



# Nham Tran

*Associate Professor*

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## Biography

Dr Tran is a cancer researcher with expertise in RNA biology and point-of-care (POC) diagnostics. He earned his PhD in non-coding RNA biology through a collaboration between Johnson and Johnson and UNSW. Dr Tran holds several patents in this field and, as a postdoctoral researcher, led the first study to characterise microRNAs in oral cancers and their potential use as biomarkers.

His current research focuses on utilising microRNAs as biomarkers for early cancer detection and understanding how they regulate genes involved in cancer development. His team has identified specific microRNAs associated with head and neck cancers and is actively investigating their roles in cancer pathways. Another significant area of his work is viral oncology, where he studies the HPV16 virus in oral cancers and its impact on noncoding RNAs in regulating cancer progression. Recently, Dr Tran has expanded his research into parasitology, collaborating with Dr Shelia Donnelly to explore how small RNAs influence parasite development.

Students passionate about cancer research, RNA biology, or developmental parasitology are warmly encouraged to join his lab.

## Research Projects (Honours and PhD)

- miRNAs biomarkers for diagnosis of head and neck cancers
- Investigating the mechanistic role of miRNAs in cancer oncogenesis
- Developing a salivary 3 plex qPCR assay for clinical testing of HPV16
- Characterisation of HPV incidence in Head and Neck Cancers from Southeast Asia
- Nanotubes: cell to cell tunnels and their role in cancers
- Characterisation of CRISPR KO cells in parasite development
- Small RNAs guiding parasite development

## Methods/Research Skills

- Cell culture and cell biology methods
- Molecular biology skills such as DNA cloning, CRISPR, PCR and qPCR
- RNA DNA transfections, Luciferase assays, ASO technologies
- Bioinformatics, R studio, statistical analysis and pathway mapping using Cytoscape
- Weekly presentations at lab meetings and 1:1 meeting

## Current team members

We have eight members in the team from everywhere around the world.

**Available Co-supervisors:** Shelia Donnelly, Debbie Marsh, Valery Gay

