# THE INSTITUTE FOR GENOMIC MEDICINE

UC San Diego School of Medicine

IGM Institute for Genomic Medicine

presents

## Jeong Ho Lee, PhD

Associate Professor

**KAIST** (Korea Advanced Institute of Science & Technology)

LIVE & In-Person & with Cookies & Lemonade

THURSDAY MAY 12, 2022 | 4PM | LEICHTAG AUDITORIUM | ZOOM JOIN

# Brain Somatic Mutations in Neurological disorders

Mutations occur during cell division in all somatic lineages due to the unavoidable DNA replication errors. Because neural stem cells continue to undergo cell division throughout human life, somatic mutations in human brain can arise during development and accumulate with the aging process. Although somatic diversity is an evident feature of the brain, the extent of somatic mutations affecting the neuronal structure and function and their contribution to neurological disorders remain largely unexplored. Over the last decade, we have provided the molecular genetic evidence that brain somatic mutations arising from neural stem cells indeed lead to the structural and functional abnormalities of the brain observed in neurodevelopmental disorders, brain tumors, and neurodegenerative disorders. In this seminar, I will present our recent findings of brain somatic mutations and the related molecular pathogenesis in focal epilepsy and brain tumors. I will further discuss about antisense oligonucleotide (ASO) therapeutics for these conditions.

FOR MORE INFORMATION PLEASE VISIT GENOMIC.WEEBLY.COM