

Keen to do a Master of Biomedical Sciences degree with an international approach? Work with our researchers at JCSMHS, their local and US collaborators.

We are looking for a keen, motivated and adventurous candidate to undertake a Master of Biomedical Science Degree for our joint project between Monash University Malaysia, University of Malaya and University of California (Berkeley): **Deciphering the Genomics and Adaptation to Dive-Induced Hypoxia in Sea Nomads of South East Asia.**

This is an international collaborative study involving genetics, biomedical research, and aspects of anthropology. Southeast Asia (SEA) has extremely rich human genetic diversity and population history, a result of multiple migrations and evolution over the past 70,000 years. Interactions between various environments and genomes have led to diverse adaptive mechanisms in different populations.

This study proposes to investigate the genes and genetic variations and dive-induced hypoxia in two Sea Nomad groups in Malaysia, Orang Seletar in Johor and Bajau Laut in Sabah. Fieldwork will be carried out in these populations before genomics data is generated. Using current genomics and bioinformatics techniques, variants will be elucidated and compared with globally available genetic databases to highlight novel biological pathways that are affected by hypoxia.

Previous study on a Sea Nomad tribe in Indonesia showed that they have a significantly larger spleens than their land-dwelling neighbours. This difference is significantly associated with a genetic mutation in the gene PDE10A, which encodes a cyclic nucleotide phosphodiesterase that affects thyroid hormone levels and spleen size. We believe there may be other mutations yet to be explored, in Sea Nomads of SEA.

We have successfully secured main FRGS funding from the Ministry of Education, Malaysia which will provide a monthly stipend to the candidate and will be supported by research resources available at JCSMHS and our international collaborators in USA. Should you already have a first author publication in a ISI/Scopus journal, you may qualify for a fee discount.

The candidate must be able to converse in Malay in order to communicate effectively with indigenous participants. If you are interested, please email your latest CV, a statement of why you are interested in pursuing postgraduate studies and relevant documents to

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