

Child Health Research CIO

CHILD HEALTH RESEARCH CHARITABLE INCORPORATED ORGANISATION (CHR CIO) PROGRESS FORM – VACATION STUDENTS

Student's name:	Wing Chit Vincent Chan
Academic Programme:	Genetics and Genomic Medicine
Project title(s):	Investigating gene expression changes and confirmation of methylation status in a mouse model of Silver-Russell syndrome with hypomethylation of Igf2/H19 ICR

1. Lay Summary

What are you trying to do in this studentship?

I aim to investigate gene expression of Silver-Russell syndrome (SRS) with the use of a mouse model. From previous preliminary results, I hope to uncover some genes that may associate with the clinical features seen in SRS patients. The gene expression of these candidate genes would also be validated to ensure the findings are accurate. In addition, the genomic region responsible for SRS would need to be sequenced to validate that the mouse model contain the key features to emulate SRS.

Why is this research important?

SRS is a heterogeneous growth restriction disorder with multiple causes. While the major genetic defects that cause SRS are well-studied, the mechanism of which how various defects can result to the same clinical features is not known.

By studying the gene expression of SRS, downstream affected genes of SRS would be uncovered. The functions of these genes may play a crucial role in leading to the symptoms seen in patients.

2. Value of Your Experience

Of all the lab techniques that I have been exposed to during this period, I find gene enrichment analysis to be the most rewarding. I am now more competent in searching for 'interesting' results from a large dataset. I believe that my training in bioinformatics and would help in my future research projects as high throughput methods become commonplace.