Travel Report
58th Annual Meeting of American Society of Hematology (ASH) 2016

The 58th Meeting of the American Society of Hematology (ASH) took place from 2nd to 6th of December, 2016 in San Diego, CA, USA. This meeting is the largest and most important meeting in the field of hematology and hemato-oncology with almost 30,000 participants in this year. The ASH annual meeting offered an interesting program consisting of educational and scientific sessions as well as trainee activities for young scientists in the field of hematology. The scientific program comprised oral and poster presentations of scientists from around the world.

The opportunity of coming together to the biggest hematology meeting was also used to organize an Internal Chronic Neutropenia Meeting with international experts coming together and exchanging updates on the disease and progress in treatment. Scientists from different research groups working in this field presented their data in oral presentations. The internal meeting is very useful because we could discuss the results very deeply since all participants had similar interests.

My research project entitled “Impaired DNA Damage Repair in Congenital Neutropenia Patients” was accepted by the ASH committee for poster presentation. I had the opportunity to exchange ideas with scientists from our and similar fields and received useful impact for the progression of my project.

Since my research project is about understanding leukemia development in congenital neutropenia patients with pre-leukemic bone marrow failure syndrome, I visited sessions about pre-malignant bone marrow failure syndromes, mechanisms of malignant transformation of hematopoiesis and about new technologies to query single cells in hematopoiesis and leukemogenesis. Most remarkable was the presentation of Rahul Satija from New York Genome Center about the developments in single-cell sequencing and their use to understand and trace hematopoietic cells. Their approach allowed the identification and reconstruction of lineage hierarchies in human hematopoiesis using Drop-Seq. Furthermore, this research group could identify key regulators of cell fate decisions and trace their expression throughout development. The work of this group was very impressive, however, hard to reproduce due to the complex process of analyzing data by a software which is not commercially available but developed by their own lab to handle the flood of generated data.

Moreover, I was interested in the session about genetic susceptibility to leukemia which was held by Kim E. Nichols (Memphis), Christopher C Porter (Aurora) and Joshua Schiffman (Salt Lake City). The authors showed that about 4 - 6% of leukemias are hereditary caused by a wide array of rare syndromes. The defects mainly affected genes which participate in DNA repair/genomic stability, bone marrow function, signal transduction, immune cell function as well as epigenetic alterations. Among the syndromes predisposing to leukemia were for instance Fanconi anemia, Shwachman Diamond syndrome, Diamond Blackfan anemia, Li Fraumeni syndrome and most importantly for our lab: Severe Congenital Neutropenia. Among affected genes were candidates that were before known to play a role in solid tumors e.g. BRCA genes. I gained impressive insight into high-impact translational research from international groups doing their best in clinical and basic research to be able to cure malignant diseases and improve the lives of their patients.

Altogether, this conference enhanced my motivation even more when seeing how research groups are trying their best to understand and eradicate hematologic malignancies to save patients’ lives. I want to contribute to the improvement in understanding, therapy and cure of leukemia patients.
Last but not least, I would like to thank the Ludwig Hiermaier Foundation for the financial support for my travel to the 58th annual meeting of ASH. Your foundation helps contribute to the improvement of research groups by exchanging knowledge and ideas with other international groups but also to meet and cooperate for the best possible outcome for patients.

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