

GSCN Travel Award Report

66th Annual Meeting of the American Society of Hematology (ASH) in San Diego, California, USA (7-10th December 2024).

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The American Society of Hematology (ASH) annual meeting is a premier event in the field of hemato-oncology, bringing together thousands of scientists, clinicians, and industry leaders from around the globe. Featuring a diverse array of oral presentations, poster sessions, and topic-specific workshops, ASH provides an exceptional platform to explore cutting-edge advancements in hematology research and clinical innovations.

Among the many highlights of the conference, two plenary oral presentations stood out as particularly inspiring. The first was delivered by Sean Morrison, a world-renowned expert in hematopoietic stem cell (HSC) biology, as part of the 2023 E. Donnall Thomas Lecture and Prize. Dr. Morrison shared his lab's groundbreaking discoveries, emphasizing the pivotal role of mesenchymal niche cells in maintaining HSCs and supporting blood system regeneration following transplantation. He placed special focus on the regulation of bone marrow innervation, shedding light on its critical contribution to HSC biology.

The second outstanding presentation occurred during the plenary session, where Sen Zhang, a postdoctoral researcher in Sandra Pinho's lab, presented compelling preclinical findings on the role of platelet factor 4 (PF4) in hematopoietic stem cell (HSC) aging. Zhang demonstrated that administering recombinant PF4 to aged mice effectively restored HSC functionality and rejuvenated their profile to resemble that of young HSCs. These results underscore the potential therapeutic value of PF4 in interventions aimed at HSC rejuvenation.

Additionally, I attended the Myeloid Workshop, which focused intensively on oncogenic alterations in hematopoietic stem cells in myeloid malignancies. Leading experts in the field presented their groundbreaking work, including Andreas Trumpp, who identified a novel subset of disease-initiating leukemia stem cells (LSCs); Ross Levine, who explored the significance of clonal hematopoiesis mutations in thyroid cancer; and Margaret Goodell, who unveiled a new function of mutant NPM1c in acute myeloid leukemia (AML) LSCs.

I had the privilege of presenting my PhD project through an oral presentation titled "Identification and Functional Interrogation of Dormant Cancer Stem Cells in JAK2V617F-Driven MPNs". This experience was not only an invaluable educational milestone as a young scientist but also a source of constructive discussions on deeply dormant mutant HSCs in myeloproliferative neoplasms (MPNs) and the therapeutic strategies available to target them. Additionally, as a preclinical researcher focusing on MPNs, I greatly benefited from attending outstanding presentations such as Alex Rampotas's work on a novel CAR-T therapy for calreticulin-mutant MPNs and Benjamin Rolles's preclinical findings on the role of obesity in the context of JAK2V617F-mutant MPNs.

Overall, attending ASH 2024 was an exceptional experience, filled with groundbreaking science and meaningful interactions with collaborators and fellow scientists. The meeting's inclusive, diverse, and collaborative atmosphere set it apart, creating a unique platform to foster new partnerships while strengthening existing connections with researchers from around the globe.

Finally, I would like to express my heartfelt gratitude to the GSCN for awarding me a Travel Grant, enabling my participation in ASH24. Immersing myself in such a vibrant and inspiring environment has

further fueled my motivation to advance scientific knowledge and intensify efforts to combat cancer through collaboration and collective initiatives.

Sincerely,
Ian Ghezzi