DukeNUS Medical School | Cancer & Stem Cell Biology

# CSCB Seminar Series

## VBIM Forward Genetics and Its Application in Novel Cancer Gene Discovery

**Date:** 3rd Dec 2025 (Wednesday)
**Time:** 12pm - 1pm (SGT)

**Venue:** Amphitheatre, Level 2
Duke-NUS Medical School

For details, please contact:
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**Abstract:**

Validation-Based Insertional Mutagenesis (VBIM) is a forward genetics strategy that we have applied to identify multiple previously unknown genes. This presentation will outline the underlying principles of the VBIM approach and highlight several gene-discovery case studies. Through VBIM, we uncovered the tumor suppressor genes KDM2A and ARMC4, as well as HN1L, a gene associated with carboplatin resistance. In addition to its utility in elucidating tumor signaling pathways and mechanisms of drug resistance, VBIM holds strong potential for broader application in gene discovery and functional studies across disease areas beyond cancer.

**Speaker:**

### Dr Tao (Tara) LU

**Tenured Associate Professor in Biochemistry, Molecular Biology and Pharmacology,**
**Showalter Scholar, Indiana University School of Medicine,**
**Founder of EQon Pharmaceuticals**

Prof. Tao Lu is a tenured faculty member at Indiana University School of Medicine whose research focuses on cancer signaling and therapeutics. She founded EQon Pharmaceuticals, trained with Nobel Prize nominee Dr. George Stark, and has earned multiple prestigious honors, including U.S. Patent Awards and the Faculty of the Year Award. She serves on NIH study sections, has authored nearly 100 papers, chaired international conferences, and serves as an associate editor for two scientific journals.

**Host:**

**Dr Nicholas Tolwinski**
Associate Professor and Interim Director
Programme in Cancer & Stem Cell Biology
Duke-NUS Medical School

**No registration is required.**
**All are welcome.**