

The Technology Seminar Series Presents:

"Role of Corneal CX3CR1+ Resident Macrophages in Burned Mouse Eyes using RNAscope HiPlex"

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Thursday, December 16th, 2021 12:00 – 1:00 pm Zoom Meeting/Meltzer Auditorium

https://masseyeandear.zoom.us/j/583662273?pwd=TWJTUEV6ZTFUTzUzaWx5dXFmR2puQT09

Meeting ID: 583 662 273 Passcode: 248969



Summary of Drs. Dikshit and Zhou's talk:

Incorporating spatial analysis to interrogate complex tissues with highly specific and single cell resolution has become a crucial tool in deciphering the cellular network of disease states. Comprehensive spatial studies require tools that enable higher multiplexing capabilities, particularly when working with precious samples, with minimal time, ease of effort, and quality performance. The RNAscope HiPlex v2 assay is capable of multiplex fluorescent detection of up to 12 targets in fresh/fixed frozen and FFPE tissues. This assay has been especially optimized for detection of target RNA in FFPE samples. It is challenging to detect clean signal due to the autofluorescence observed in FFPE samples. By introducing the FFPE reagent as a part of the HiPlex v2 assay, RNA signal can be clearly visualized to assess target gene expression. The utility of HiPlex in understanding the inflammatory response of burned mouse eyes in the cornea are highlighted. The highly multiplexed localization of RNAs at the single cell and subcellular level with RNAscope HiPlex enables mechanistic insights into resident macrophages of the immune cell response.

About Dr. Dikshit:

Dr. Anushka Dikshit is a Senior Scientist leading the Applications group with Advanced Cell Diagnostics, Bio-Techne with background in cancer research and immuno-oncology. Dr. Dikshit is focused on expanding the applications of RNAscope technology in different research areas. Prior to working for ACD, she was involved in identifying novel therapeutic targets for melanoma as a postdoctoral fellow at Duke University. Dikshit obtained her doctoral degree from Southern Illinois University, School of Medicine in Molecular Physiology.

About Dr. Zhou:

Dr. Chengxin (Steve) Zhou received his doctoral degree in Biomedical engineering from University of Texas Southwestern medical center. After graduation, he joined Boston Keratoprosthesis lab in MEEI in 2014, working as a research fellow under the mentorship of Dr. Eleftherios Paschalis. His research encompassed corneal wound healing, ocular drug delivery, and anti-inflammatory therapies for ocular trauma. He is currently a R&D scientist in ACD, focusing on the development of spatial transcriptomic technology.

