

ISSUE NO. 12 | ANNUAL 2020

LGS NEWS

NEWS LETTER OF LEADING GRADUATE SCHOOL
AT CHIBA UNIVERSITY

PROFILE

7TH YEAR LGS STUDENTS

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GRADUATING LGS MEMBERS



Welcoming New Members

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On the 7th year of its cohort, the LGS welcomes six new members to the program. Who are they and what are their expectations to the program?



Terunao Iwanaga

Department of Gastroenterology

Research Theme: currently under consideration

Message: Being an LGS member would be a great opportunity for me. Since I have only clinical experiences as a gastroenterologist, this is my first time to learn about the basic medical science. I hope the experiences in the LGS program would have a good influence on my research and the future life as an MD-PhD.

Ishii Ayana

Department of Medical Immunology

Research Theme: Functional role of natural killer T cells in tumor microenvironment

Message: To aim for innovative and feasible medicine, I hope to do pioneering research. In the first year, I had many chances to talk with foreign researchers in my field and experienced researchers in other fields. All experiences were exciting to me. I am proud of being an LGS member and will give it everything I've got.



Wang Yangsong

Department of Immunology

Research Theme: Molecular mechanism under T cell mediated immunity against tumor

Message: I personally think that a driving force of society development is curiosity. As a member of the LGS program, I can enjoy many interdisciplinary lectures such as art, literature and so on. There are also many advanced training courses, which would surely broaden my horizons. I am sure we can acquire knowledge and skills not only in medicine, but in a wide range of fields. Let us satisfy our curiosity!



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Welcoming New Members

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Junichi Ishikawa

Department of Allergy and Clinical Immunology

Research Theme: Development of innovative therapeutics related to rheumatic and collagen tissue diseases

Message: I am very honored to be an LGS member. Under the LGS program, we can receive training at various cutting-edge facilities both in Japan and overseas to gain diverse insights and knowledge. I believe experiences through the program will help us become innovative researchers.

Motoyasu Kan

Department of Gastroenterology

Research Theme: Analysis of exosome associated with diabetes derived from pancreatic cancer

Message: Until becoming an LGS student, I had worked as a clinician and treated many patients with digestive diseases. Many medical procedures, such as endoscopy, directly affect patients' health; thus, acquisition of skills is very important for me. However, I have had little opportunity to get engaged in basic science, and have no idea how basic science and clinical medicine are related to each other. So, I joined this program to learn how I can connect my clinical experiences with basic science. I wish I can expand my vision and knowledge through the program. My research is just getting started, and I will do my best.



Hiroki Kano

Department of Neurology

Research Theme: Development of a new innovative therapy for immune mediated neuropathy

Message: I am very honored to be a member of the LGS program. I will do my best to become a global leader in the field of translational research and clinical research.

**“We wish you have a great time
in the LGS!”**



Overseas Training in San Diego

From August 25-30, 2019, we had an overseas training in San Diego, one of the top biotech-regions in the United States. During our stay, we visited 3 major bio-tech companies (Tanabe Research Laboratories, Kyowa Kirin Pharmaceutical Research institute, BioLegend) and 1 research institute in University of California, San Diego. At each institute, we were given lectures on their history and culture, and cutting-edge technologies of drug discovery. We also had the opportunity to listen to each presenter's career track. In the United States, according to their talks, it is easier for young researchers to conduct research in cooperation with researchers of other companies, or with their bosses. However, there seemed to be more severe competition in the United States than in Japan. Some researchers from Asian countries also told us how they ended up coming to the United States, which was very exciting and made us think about how to develop our own career path.

During this training, I was particularly interested in the latest next-generation antibody drugs, such as Bispecific antibodies and Antibody Drug Conjugates (ADCs). These drugs are now mainly used in the field of immune-oncology, and expected to be more effective and safer than conventional treatments. Since I am a neurologist and had a limited knowledge of those next-generation antibody drugs, this was a great opportunity to learn a lot about them. I thought I might be able to try these drugs for neuroimmunological disorders.

This training helped us to understand the difference between industry and academia in the field of drug discovery, and the importance of collaborating with others. I would like to thank all the LGS staff for giving us such a great opportunity. Thank you!

HIROKI KANO
7th year LGS member



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*Together,
We envision the
future*

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Leading Graduate Schools Forum 2019

Fiscal 2019 is the last year of the financial support for Leading Graduate Schools (LGS) from Ministry of Education, Culture, Sports, Science and Technology (MEXT). Thus, the Leading Graduate Schools Forum 2019 is considered as a culmination of the Leading Fora, which has taken place annually since 2012.

The Leading Forum 2019 consisted of two sessions: the keynote speeches and the workshop. The keynote speeches were delivered by Mr. Masaya Futamiya (Chair of Keidanren Committee on Responsible Business Conduct & SDGs Promotion of Keidanren) and Prof. Mutsuhiro Arinobu (Executive Director and Vice President of the University of Tokyo). Mr. Futamiya highlighted the importance of multiple stakeholder involvement in realization of the future society, called Society 5.0. Prof. Arinobu delivered an inspiring speech entitled “What we expect for the graduate of Leading Graduate Schools”.

The second session was the workshop. The forum brought together doctoral students and alumni from 62 Leading programs of 33 universities to approach the topic of “**How I will change the world**”. The participants were divided into 17 groups; thus, each group could focus on one theme from the 17 Sustainable Development Goals (SDGs). The forum’s participants discussed and worked together to envision the society in the next ten years, the year of 2030. After that, the participants formulated solutions to achieve those visions. At the final session of the workshop, each group presented their visions and solutions.

After the closing remarks of the Leading Graduate Schools Forum 2019, all the organizers and participants vowed to reunite in 10 years.

MAULANA A. EMPITU
6th Year LGS Member

Leading Graduate School Winter Camp 2020

On Feb 1, 2020, we held 6th Leading Graduate School (LGS) winter camp on Chiba University Inohana Campus. The LGS program encourages students to start their own venture companies, and regards this winter camp as a place where students can learn about starting a business. The first- and second-year students divided into two groups to develop business plans in line with the theme of this year, "Japanese medical problems and solutions seen at Olympic Games Tokyo 2020". Students spent a few months to prepare their own business plans.

The winter camp started with team presentations. After receiving advices from senior students and faculty members, they discussed to reexamine their plans. After that, students presented revised plans.

At last, "Smart DOC" team won the prize for the best discussion skills and business idea. The team proposed an AI-assisted medical adviser system located in convenience stores. After questioning local or foreign patients about their symptoms, AI instructs them which medical institutions or services they should go. Their purpose is to resolve language barriers to finding appropriate health care services, and also to ease high pressure on medical personnel during the Olympics. Their business model was highly valued for its practicality and great potential for wide application.

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Leading Graduate School

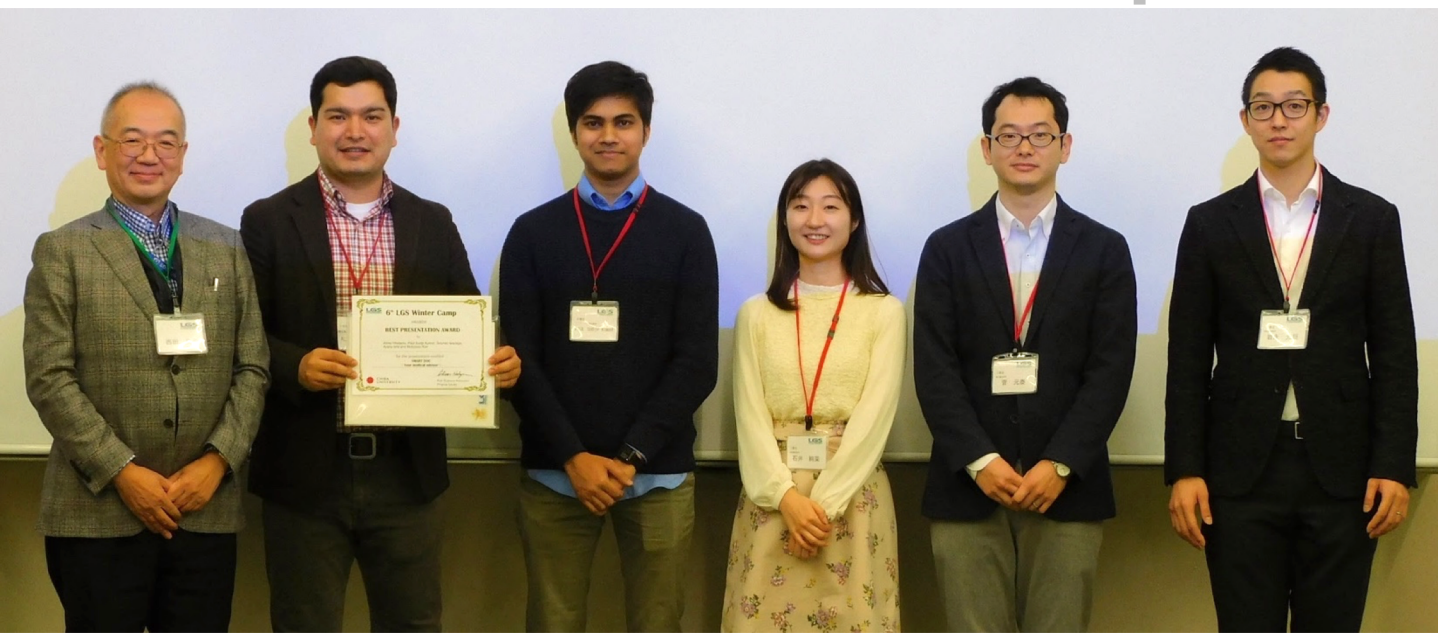
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At the 6th winter camp, we also had an invited lecture by Dr. Tomohiro Tada, who is CEO of AI Medical Service Inc. His company invented an innovative AI-assisted Image analysis system to support early detection of colorectal cancer. His products are expected to help many patients and to reduce burden on medical staff, once commercialized. Dr. Hiroki Sonehara, who is a graduate of this LGS program, also gave a lecture. He is a model case of LGS who started his business while at school. It is very valuable to listen to those who actually operate the company.

The LGS offers many opportunities to learn how to start a business through lectures and domestic and global internship activities. Through this Winter camp, I gained a lot of insights. Without LGS program, I wouldn't have thought about starting a business while conducting research as a graduate student. We look forward to learning more at next year's winter camp.

KAZUMA IIDA
6thYear LGS Student

Winter Camp 2020

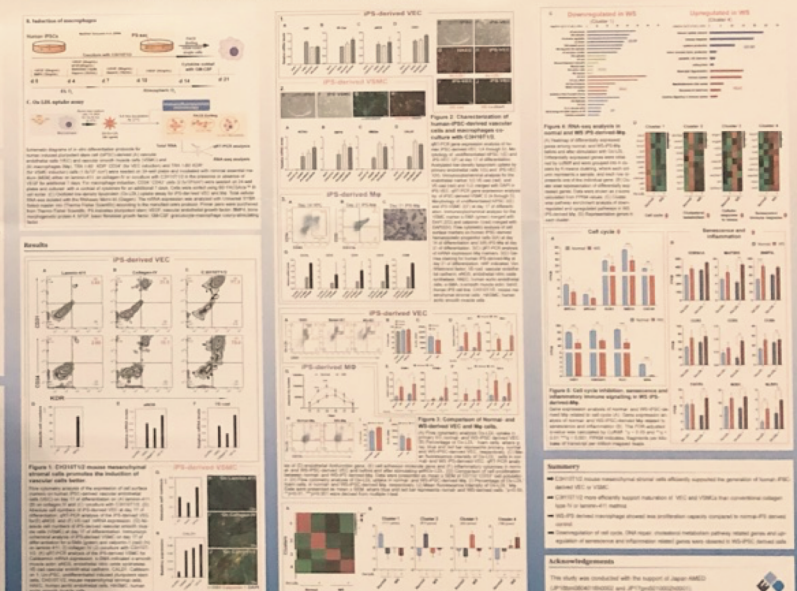




Disease Model of Atherosclerosis Using Werner Syndrome Patient-Derived Induced Pluripotent Stem Cells Reveals Excessive Inflammatory Response Against Ox-LDL

Sudip Kumar Paul¹, Masamitsu Sone¹, Hisaya Kato¹, Yoshiro Maezawa¹, Yasuo Ouchi^{1,2}, Koutaro Yokote³, Koji Eto⁴, Naoya Takayama¹

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STUDENT'S EXPERIENCE: THE AMERICAN SOCIETY OF HEMATOLOGY 61ST ANNUAL MEETING

Attending the 61st American Society of Hematology (ASH) Annual Meeting & Exposition, which was held in Orlando, FL, USA, on December 7-10, 2019, was a window of opportunity for researchers who study in hematology. The meeting facilitated networking with a global community of more than 25,000 hematologists in all subspecialties, and provided me with valuable learning experiences to discuss with the top minds in the field of hematology during conference sessions, coffee breaks or lunchtime. I have learned many novel approaches to science by attending many of the fascinating research presentations, which also helped me to improve my data presentation skills.

Moreover, my research abstract was also accepted for a poster presentation at the meeting, and published in November (2019) supplemental issue of *Blood*, an ASH journal. During the poster session, many researchers asked several questions and provided suggestions for doing

further analysis, i.e., ChIP-sequencing and ELISA (enzyme-linked immunosorbent assay), to strengthen my evidence. Besides, there was an interactive half-day event for the young research fellows, called ASH-a-Palooza, where we had multiple opportunities of open learning from the leaders in the field of hematology. In this session, I had one on one discussion with Dr. Ogla Guryanova, Assistant Professor, Dept. of Pharmacology and Therapeutics, University of Florida, regarding my future research as a post-doctoral fellow. She gave me a glimpse of how post-doctoral researchers work in the USA, and inspired me to do good science during my Ph.D. I believe attending international conferences, like the ASH meeting, broadens the horizon of knowledge and networking, as well as provides opportunities to explore current science.

PAUL SUDIP KUMAR
6th Year LGS Student

Graduating LGS Members

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On March 2020, six LGS members graduated from the program. They spent three to four years in the LGS. What are their impressions about having been LGS members of Chiba University?



Wakako Kuribayashi

Department of Molecular Oncology

Research Theme: Aging of hematopoietic stem cells

Message: The LGS program gave me chances to visit various places and to learn a lot. These experiences have brought me friends, knowledge, and my next career. It wouldn't have happened if I had just focused on my research in the lab. Thank you to everyone who has helped me along the way, and I wish you all good luck in your future endeavors.

Hiroki Furuya

Department of Allergy and Clinical Immunology

Research Theme: Cellular and molecular crosstalk in the development of allergic airway inflammation

Message: I appreciate the LGS program giving me special opportunities to significantly improve my skills and abilities essential for a global research scientist. The lectures in a wide range of fields have deepened and broadened my knowledge. Besides, the program enabled me to improve my presentation skills in English since it provided me with many chances to give presentations and to discuss in English. I would like to make the most of what I've learned in the program to contribute to science.



Yusuke Baba

Department of Endocrinology, Hematology and Gerontology

Research Theme: Transcription factor Tcf21 regulates cardiac fibrosis after injury

Message: This LGS program gave me a lot of chances to expand my insights. I organized a series of special lectures. Choosing and inviting speakers was a hard but precious experience. There were many opportunities to discuss and make presentations in English under this program. These experiences improved my English communication skills, and inspired me to be a global leader. Last, but not least, I would like to thank all the members and staff of the LGS program for supporting me.

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Graduating LGS Members

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Yukiko Yamaguchi

Department of Frontier Surgery

Research Theme: Lowering the setting value of the esophageal endoscopic submucosal dissection device enabled tissue damage control in an in vitro porcine model

Message: By participating in this program, I gained a lot of valuable experiences. I was in charge of planning and operations of the Winter camp, and it turned out to be a very wonderful meeting with the great contributions of the guests and the participants. In the San Diego training with my classmates, I learned a lot and got some really fun memories. There were many difficult tasks given in this program, but now I think that everything was necessary for me to be a global leader in the future. I appreciate all the support I have received from colleagues and staff of the LGS program.



Hiroaki Kanzaki

Department of Gastroenterology

Research Theme: FGF19/FGFR4 signal inhibition is indispensable for the antitumor activity of multi-kinase inhibitors in hepatocellular carcinoma

Message: I am very grateful for having had the opportunity to discuss my research findings with researchers from other labs through the LGS program. I feel that I was able to make progress in my research knowledge and skills. From this program, I got inspiration for my future research topic. Even after graduation, I will make every effort to become a global physician scientist using my experiences in the LGS. Finally, I would like to thank all LGS staff members for management of this program.



Kensuke Kayamori

Department of Endocrinology, Hematology and Gerontology

Research Theme: Synergistic effect of DHODH inhibitor PTC299 with DNA demethylating agent in myelodysplastic syndromes

Message: Before entering a PhD program, I had worked as a clinical doctor for six years. This LGS program gave me different insights, which I could not have obtained if I had just worked as a medical doctor. I never thought about improving my English skills, getting along with people whose major are different, or studying abroad before. All experiences I gained during my time as a graduate will certainly become assets in my life. I would like to say thank you all for your support and cooperation.



“We wish the best for all of you!”



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