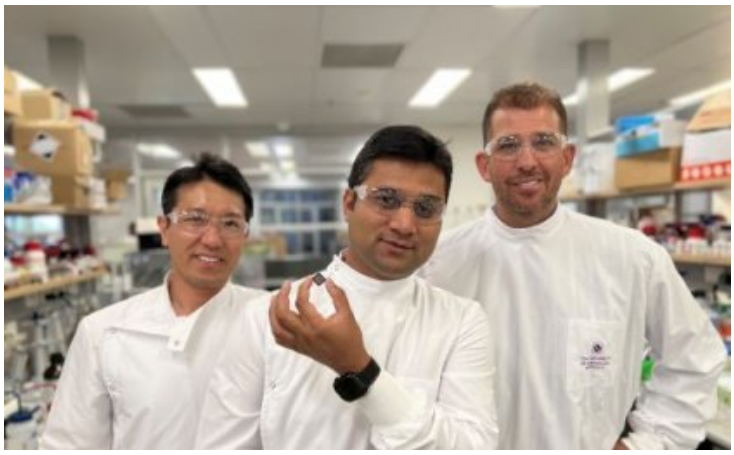
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ASIA EDITION

Australia designs new rapid sensor to detect pregnancy complications

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The researchers' next study will include a clinical trial involving at least 2000 women



Australia's University of Queensland (UQ) researchers have developed a new rapid sensor that can detect pregnancy complications, such as gestational diabetes, preterm birth risks and hypertension, as early as 11 weeks, with a simple blood test.

The ‘nanoflower sensor’ which works by screening blood samples for cell biomarkers could help reduce neonatal hospital admissions and save the healthcare system millions each year.

Professor Carlos Salomon Gallo from UQ’s Centre for Clinical Research said the sensor was able to detect health complications that usually aren't picked up until the second or third trimesters.

The technology analyses extracellular vesicles, known as the ‘body’s text messages', which carry critical signals between maternal and fetal cells during pregnancy.

Statistics from Australian Institute of Health and Welfare show about 30,000 babies born in Australia each year experience growth and developmental impairments due to pregnancy complications.

Professor Salomon Gallo said the technology could save the healthcare system millions annually by reducing neonatal intensive care unit admissions, which cost about $5000-$10,000 per day, and prevent emergency interventions, including caesarean sections which cost about $10,000-$20,000 each.

The study is a collaboration between UQ’s Centre for Clinical Research, AIBN and Ochsner Medical Centre in New Orleans, with support by National Health and Medical Research Council , Cancer Council Queensland, JST-ERATO Yamauchi Materials Space-Tectonics Project and ARC Australian Laureate Fellowship.