MEDIA RELEASE

For immediate release

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Mercy Health scientists awarded $1.1M to develop a preeclampsia blood test

Mercy Health scientists have been awarded $1.1 million from the National Health and Medical Research Council (NHMRC) to develop a new blood test which could identify women at risk of preeclampsia – a disease considered one of the most significant causes of pregnancy complication.

Funding announced today by Federal Minister for Health Greg Hunt will enable the Mercy Health team of scientists and researchers from the Mercy Perinatal centre, led by Associate Professor Tu'uhevaha Kaitu'u-Lino, to screen for novel proteins within a mother's bloodstream which could flag whether she is likely to develop the disease.

"We are grateful and honoured to receive such significant funding," A/Prof Kaitu'u-Lino said.

"Our novel blood tests could be offered throughout Australia and universally. There will be particular interest in regions of South Africa, where preeclampsia is rife and Mercy Health already has a presence.

"Early identification would lead to improved surveillance and personalised care to reduce serious adverse outcomes for both mother and baby.

"It takes us one step closer to our ultimate goal of improving pregnancy outcomes for all women, particularly in low and middle-income countries, where the burden of preeclampsia is particularly devastating," A/Prof Kaitu'u-Lino said.

It is estimated that preeclampsia causes more than half a million perinatal deaths globally every year and 60,000 maternal deaths.

Pregnant women who battle preeclampsia have raised blood pressure and can suffer from significant organ damage, including neurological impairment or stroke, while their babies are more likely to be born preterm, sick and small.

A/Prof Kaitu'u-Lino says while women are checked at each of their antenatal visits for signs and symptoms, at times the disease can even develop between appointments.

"A simple blood test which could identify women at greatest risk would transform clinical care.

"Preeclampsia originates from a failing placenta," A/Prof Kaitu'u-Lino said. "We plan to measure proteins that spill out of the placenta into the mother's bloodstream, so that we can identify which pregnancies need the closest monitoring."

A medical treatment that fights against the disease process without requiring early delivery of the baby would be a major advance.

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Profile/Biography – Associate Professor Tu'uhevaha Kaitu'u-Lino

- A/Prof Kaitu'u-Lino is an outstanding mid-career scientist with acknowledged leadership, experience and scientific skills.
- Her expertise within the field and capacity to lead projects through to completion is exemplified by her numerous publications. Her works have been published on 90 separate occasions, of which she has been the first or last author on 62 per cent of occasions.
- She also has highly developed skills in leading productive personnel - her current team comprises eight staff/students.
- She has demonstrated previous success in biomarker discovery and validation.
- This is evidenced by the team's research on SPINT1 (recently published in *Nature Communications35*) as a novel biomarker for fetal growth restriction.

Pronunciation: A/Prof Tu'uhevaha Kaitu'u-Lino is known and addressed by family, friends and colleagues as Tu'uhe pronounced Too-ay.

Curriculum Vitae

Group Head Diagnostics Discovery and Reverse Translation, Mercy Hospital for Women, University of Melbourne

- PhD awarded from Monash University in 2018
- Research scientist at the Mercy Hospital for Women, University of Melbourne
- Translational scientist working to improve pregnancy outcomes for women and their babies
- Focussed on developing blood tests to identify women at risk of preeclampsia and stillbirth
- Also studying the placenta to better understand why these complications occur, as a means for therapeutic development

Mercy Perinatal

Mercy Perinatal delivers clinical care for mothers with a complicated pregnancy, which can also be referred to as a ‘high-risk’ pregnancy, in the Department of Perinatal Medicine at the Mercy Hospital for Women.

Our multidisciplinary team provides comprehensive counselling and pregnancy care, as well as obstetric imaging, fetal monitoring, and prenatal procedures.

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