

Report for LEGEND Travel Award

Awardee: Pin-Wu Liu (劉品吾)

Institute: Kyoto University, Graduate School of Medicine, Laboratory of Systems Neuropharmacology

Conference: The 44th Annual Meeting of the Japan Neuroscience Society

Sponsor: BioLegend/Tomy Digital Biology

Dates: July 28-31, 2021

First of all, I'm very pleased to be selected by LEGEND Travel Award Program. This program supports my attendance to "the 44th Annual Meeting of the Japan Neuroscience Society", which was held in hybrid this time because of the pandemic caused by COVID-19. Although, since I'm currently in maternity leave, I couldn't join the symposium at Kobe convention center, but it actually makes me be able to attend the symposium online. It's a very nice experience of managing taking care of a baby and attending a meeting at the same time. In addition, I found that online meeting does help people save time to move in between the meeting room. Especially, when the talks that you're interested in are given in the same time session but in different room, the online meeting let you be able to catch up the presentation just by one-click!

The symposium that impressed me the most is the one discussed "liquid-liquid phase separation (LLPS)". LLPS is a phenomenon where liquids mixture spontaneously separated into two liquid phases, like oil and water. In my current research project, I'm focused on observing the dynamic of synaptic proteins with this phenomenon. LLPS has been well known in the field of soft matter physics, however, it's a very new topic that be raised up the impotency in neuroscience within these five years. The published article and books are relatively less than other topics. Having the chance to get a glance of how other researchers approaching this topic, what kinds of difficulties they faced and how they apply the finding for therapy development really inspired me.

This time I also tried to pick up the topic that is a bit outreach for my current study, that is, the techniques of large-scale imaging which allows broad observation of an entire organ or tissue with cellular resolution. Although I believed that when we have more understandings of the mechanism in the molecular level, we can get the idea of what is happening in the cellular or even circuit level easily. But to prove it and fill-in the gaps in between different levels, being able to carry on the experiments that can visualize neural activity in multiple areas at once is definitely necessary. Knowing the principle and the application of these imaging methods and microscopies is going to be very helpful for me to plan the future research projects.

A special event for me in this meeting is that I got the "Toshihiko Tokizane Memorial Award for Excellent Graduate Study in Neuroscience". This award recognizes excellent graduate studies in the field of neuroscience. It's a great honor for me to attend the ceremony of this award which encourages me to pursue higher goal for my future career.

In the end, I'd like to deliver my appreciation again to BioLegend/Tomy Digital Biology for supporting me attend this meeting.