



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

# NEWS LETTER

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**LGS**  
LEADING GRADUATE SCHOOL  
AT CHIBA UNIVERSITY

## 2nd LGS Winter Camp

We held the "2nd LGS Winter Camp" in HOTEL ICHINOMIYA SEASIDE OHTSUKA, Chiba from January 30 through 31, 2016. This was the second event where students made business plans to present their ideas on a given topic. In addition to that, invited speakers from two successful venture companies gave lectures on what it is like starting and running a business.

This year's presentation theme was "Health promotion in 2020," which was more realistic than last year's theme, "Novel strategies against infectious diseases in 2050." Students worked so hard to prepare for the business plans in between their daily duties.

On the first day of the Camp, each team made a poster session about the outline of the business plan, followed by Qs & As. Then, each team made improvements in the plan based on suggestions by other students, teachers and invited speakers.

On the second day, all teams made presentation about their revised plans. Although all teams were fantastic, "Team Gazelle" that suggested the virtual running system using 3D glasses won the first prize. In the future, we will consider how to translate these virtual business plans into the real business.

Leading Graduate Students could boost each other up by talking about the therapeutics of the medical and pharmaceutical fields as well as the future and the vision of global leaders. As I believe the interaction in the Camp will contribute to our progression and development, I hope we can hand over the mission and activities of the Camp to the next.



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## Overseas training in Germany

LGS 3<sup>rd</sup> year member Toshio Kanno

As a graduate student who is in an effort to be a skillful researcher, I felt blessed for the opportunity to visit an international research center and to attend a symposium where first-class researchers around the world gathered. I would like to report my experiences during the overseas training at: Deutsches Rheuma-Forschungszentrum, Berlin (DRFZ); and International Immunological Memory and Vaccine Forum (IIMVF).

### ① DRFZ

This research center is composed of labs from many fields, such as immunology, biology, and genetics, to research curative development for rheumatoid related diseases. I personally thought it is a rare concept to draw in labs from a variety of fields with the aim of studying one particular disease. What interested me most was that the center was trying to improve the efficiency by managing reagents to share among labs, or sharing information and tips via Internet to use reagent properly. I learned they could save time and budgets to conduct their research effectively by this means.

### ② IIMVF

The IIMVF is an international symposium, which was held three times so far. The symposium aims to educate young researchers and promote mutual activities among researchers. I could learn the latest research about immune memory and vaccination. Especially, I was interested in the research about nasal vaccine. The researchers reported that the cationic nanogels containing pneumococcal surface protein A was effectively delivered to upper respiratory mucous membrane, which resulted in the induction of protective immunity in the absence of adjuvant. The nasal vaccine has attracted a great deal of attention as a new vaccine against respiratory tract infections. I am so interested in its future direction.

I will make use of this experience and knowledge for my research.



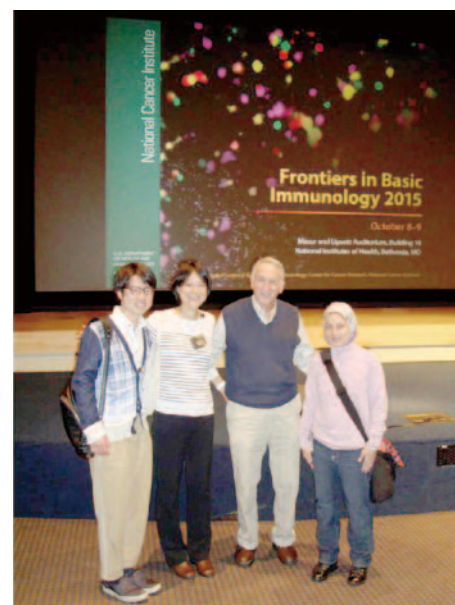
## National Institutes of Health Visit

LGS 3<sup>rd</sup> year member Takuya Nakagawa

The main purpose of this visit was to attend a two-day symposium, "Frontiers in Basic Immunology" held in National Institutes of Health (NIH). The NIH accommodates a research institute equipped with advanced facilities, and an extensive hospital on its vast property. I felt it is a great environment to get deeply engaged in research.

During the visit, I could call in two labs: one is a head and neck cancer lab, and the other was an otorhinolaryngology lab. Although I had a chance to make a presentation on my research entitled "Epigenetic analysis of HPV associated oropharyngeal carcinoma" at the lunch meeting of the head and neck cancer lab, I found it very difficult to explain the details of my study clearly and to answer some questions in English. I keenly felt the importance of English ability to appeal my study to people from diverse backgrounds.

The visit motivated me to pursue my research further and to brush up my English ability. If I have a chance, I'd like to come back to the NIH to study for a long term.



## Participating the La Jolla Internship

LGS 2<sup>nd</sup> year member Yuki Yoshi Mita

From August 19 to 21, I participated in a three-day internship in La Jolla, California, US.

In La Jolla, biotech companies are forming a cluster centering around University California, San Diego. Due to its' geographical characteristic near the Pacific Ocean, it is also known as the "biotech beach."

During the internship, we had the opportunity to visit four facilities within the cluster: Tanabe Research Laboratories, Kyowa Hakko Kirin California, Bio Legend, and La Jolla Institute of Allergy and Immunology. In each facility, we were able to learn about the differences between Japanese laboratories and Americans, and recent trends of drug development and research through lectures, talks with the local research staff, and lab tours.

I was most surprised by the difference in approach to research between Japanese institutions and Americans. Japanese institutions tend to take a closed approach and rely on inner innovation compared to American institutions. Success will bring you immense profit in this approach; however, it takes a very long time to achieve results, and the risk is higher when you fail. American institutions, on the other hand, are more open both physically and mentally, and the idea of open-innovation is infiltrated through out the institutions. As they share information and cooperate with other institutions, the benefits achieved from the joint research are less than that of individual research. Instead, they offer a range of benefits such as lowering a risk and finishing a research faster.

Many students of this program, including me, are planning to study abroad after graduation. This internship gave us opportunities to ask local researchers what it was like to work in American institutions. Those three days were meaningful for all of us.



## Study tour to United Nations Organizations in Geneva, Switzerland

LGS 3<sup>rd</sup> year member Tatsuma Shoji

A training course of the United Nations Organizations in Geneva was held for three days from August 31, 2015. We visited World Health Organization (WHO), United Nations Children's Fund (UNICEF), International Federation of Red Cross and Red Crescent Societies (IFRC), International Labour Organization (ILO), and United Nations High Commissioner for Refugees (UNHCR).

We had many lecturers from those organizations to know about their histories and roles, and introduction of their works. For example, we learned about public relations activities, the countermeasures against Ebola, and the procedures to develop guidelines from a lecture by the WHO. In addition to these "official" lectures, some speakers shared us with their "private" stories such as their carriers and personal lives. They told us that works at the UN-related organizations provide them with a lot of opportunities to learn diverse points of view and a sense of responsibilities; however, they also face a difficulty to maintain relationships with their family members and friends due to the rotation of short-term international assignment.

On the 1<sup>st</sup> night of the course, the reception party was held at the Permanent Mission of Japan in Geneva. Many lecturers from each organization attended the reception. On the 2<sup>nd</sup> night, participants of this training course enjoyed the get-together with professors and officers. These were very valuable opportunity for us to ask lecturers and professors for suggestions on our carriers.



## The 3rd Student Meeting of Leading Graduate Schools in HOKKAIDO

LGS 3<sup>rd</sup> year member Mami Negawa

The 3rd Student Meeting of Leading Graduate School was held at Hokkaido University from June 20-21, 2015. The main theme of this student meeting was "Doctors, Be ambitious! ~Idea generation workshop toward resolution of the problems modern society faced." As the majority of participants were graduate students from different field, school, and countries, it was a chance for us to learn features of other Leading Programs.

In the workshop, we discussed problems of modern society. There are six themes including "Future way to present your research," "Disposal management of chemical substances," and "Mass consumption of paper."

We listed the problems of each theme to find solutions. During the discussion, we gave numerous suggestions and ideas, but there were so many times when we could not come up with any decisive solutions. We also felt a huge gap between participants from private companies. This experience encouraged us to have more positive and active discussion than ever.

We were able to listen to the special lectures by Mr. Mamoru Mori, an Chief Executive Director of the National Museum of Emerging Science and Innovation, and a Science Journalist, Mr. Jean-Marc Fleury. I was impressed how positively, clearly and simply they posed us questions and answered.

In this meeting, we had an opportunity to learn "what we need to be leaders." I fully realized how important it is to use English as communication tools.

I got really motivated to speak English more often and made sure the meaning of being a part of the Leading Program. In the future, I want to put this experience to good use in various situations.



## Leading Forum 2015

LGS 3<sup>rd</sup> year member Jin Kumagai

The Leading Forum 2015 was held from October 24 to 25, 2015. The University of Tokyo hosted the forum this year. Here, I report on the Student Forum, which was a part of the Leading Forum 2015.

The aim of the Student Forum was to present the knowledge and abilities the Leading Program students acquired through the Programs. Approximately 300 Leading Program students participated in the Forum.

On the 1<sup>st</sup> day, students were first divided into five groups. Each group was given a different topic: "Leadership education," "Interdisciplinary education," "Globalization and internationalization," "Partnership with public and private sectors," and "Project works to address social problems." Students in each group were then subdivided into ten teams of six to discuss the topic and to present their ideas and thoughts. At the end of the day, we voted the best group for each topic. On the 2<sup>nd</sup> day, the elected five teams made presentations in front of all participants.

I was in the group of "Project works to address social problems." Through the discussion with students from other universities, I realized "social problems" depended on what and how each university thought about. It was also amazing that seemingly diverse problems have in common in terms of underlying causes.

It was very meaningful for us to participate in this Forum, because we could meet motivated Leading Program students from different fields and universities. At the same time, we were able to make strong connections among various Leading Programs.





## Organizing the “Advanced General Education” in 2015

LGS 2<sup>nd</sup> year member Seitaro Nakagawa

The “Advanced General Education” is a course designed to expand the knowledge and horizons of Leading Graduate School students. One of the features of this course is that students themselves choose candidate lecturers and make requests for them. This year, I am responsible for organizing the class. I took this course last year to find every class very exciting and impressive; therefore, I decided to invite lecturers from a wide range of fields as an organizer of this year.

With the help and advice from Prof. Tetsuichiro Saito, I could invite lecturers from variety of fields: medicine, immunology, and biology from the field of life science; and astronomy, architecture, technology transfer, law, administration, politics, literary, philosophy, and history from Humanities. Moreover, I could invite an entrepreneur (postponed), a journalist, and even an astronaut.

Although each lecture was unique and stimulating, I would like to introduce the following two classes as the highlight of the year: Mr. Ryue Nishizawa, a winner of the Pritzker Architecture Prize and Mr. Toshiyuki Horie, an Akutagawa prize-winning novelist. Mr. Nishizawa gave us a talk about his recent work of “Teshima Art Museum.” Through his talk, we could feel his courage and enthusiasm toward architecture. Mr. Toshiyuki Horie shared us his insights into words and profession of medical doctors in his unique style: comparison of doctors with novelists, and use of immunology metaphor to describe “words” in the world of literature.

It is also noteworthy that we could hold the special lecture on “The International Space Station and Space Medicine” by a Japanese astronaut, Mr. Satoshi Furukawa. Over 700 audience crowded to listen to his lecture and we received many positive responses from them. Although all lectures are very specialized and distinct, we could find traits common to their quality, life philosophy, and wisdom. I hope that their message would be a help to our Leading Graduate School students to achieve our own goals in the future.

