murdoch children's research institute

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Centre of Research Excellence Newborn Medicine

Do you have a passion for preterm birth research and want to work with a world leading team?

PhD Project Opportunity

The Victorian Infant Brain Studies group at The Murdoch Children's Research Institute is seeking a PhD student to join their team on a project investigating the impact of moderate-late preterm (MLP; 32 to <37 weeks' gestation) birth on neurodevelopment, brain development, and respiratory health at 9 years of age. The majority of preterm births are attributed to MLP births, and there is a growing evidence-base demonstrating that children born MLP experience more adverse outcomes in early childhood than their term-born peers. Specifically, children born MLP experience increased respiratory morbidity in infancy and early childhood than their term-born peers. Our previous research has also found that infants born MLP have smaller and less mature brains than term-born infants at term-equivalent age, although less is known about brain changes over time in this population.

Within the larger project, children in the study are wearing a tri-axial accelerometer to measure physical activity, sedentary behaviour and sleep patterns for one week, as well as completing a self-reported physical activity questionnaire. The PhD student will investigate one of the following areas in relation to these activity data:

- The association between physical activity levels and brain function in 9-year-old children born MLP compared with term-born controls. Children are undergoing brain MRI, and the PhD student will be supported by experts in the area of neuroimaging.
- The association between physical activity levels and respiratory function in 9-year-old children born MLP compared with term-born controls. The project contains rich data concerning respiratory health, as children are completing lung function tests and we are collecting data on respiratory symptoms and diagnoses.
- The associations between sleep duration and quality and cognitive/behavioural outcomes in 9-year-old children born MLP compared with term-born controls. We are collecting detailed neuropsychological data, such as IQ, memory and academic achievement, alongside data concerning behavioural problems.

For expressions of interest or for more information, please contact
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Working in partnership with:

murdoch children's research institute

The University of Melbourne

the women's the royal women's hospital victoria australia

Australian Government National Health and Medical Research Council

NHMRC

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