## ANALYTICAL SEMINAR

3D Optical Microscopy-Guided Cellular and Molecular Analysis of Normal and Diseased Tissues

## **Steve Seung-Young Lee**

Assistant Professor Department of Pharmaceutical Sciences/College of Pharmacy University of Illinois Chicago



The distinctive functions of each organ in the body arise from its unique structural organization across multiple biological scales—including tissue, cellular, and molecular levels. To fully understand physiological and pathological processes, it is critical to study how these different levels of biological organization interact and influence one another, particularly in their spatial context. In this seminar, Dr. Lee will introduce new 3D optical imaging approaches for spatial analysis of cells and molecules in normal and diseased tissues. These include correlated multiscale 3D microscopy, 3D multiplex immunofluorescence microscopy, and cell type- and tissue region-selective multiomics. Using these novel spatial tissue assay tools, Dr. Lee and his research team are working to understand complex biological systems and ultimately to advance the diagnosis, treatment, and prevention of human diseases.

📰 Tuesday, April 15, 2025



**PURDUE** UNIVERSITY.

James Tarpo Jr. and Margaret Tarpo Department of Chemistry