Name: Stephani Edwina Lucia
University: Korea Advanced Institute of Technology (KAIST)
Visiting Period: 2024/8/22-2024/9/20
Nationality: Indonesian
Lab: Mizuno Lab

1. Summary of the internship

From August 22, 2024, to September 20, 2024, I had the opportunity to undertake an internship at the Mizuno Laboratory. Under the supervision of Professor Mizuno, the lab focuses on investigating the dynamics of neural activity in the developing brain through advanced intravital imaging techniques. During my time at Mizuno Lab, I learned and observed the experimental processes required for brain imaging. Specifically, the in-utero electroporation to label some neurons in the brain, brain sample preparation by perfusion and brain sectioning.

2. What did this experience do for you with respect to your specific career development directions?

This internship experience has been pivotal for my career development, especially in expanding my expertise in imaging techniques and fostering professional relationships. In my current lab at KAIST, I have been working with intravital imaging in various organs, including the pancreas, spleen, lymph nodes, liver, and kidneys. My time at the Mizuno Lab allowed me to further broaden my skill set by learning how to conduct brain imaging, which was an entirely new area for me. Additionally, I had the unique opportunity to observe heart imaging in neonatal mice and blood flow imaging of the tibial vessels, both of which introduced me to new methodologies and techniques that will enhance my research capabilities.

Beyond the technical skills, this internship was also an enriching experience in terms of networking and personal growth. I was fortunate to meet and build friendships with fellow international researchers. Many of them graciously shared their own research and experimental methods with me, which not only deepened my understanding of different scientific approaches but also inspired me through their passion and dedication to their work.

Moreover, the exposure to experts from various research disciplines helped me develop a more comprehensive view of the scientific community. Engaging in discussions with these professionals provided valuable insights into different fields, further expanding my network and

opening potential avenues for future collaborations. These interactions have not only enhanced my professional connections but also motivated me to pursue excellence in my own research.

3. What did you enjoy about life at Kumamoto University (Kumamoto city or Japan)?

One of the aspects I truly enjoyed about my time at Kumamoto University was the open lab system at IRCMS. Unlike my experience at KAIST, where not all labs adopt such a structure, the open lab system at IRCMS fosters an environment of collaboration and knowledge sharing. This setup allowed for easy and spontaneous interactions with fellow researchers, facilitating discussions on research topics and experimental methods. I found it inspiring to be surrounded by researchers working on diverse projects, and it was motivating to engage in conversations that sparked new ideas.

Beyond the academic setting, I thoroughly enjoyed life in Kumamoto City. The city offers a wonderful blend of culture, history, and natural beauty. I had the chance to visit some iconic landmarks, such as Kumamoto Castle, which gave me a glimpse into Japan's rich historical heritage. Additionally, I was able to experience the stunning landscapes of Mount Aso and tried a delicious soft ice cream from Aso milk.

The culinary scene in Kumamoto was also a highlight. I enjoyed exploring the local food, which offered a wide variety of delicious and unique dishes. Some of my IRCMS friends were kind enough to take me on trips outside the city, including a visit to Saga, where we experienced the immersive art installations and light shows of TeamLab. The combination of art, technology, and nature at TeamLab was truly mesmerizing, and it added a unique and memorable dimension to my time in Japan.

4. Message to prospective students.

I highly recommend Kumamoto University's IRCMS to anyone with an interest in biomedical studies. As an internship student, I experienced firsthand the exceptional care and support provided by IRCMS, from securing comfortable accommodation to ensuring that all necessary arrangements were made for my stay. The institution truly values its interns and creates a nurturing environment for them to focus on their research and learning.

IRCMS offers a vibrant and collaborative research environment, where students have the chance to observe and learn from a wide range of experiments. One of the most valuable aspects of this experience is the opportunity to engage in discussions with seasoned researchers. These interactions offer insights into the realities of a research career, helping students understand what to expect and how to navigate their future academic paths. If you are considering a future in research, this experience will be an invaluable step in your professional development.