EMBL seminar : Syncell Inc. to introduce new MicroScoop Technology for unbiased, sub-cellular and spatial proteomics.

Lecture Hall : Small Operon

Date / Time : July 13th 2026, 14:00 – 15: 30

Speaker : Mario Scheel-Werner

Syncell Inc., Head of Commercial EMEA

Quick Introduction on Syncell Inc. and seminar moderator

Speaker : Jung-Chi Liao, PhD

Syncell Inc., CEO

Talk Title : Microscopy-guided protein photo-biotinylation for high-precision subcellular proteomic discovery

Abstract : Microscoop is a microscopy-guided spatial proteomics platform that automatically performs in situ photo-biotinylation of user-defined subcellular regions with up to 25 nm precision. Proteins from cells, FFPE, or fresh frozen tissues are identified by LC-MS/MS, enabling unbiased discovery of novel protein constituents in disease- and function-associated structures such as stress granules, primary cilia, immune synapses, TDP-43 aggregates, and amyloid-β plaques

Speaker : Kateryna Shkarina, PhD

University of Bonn, Sr. Scientist, Innate Immunology, Eicke Latz Lab

Talk Title : Spatial proteomics reveals an unexpected role of nuclear bodies in human inflammasome activation

Abstract : Inflammasomes are key regulators of the innate immune response and are generally thought to assemble in the cytoplasm. We recently discovered that the human NLRP1 inflammasome uniquely forms a functional complex in the nucleus in a species- and trigger-specific manner. Using Microscoop-assisted spatial proteomics, we identified proteins specifically associated with nuclear inflammasomes, unexpectedly revealing the presence of PML body components. Follow-up studies uncovered a previously unknown regulatory role of PML and SUMOylation in NLRP1 activation and signaling. These findings provide new insights into innate immunity and highlight how spatial proteomics enables unexpected biological discoveries.

Speaker : Cristiana Lungu, PhD

University of Stuttgart, Project Leader, Cell Biology and Immunology, Monilola Olayioye group

Talk Title : PHF19 drives the formation of PRC2 clusters to enhance motility in triple negative breast cancer cells

Abstract : How does the spatial organization of chromatin regulators shape cancer-cell behavior? Using in situ subcellular proteomics, high-resolution imaging, and functional genomics, we investigated Polycomb Repressive Complex 2 (PRC2) organization in triple-negative breast cancer cells. We identify PHF19 as a driver of nuclear PRC2 clustering and show that this organization promotes cancer-cell motility. These findings reveal a novel non-enzymatic mechanism of PRC2 regulation and demonstrate how spatial proteomics uncovers functional protein organization relevant to cancer biology.

Remote Access : https://embl-org.zoom.us/j/99846203433?pwd=rRO7dXnga0q2kq3H1T3UXVtdIbXV0y.1