



Media Release

women & infants
research foundation

New Federal funding to reduce rates of preterm birth in Aboriginal and Torres Strait Islander women and revolutionise pre-pregnancy care for all Australian women

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New Federal funding is set to significantly improve the outlook for Aboriginal and Torres Strait Islander mothers and their babies that continue to be disproportionately affected by preterm birth.

Minister for Health and Aged Care, the Hon Greg Hunt, recently announced \$239 million in funding for 248 innovative research projects as part of the NHMRC Ideas Grant Scheme, including more than \$2 million to expand a pioneering WA diagnostic test which uses a woman's vaginal bacterial DNA signature to identify those at high risk of preterm birth; the GLU test.

In making the announcement, Minister Hunt said Australia continues to take a lead role in improving the lives of patients around the world through health and medical research.

"These projects demonstrate the outstanding innovation of the health and medical research sector in Australia and offer great promise for future advances in our understanding and management of health challenges."

Chief Investigator and Head of the WIRF Clinical Perinatal Research Laboratories, Dr Matt Payne said bacterial infection in pregnant women continued to be one of the leading causes of early preterm birth.

"This is also one of the hardest to predict, especially in women who are pregnant for the first time, as many of the organisms involved are also bacteria generally considered to be harmless," he said.

"Recently, we developed an innovative diagnostic test capable of identifying up to 45 per cent of women at high risk of spontaneous preterm birth based on mid-gestation vaginal microbiology."

The GLU test uses a specific vaginal bacterial DNA signature to identify these women and currently underpins a large randomised clinical trial for preterm birth prevention, paired with specific antimicrobial and probiotic treatments. This work is being undertaken in urban and peri-urban populations in the Greater Perth Metropolitan region.

"Being born too early remains a huge issue for Aboriginal and Torres Strait Islander mothers and babies and is one of significant disproportion," Dr Payne said.

Between 2016 and 2017, the rate of preterm birth in Aboriginal and Torres Strait Islander babies reached almost 15 per cent. Aboriginal and Torres Strait Islander babies are at least twice as likely to be born too early, especially in regional and remote communities.

"The next steps are to work with Aboriginal and Torres Strait Islander women and communities to aid in developing similar tools to predict women at risk of spontaneous preterm birth. Our aim is to work in close partnerships with Aboriginal and Torres Strait Islander communities and their healthcare providers to determine if vaginal bacterial DNA signatures are one such tool."

The research builds upon strong collaborations forged over the past two years between Dr Payne's team at the University of Western Australia, and clinicians and midwives at the Geraldton Regional Aboriginal Medical Service, Royal Darwin Hospital, Menzies School of Health Research and Gove District Hospital. As a result of this, a core component of the research involves extensive community engagement, particularly with remote communities within the Northern Territory in which the burden of preterm birth is disproportionately high.



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Dr Payne said the funding would also allow the study team to develop a simple pre-pregnancy diagnostic test for prediction of preterm birth risk in all Australian women around the time of conception.

"Considering we have already shown that a woman's vaginal microbiology in pregnancy is a powerful tool for prediction of preterm birth risk, imagine if we could take this principle and apply it to the pre-conception period. If we already know that a woman's vaginal microbiota is non-optimal when they are trying to conceive, we can take steps to modify this to one which is more favourable before conception occurs using a number of safe interventions; vaginal probiotics, for example."

Currently, beyond a previous or family history of preterm birth, we have limited tools at our disposal to identify women who are most at risk of delivering early. The most common diagnostic test for prediction of preterm birth is a mid-gestation swab to detect fetal fibronectin and there are significant limitations to this test.

"Our approach plans to use vaginal microbiology to tackle the problem from a different angle by identifying women who are at risk of delivering too early before conception has even occurred. This unique strategy would result in women being actively rather than passively, involved in predicting their risk of preterm delivery. A positive test result would allow women to take the necessary steps, with the assistance of their health practitioners, to reduce their risk and optimise targeting of interventions. It will enable clinicians to provide women with more effective and widely-applicable treatments."

WIRF Chief Scientific Director and Chair of the Australian Preterm Birth Prevention Alliance, Professor John Newnham AM said that the findings from the expansion of the GLU test would significantly bolster the coordinated national effort underway to safely lower the rates of early birth.

"Under the auspices of the Alliance, we are working in each Australian state and territory to lower rates of preterm birth using the key interventions developed as part of our pioneering Western Australian trials," Prof Newnham said.

"By identifying prevention strategies that are effective and feasible for each health care system, and assisting with their implementation, we are seeing some truly impressive results."

ENDS

Media opportunity:

Dr Matt Payne is available for interview and follow-up media comment.

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Background:

The Women and Infants Research Foundation

The Women & Infants Research Foundation is one of Australia's leading medical research institutes dedicated to improving the health of women and infants. We focus our research and programs across four principal areas: the prevention of preterm birth, gynaecological cancers, women's mental health, and the development of an Artificial Womb. Our research and programs have directly contributed to a number of improved clinical practices and health outcomes.