



## **Menzies Lunchtime Seminar**

### **Presenter**

**Dr Line Hjort MSc., PhD., Postdoc. – Department of obstetrics, The Copenhagen University Hospital, Denmark**

### **Title**

**“How diabetes in pregnancy can affect the child’s DNA and later health”**

### **When**

**Thursday, 7 November 2019 from 12.00pm – 1.00pm**

### **Where**

**Seminar Room | John Mathews Building (Bldg 58), Royal Darwin Hospital Campus - [view map](#)**

### **Abstract:**

Pregnancies complicated by maternal diabetes not only impact the woman, but also result in exposure of the developing fetus to hyperglycemia. Fetal development and early life are critical periods of susceptibility to environmental exposures with potential to predispose the offspring to later diseases. This is encompassed by the Developmental Origins of Health and Disease (DOHaD) hypothesis<sup>5</sup>. Numerous studies have shown that maternal diabetes increases the risk of long-term adverse health effects in the offspring, including increased risk of type 2 diabetes (T2D) and obesity, though the underlying molecular mechanisms remain unclear.

Epigenetic mechanisms, including DNA methylation, and the telomeres, at the ends of the chromosomes, are widely thought to mediate the effects of early life exposures on later disease risk. I will present data from Danish and African studies, showing that offspring of mothers with diabetes in pregnancy have changes in their epigenetic and telomere length profiles, compared to non-exposed offspring, and further discuss how these changes at the genetic/epigenetic level may be used to identify children at risk of developing disease themselves later in life.

### **Brief biography:**

Dr Line Hjort has a background as human biologist, and has 8 years’ experience working with epigenetics and how these are linked to the fetal environment and risk of developing disease in later life. In particular, She has worked with low birth weight models as well as offspring cohorts affected by overnutrition in pregnancy, and is currently investigating how DNA methylation, non-coding RNA, and telomere length changes may be involved in the pathophysiology of children exposed to maternal diabetes in pregnancy.

\*\* The Menzies seminars are free of charge and open to the general public.

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Meeting number (access code): 572 193 046

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Thursday, November 7, 2019

12:00 pm | Australia Central Time (Darwin, GMT+09:30) | 1 hr

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