

# Keck School of Medicine of USC

Department of Translational Genomics - Virtual Distinguished Lecture Series



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***“Using spatial gene expression patterns to define translational cell types in mouse and human hippocampus”***

The hippocampus is considered to be structurally and functionally homologous across mammals. However, less is known about the homology of hippocampal gene expression across species which is critical to defining translational hippocampal cell types. Previously, we have analyzed spatial gene expression patterns to create the mouse Hippocampus Gene Expression Atlas (HGEA) which defines 20 distinct hippocampal subregions with distinct gene expression and anatomical connectivity profiles across the entire hippocampal axis. More recently, we have found evidence that human hippocampal cell types are conserved between mouse and human, but with divergent gene expression profiles. These data suggest an appreciation of hippocampal anatomy and the spatial context of gene expression is critical to identifying and defining translational cell types across species. Ultimately, a better understanding of the similarities and differences between mice and human cell types will lead to improved clinical development and better translational studies of the hippocampus and hippocampal-related disease like Alzheimer’s disease.

**Tuesday, May 11, 2021 11:00am – 12:00pm** [Register Here](#)