SSBH 2022

THE 10TH SEOUL SYMPOSIUM ON BONE HEALTH
& the 34th Spring Scientific Congress of the Korean Society for Bone and Mineral Research

Symposium 5

Birgit Schilling, PhD

Curriculum Vitae

Associate Professor and Director of the Mass Spectrometry Center
Buck Institute for Research on Aging

● Educational Background & Professional Experience

2018–Present	Buck Institute, Associate Professor
2022–Present	President 'US Human Proteome Society', US HUPO
2020–Present	Standing Member of Neurological Sciences Training NST2 study section (NINDS/NIH)
2016–2018	Buck Institute, Assistant Professor
2016–Present	USC, Adjunct Professor
2016–2018	Buck Institute, Research Ass. Professor
2016–Present	Buck Institute, Director Mass Spectrometry Center
2000–2016	Buck Institute, Scientist, Manager Mass Spectrometry Center
1998–2000	UC San Francisco, Postdoctoral Fellow with A. Burlingame and B. Gibson
1997	Germany, PhD in Organic Chemistry (University of Clausthal)
1993	Germany, Diploma in Natural Product Chemistry/Analytical Chemistry (University of Hamburg)
1990	Great Britain, Erasmus Fellowship in Analytical & Organic Chemistry (University of Southampton)

● Research Interests

Aging is a complex biological process associated with progressive loss of physiological function and susceptibility to several diseases, such as cancer and neurodegeneration. As senescence burden increases with aging and becomes a risk factor for many age-related diseases we are specifically interested in senescence-derived aging signatures. We use cutting-edge proteomic workflows to investigate the senescence-associated secretory phenotype (SASP). My recent research interest also has expanded to investigate mechanisms and therapeutic interventions into osteoarthritis or other diseases that involve bone or cartilage health. We are growing 3D tissue pellets of chondrocytes from OA patients and elderly individuals to test potential beneficial therapeutic interventions using senolytics or senomorphics. We also developed novel workflows for deep proteomic analysis of bones (confidently quantifying >2,000 proteins from bone). With Dr. Alliston (UCSF) we are investigating a TGFβ receptor II knockout mouse model to gain insights into age-related bone fragility.

● Publications

1. Basisty N, Kale A, Jeon OH ⋯ Ferrucci L, Campisi J, Schilling B. A Proteomic Atlas of Senescence-Associated Secretomes for Aging Biomarker Development. PLoS Biol 2020. 18(1):e3000599. PMCID: