

# SigN SEMINAR

*Hosted by Prof LAM Kong Peng*

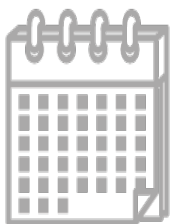


## Associate Prof Kelvin TUONG

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Ian Frazer Centre for Children's Immunotherapy Research  
Child Health Research Centre  
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### Machine Learning of Molecular Signatures in Gene Expression & Immune Repertoires in Paediatric Cancer

Paediatric cancers are remarkably heterogeneous, both clinically and genomically. At the Ian Frazer Centre, Prof Tuong & his team are developing new bioinformatics methods to understand and track the complexity of paediatric immunity in health and in disease. In this talk, he will present his two recent projects on training machine learning models to learn and track these individualised cancer and immune signatures from the time of diagnosis. With single-cell gene expression data, they developed an approach for personalised machine learning to track a patient's unique signatures. For immune tracking, they are training deep learning models of T- and B-cell receptors by abstracting their 3D structure. Together, Prof Tuong & team hope that the models have the potential to better detect residual disease and forecast relapse by recognising the recurrence of a patient's molecular fingerprint in follow-up samples.



**12 May 2026 (Tuesday)**  
**10 – 11 AM (Singapore Time)**  
**SigN Seminar Room**  
**8A Biomedical Grove, Immunos, #04-06**  
**Singapore 138648**

*Seminar is  
open for all  
to attend.*

*Registration  
is not  
required.*

