

Report – 01/10/2019

LEGEND Travel Award 2019

April 2019 recipient

Thomas MAURISSEN

Center for iPS Cell Research and Application (CiRA), Kyoto University

2019 ISSCR/KSSCR International Symposium

Thanks to the generous support of BioLegend and Tomy Digital Biology through the LEGEND Travel Award Program, I participated to the International Society for Stem Cell Research (ISSCR) and Korean Society for Stem Cell Research (KSSCR) International Symposium, held on 26-27 September 2019 in Seoul, South Korea. Although I have been a PhD student in the Graduate School of Medicine, Kyoto University for over two years, it was my first time travelling to neighboring South Korea and interacting with the Korean scientific community, especially related to stem cell research.

Notable international speakers for me included Shinya Yamanaka, the director of CiRA at Kyoto University, Janet Rossant, Hans Schöler, Hongkui Deng, Takanori Takebe, Amy Wagers, Amander Clark, Nissim Benvenisty, Peter Zanstra, Kevin Eggan, Christine Mummery and Deepak Srivastava, who are all leading scientists in their fields. I was particularly impressed by the Villages in a Dish approach presented by Kevin Eggan, which allows to model up to 100 different cell lines in parallel in a single dish for phenotyping purposes, while keeping track of the identity of single cell lines through a sequencing method they developed. In addition, I was really fascinated about the talk of Nissim Benvenisty on the diversity of ploidy in different human cell types, and how he used haploid cell lines to perform a genome-wide CRISPR-Cas9 knock-out screen to identify cell essential genes in human embryonic stem cell (hESC) versus differentiated cells, as well as growth-restricting genes, to eventually map the hESC essentialome.

Moreover, I participated to luncheon symposia offered by Thermo Fisher Scientific on integrated work flow solutions, and by Bio-Techne on organoid technology.

Finally, I also attended presentations given by two fellow colleagues from CiRA, namely Huaigeng Xu on making immunocompatible HLA knock-out iPS cell lines, and Shin-II Kim, presently working at AceRNA Technologies on detecting and purifying specified cell types with RNA switch technologies.

The full program of the symposium can be found here:

<http://www.2019isscrksscr-symposia.org>

Importantly, I gave a poster presentation on biasing DNA repair towards Homology Directed Repair in human iPS cells for improving precise gene editing, and was able to interact with South Korean students from CHA University in Seoul and KAIST in Daejeon, at their posters.