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Delivering hope

Herald Sun, Melbourne



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Victoria leading the fight for safer pregnancies

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Farhan Lukman and Marina Nasution with baby Lyra after their pre-eclampsia drama. Picture: David Caird

EXCLUSIVE ROBYN RILEY

VICTORIAN researchers are leading an international team to identify and treat women with the life-threatening disease pre-eclampsia when it develops late in pregnancy.

Pre-eclampsia is a serious disease that causes high blood pressure and other complications for a mother and baby, affecting up to 8 per cent of pregnancies.

In a world-first the team, led by researchers from the University of Melbourne and the Royal Women's Hospital, has identified abnormalities in the placenta many weeks before diagnosis of term pre-eclampsia.

Melbourne scientists Dr

Ellen Menkhorst and Professor Eva Dimitriadis are leading the research, which

has been using rare clinical samples of placental biopsies collected by top fetal medicine expert Professor Kypros Nicolaides at King's College London.

Dr Menkhorst said that while advances had been made in predicting and preventing mothers at risk earlier in pregnancy (known as preterm pre-eclampsia),

identifying and treating those at risk in the final weeks (called term pre-eclampsia) is limited.

She said women who do survive term pre-eclampsia or the rare form that develops after birth may have a reduced life expectancy, with

increased risk of stroke, cardiovascular disease and diabetes. For their babies, it can



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prove fatal or increase the risk of neurodevelopmental disability, and heart and metabolic disease later in life.

Dr Menkhorst described the biopsies as a unique “time capsule” providing clues to placental damage that may cause the syndrome.

She said that until now it was thought the placenta was not a major cause of the term disease, but the team’s research suggested otherwise.

“The clinical samples are from women who had a healthy pregnancy and those who developed pre-eclampsia,” Dr Menkhorst said. “They are giving us pieces of

the puzzle to help us understand what is causing it.”

Dr Menkhorst was a lead author on a paper in Nature Reviews Disease Primers that called for more research and clinical trials to help identify and treat pre-eclampsia in late pregnancy.

She said it is a global health problem that causes the deaths of more than 70,000 women and 500,000 babies worldwide.

Early pregnancy screening combined with daily low-dose aspirin started before 16 weeks’ gestation can help prevent preterm pre-eclampsia, she said. “By contrast, the prediction of term and post-partum (after delivery) pre-eclampsia is limited and there are no preventive treatments.”

In December Dr Menkhorst was awarded a National Health and Medical Research Council Ideas Grant, worth \$1.22m over three years, to investigate ways to uncover and detect placental dysfunction in term pre-eclampsia.

This project, she said, would identify early pregnancy biomarkers to help detect women at risk.

“I want to show that term

pre-eclampsia is brought about by early changes in the placenta,” she said. “This could lead to a test and medications to treat it.”

Dr Menkhorst will present the research at the International Society for Reproductive Investigation meeting in Brisbane this month.