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## **Nutritional status in early childhood and subsequent health outcomes**

### **Faculty:**

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### **Project Description:**

Early life nutrition is fundamental to the development of a child's full potential. Understanding dietary intake and nutritional status of a child is important to identify areas for improvement in establishing healthy eating patterns at an early age.

The Growing Up in Singapore Towards healthy Outcomes (GUSTO) study is an ongoing birth cohort study in Singapore. It is a longitudinal study which tracked the health and behaviour of pregnant women since the first trimester of pregnancy, and of their offspring since birth. Dietary intakes of children at ages 5 and 7 years were captured via questionnaires, and plasma nutrient biomarkers were measured when the children were 6 years of age. Metabolic and neurocognitive outcomes were assessed at various time-points in the same time period and later (children are now 11 years of age).

A preliminary analysis of plasma biomarkers data suggests the existence of a group of children who are deficient/insufficient in several nutrients. However, little is known about the dietary factors contributing to these deficiencies/insufficiencies. This study thus aims to examine how diet at ages 5-7 years relates to nutritional status at age 6 years. In addition, this study aims to relate child's diet and nutritional status in childhood to child health outcomes at age 8 or 9 years of age. Understanding the dietary factors contributing to these nutritional gaps and the impact on subsequent health outcomes, will help inform future efforts to improve dietary intakes of children at these ages.