Microbial Biomarkers of Preterm Birth

Research overview

Bacterial infection is highly associated with the earliest preterm births and is typically present in ~40% of all preterm birth cases. Bacteria responsible for infection are believed to primarily reside in the vagina; they migrate from here to the uterus. At present, the only way to detect an infection inside the uterus is to perform an amniocentesis. This is an invasive procedure that has a small associated pregnancy loss rate.

Based upon the recent discovery that cell-free fetal DNA can cross the placenta and enter the maternal bloodstream, we also believe that cell-free microbial DNA may be able to do the same. This would mean that collection of a maternal blood sample could be used to test for an infection inside the uterus. The aim of this project is to compare the microbiological profiles of blood and placenta/membranes from women who deliver at <34 wks GA.

Research highlights

- Ethics approved
    - Recruitment has been underway since early 2015 and to date we have collected samples from one woman who met our highly stringent inclusion criteria

Progress Report

Ethics has been approved and sample collection has begun. We anticipate that sample collection will be completed by December 2016.

THE TEAM

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