopharmaceutics

●Theme

Development of a
new knocking-down
system using specific
internalization of
membrane proteins.

●Goal

1) I would like to be a
scientist who can
capture the
"science" through
multiple
perspectives, from
basic science to
clinical sites.
2) I want to get
qualified as a
pharmacist.

●Message

LGS program
provides us with an
opportunity to study
and discuss with
many distinguished
medical doctors who
work in the forefront
of medical care.
I will do my best in
this LGS program,
and try to always ask
myself what the ideal
medicine is.



Kokiladevi ALAGARSWAMY

<Affiliation>
Department of Molecular
Biology and Oncology

●Theme

I am interested in
investigating cancer stem
cells at molecular level to find
a solution for the prevention
of tumour relapse and
metastasis.

●Goal

Advanced cancer therapy still
exists with drastic side effects.
So I would like to investigate
to find an effective therapy
which is much more beneficial
to mankind.
I consider Leading Graduate
Program at Chiba University
as a great and rare
opportunity to gather enough
knowledge to improve my
technical skills as well as to
enhance my research
knowledge on novel
therapeutics against cancer.

●Message

Medical science is an ocean
and I always believe that
learning has no end point.
I would like to gain enough
knowledge to find new
methods to prevent, treat,
and cure cancer.
This is a great an opportunity
to meet people from all over
the world and get to know
more about their ideas and
beliefs in medical science.