

Research Theme: Metabolic Diseases (Future Healthcare)
Research Project Title: Nonalcoholic steatohepatitis – nutritional epigenetics
Principal Investigator/Supervisor: A/P Andrew Tan Nguan Soon
Co-supervisor/ Collaborator(s) (if any): Prof Walter Wahli
Project Description a) Background: Non-alcoholic fatty liver disease (NAFLD) is one of the most important causes of liver disease worldwide and will probably emerge as the leading cause of end-stage liver disease in the coming decades. Many patients with NAFLD develops into nonalcoholic steatohepatitis (NASH) that portends subsequent life-threatening diseases such as cirrhosis and hepatocellular carcinoma. . In human, a healthy liver progresses to NASH in an ‘experimentally unrealistic’ period of many years. Understanding the progression of the NASH in human is a fortuitous event because of the time of disease progression. Thus, little is known about the molecular mechanisms of the pre-diseased/asymptomatic stage of NASH. b) Proposed work: The LIDPAD mouse model, which we have developed, is a powerful tool to study the development of NASH. In this model, NASH was induced exclusively by a dietary challenge. The disease progression are being characterized at the systemic, organ and molecular levels. In this project, the candidate will study the nutritional epigenetics prior the development of this disease. The candidate will focused on how the molecules in food interact, via metabolic systems, with the molecules that attach to DNA and control levels of gene expression in the body.
Supervisor contact: If you have questions regarding this project, please email the Principal Investigator:
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