

# ASHBi SEMINAR

## Blood for life: hematopoietic stem cells from womb to tomb

Lecturer: **Camilla Forsberg, Ph.D.**

Professor of Biomolecular Engineering

Director, Institute for the Biology of Stem Cells, University of California, Santa Cruz



Date

**Monday, 22 September 2025**

Time

**16:00 – 17:00 [JST]**

Venue

**Conference Room** **Onsite Only\***  
**B1F, Faculty of Medicine Bldg. B**

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### Abstract

The Forsberg lab aims to understand the dynamics of hematopoietic stem cell (HSC) biology from prenatal life into aging. We trace, quantify, and modify HSC differentiation at key developmental stages to shed light on the mechanisms controlling the variable types and numbers of hematopoietic cells produced throughout life. It is increasingly clear that HSCs retain epigenetic memory in response to a wide array of exposures and that this memory shapes the function of both the HSCs themselves and of the cells they give rise to. Recently, we found that the aging-induced platelet hyperreactivity that causes a dramatic increase in thrombotic incidents upon aging is rooted in the specific differentiation path from HSCs. Likewise, HSC exposure can lead to either maladaptive or trained immune memory that have lasting effects on disease susceptibility. Our main goal is to gain an actionable understanding of how intentional and unintentional acute and chronic challenges shape HSC functional capacity and life-long health.

Organizer : Institute for the Advanced Study of Human Biology (WPI-ASHBi), Kyoto University

Host: Ryo Yamamoto (PI-ASHBi)

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