



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

WHO educational meeting report

1st year member Department of Immunology
Md Murshed Hasan Sarkar

The World Health Organization (WHO) is an authoritative agency of the United Nations (UN) for public health. WHO provide leadership on global health matters and technical support to countries. During my WHO visit from 27th to 28th November I had attended educational meeting organized by WHO, Geneva, Switzerland. Throughout the meeting I had learned working facilities at UN, the missions and works of WHO, development of the guidelines and works of WHO as a regulatory agency. I had also learned WHO initiatives to combat against environmental pollution, tuberculosis, hepatitis and non-communicable diseases and also pharmaceutical vigilance. I had a great discussion with WHO staff about global health initiative taken by WHO and the way of implementation. These discussions broaden my outlook about WHO and also increase our interest on their works.



Berlin report

2nd generation of leading graduated school
Risa YAMAZAKI

In Berlin, we visited Humboldt University and Charite, and participate in 3rd Japan-Germany joint symposium. In the symposium, the theme was "Children's health", it had three lectures; the effect of contamination of radioactive by the accident in nuclear power plants, the effect of nuclear medicine diagnosis, and vaccination for pertussis toxin. At Humboldt University, we saw so many pictures of Nobel Prize winners from the University and the explanation of their findings. By these, I wondered how wonderful educations have been done in such a university. In symposium, although presentations for nuclear medicine diagnosis and vaccine for pertussis toxin were a little difficult to me, I learned the schedules for vaccination and disease rate are varied among the countries. What impressed me was what needed the most had been changing depends on time every points after the nuclear accident, and what the most important thing is to care individuals both physically and mentally. The work by a nurse from Nagasaki University also impressed me a lot. Since the contents of presentations were very different from my research field, I think I could have a wider point of view through this symposium. Even such a different field, I want to keep having interests and to participate aggressively. At the same time, I felt I need to improve my English and thinking skills more and more.



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The 2nd Student Meeting of Leading Graduate Schools in KUMAMOTO

1st year student

Huizi Li

The 2nd Student Meeting of Leading Graduate Schools was held at Kumamoto University on 21st to 22nd June 2014. This meeting was co-hosted by Kumamoto University, Kyushu University and Nagasaki University.

The main theme of this student meeting was "Employment Issues for Ph.D. students and holders". The employment situation in Japan is quite tough for Ph.D. students and Ph.D. holders and it is difficult to achieve full-time employment in their fields. During this meeting, we had the opportunity to have discussions and exchange ideas not only with Leading Graduate School students from all over Japan, but also with people from companies and government agencies, and we tried to find the solution to this issue.

The discussion was held in "World Café" style, which is a meeting style that provides more open and creative conversation in a relaxed atmosphere, as if in a café. Participants were divided into ten groups, and each team had a host. Each group formulated their ideas and gave a presentation about the solution for this topic. Every presentation was wonderful and full of individuality. It was clear how much potential Leading

Graduate School students have. I was really happy with the group, which I hosted, got second place with vote.

It was just two days, but I believe that what we learned from this meeting will contribute greatly to a proeperpus future.



Cross Interactive Meeting

1st generation, Department of immunology,

Shunpei Satoh

Since the end of the last fiscal year, we have been voluntarily organizing the weekly meeting, Cross Interactive Meeting (CIM). We have established the meeting, because a variety of our medical and pharmaceutical backgrounds enables us to share with each other the latest treatment and researches in our own fields as well as what we have experienced through internships in the LGS program. In CIM, a responsible person weekly chose a topic, and we have 1) his or her presentation, 2) a discussion about the presentation and 3) a problem resolving training about the topic in English.

Although we have voluntarily started CIM, only a few students attend it. Its concept seems not to be largely accepted. However, we do not make other students attend it at all since autonomy should truly bring about active and meaningful discussion. Furthermore, it is natural that each student needs different things in LGS. Thus, I think that CIM is successful enough for me to enjoy science and active discussion with ambitious students



Nurture of Creative Research Leaders in Innovative Therapeutics

Looking back on the history of medicine in Japan from the Meiji era, much attention has been focused on “Diagnostics,” and great efforts have been made to understand the pathogenesis and pathophysiology of many diseases with various symptoms and to give a correct diagnosis. However, it is clear that a patient will not merely be satisfied with the correct diagnosis unless the disease is treated appropriately and the symptoms are relieved. Therefore, “Therapeutics” is believed to be the most important factor, as the patients anxiously hope to achieve a recovery from their diseased state.

Although the immune system is understood to provide a defensive function against various diseases including infection, this process can sometimes cause allergic and autoimmune diseases. Recently, it has been shown that inflammation and immunity are involved in the progression of various cancers and cardiovascular diseases. Hence, regulation of the immune system may retard the progression of various diseases and should become a strategy for treating many kinds of diseases.

The aim of the program of the Leading Graduate School, the “Nurture of Creative Research Leaders in Immune System Regulation and Innovative Therapeutics” is to educate young researchers who are interested in “Therapeutics” in the medical and pharmaceutical fields to become excellent leaders with a willingness to conduct translational research and who possess extensive knowledge as well as the skills to obtain a bird’s eye view, a capacity for sharp judgment and the characteristics of strong leadership. Doctoral course students who have passed the entrance examination are on the program of the Leading Graduate School for two years. The students are given special interdisciplinary lectures including some by a Nobel-Prize winner, various types of course work, workshops and overseas trainings. Our intention and hope is that this program should foster excellent leaders who will go on to develop innovative therapeutics in the domains of academia, hospital systems, the pharmaceutical industry and government.

The Schools of Medicine and Pharmacy at Chiba University have a history of establishment in excess of 100 years. Many talented graduates from both have achieved great success in clinical medicine, the pharmaceutical industry and in administrative organizations. After completing the program of the Leading Graduate School, the doctoral course students are expected to become prominent leaders who go on to develop novel drugs in universities, research institutions and pharmaceutical companies, or who supervise innovative medical care in large hospitals and governmental organizations. We hope that, in future our graduates will achieve great success in Japan and in the world beyond.

Haruaki Nakaya, MD, PhD

Vice President of Chiba University

Program Leader of the Leading Graduate School



International Symposium ~The 2nd Symposium of International Immunological Memory and Vaccine Forum~

LGS sophomore Koo Nagasawa

I participated in the international Symposium which was held at La Jolla institute for Allergy and Immunology. Symposium's title was "trends in Immunological Memory and Vaccine Development". This was about Generation and immune responses of memory CD4T, CD8T and B cells. I was able to learn about not only the latest Immunology but also unique vaccine in this symposium. I will introduce the most interesting presentation for me.

The title was "Mucosal immunity and vaccine development". That was presented by Dr. Kiyono. His group is using transgenic rice for oral vaccine to cholera. It is because rice can be reserved at room temperature. This aspect is very attractive for developing country people because it is difficult to chilled storage in the developing countries. I think that it is useful for me to be exposed to noble ideas like that.



Overseas Training at California (Internship at Kyowa Hakko Kirin California)

Togo Iwahana (LGS First Year Member, Department of Cardiology)

We attended the internship of Kyowa Hakko Kirin California. The laboratory is located in the site of University of California, San Diego and established together with La Jolla Allergy Institute (LIAI). The laboratory has been known as characteristic of immunological research.

In recent years, they have developed the high quality antibody preparations with the new technology so called POTTELGENT®, which enhances the activity of antibodies in the antibody dependent cellular cytotoxicity (ADCC), removing fucose attached to Fc regions.

We had some lectures about the outline and history of the institute, and the latest technology. Then, we had a lunch with local research workers, at last lab tour.

Staffs are all local employed except for the five Japanese staffs. Although their contract is terminated if they couldn't give any results, I felt that they worked in a good atmosphere. The laboratory is not so huge, but systematic. We could glance over the vast ground of the university and several medical centers from the window.

This was the first time for me to visit laboratories abroad, and I felt that working abroad is fresh especially in environment.



Overseas training at BioLegend

1st year student of LGS

Department of gastroenterology and nephrology
Yuki Haga

We visited BioLegend as the overseas training on August 28th. BioLegend is a company that deals with the research source including the antibodies. The company was established in 2002, so it doesn't have longer history than other companies. However, I wonder why it is one of the companies increasing achievements on a global scale. But after I visited it and met the staff, it became clear. It is because the company is always catching cooperation with the researchers, information provided by the company is always up-to-date, and it always continues meeting a demand. These postures were useful even as the researcher for me.



The possibility of change in Japanese study environment ~A visit to Tanabe Research Laboratories U.S.A. Inc.~

1st year member

Department of Otorhinolaryngology-Head and Neck Surgery
Yuki MORIMOTO

- I have felt that a change is necessary for study environment in Japan.
- When we visited Tanabe Research Laboratories U.S.A., Inc., I interested in the story about the merits and the demerits of the company activity including a study in the United States.
- For example of concrete merits,
 - ② Clustering led by the public research organization
 - ② Gathering many things, human resources, and funds as biology and IT
 - ③ Frank human relations
 - ④ Clearance of the duties and the responsibilities of researchers
- I learned that "rationality" formed the basis of these concepts.
- If there is no change in Japan, a limit will come in the near future, and Japanese ability will decline. I think that the simple introduction of the principle of American style competition to Japan produces only the meaningless mutual obstruction and the friction in the real study field.
- In conclusion, if all Japanese with irrational national traits can perform the role of the "rational" posture and make authorities and responsibilities clearer than now, I feel the possibility that Japan can accomplish the rational change.

