

New treatment hope for pregnant women with high blood pressure

4 June 2015, by David Stacey



Exciting research from the Harry Perkins Institute of Medical Research has found new answers for pregnant women with high blood pressure, which is also a characteristic of the serious condition, pre-eclampsia.

Pre-eclampsia is a problem in 5 to 10 per cent of all pregnancies in Australia and can threaten the lives of the mother and unborn child.

There is currently no cure except delivering the baby, which can cause health problems for the child if the birth is pre-term. Most traditional medications for [high blood pressure](#), or [hypertension](#), are harmful for the foetus.

Professor Ruth Ganss, head of the Vascular Biology and Stromal Targeting Laboratory at the Perkins said [pregnant women](#) produced more blood and fluid and their blood vessels needed to relax and expand to meet the baby's demands.

"When the vessels stay constricted and the mother experiences hypertension, the mother and the placenta can't provide enough nutrients for the foetus," Professor Ganss said.

"Now, our research on a regulator called RGS5 has led to a new understanding about the somewhat mysterious process which makes blood vessels constrict or relax during pregnancy.

"It also shows that that a woman with no previous experience of high blood pressure can become hypertensive during pregnancy which then can cause pre-eclampsia."

Professor Ganss said the research had opened the door for a potential treatment, using an existing drug which is currently being used to help female infertility.

The drug works to relax abnormally constricted blood vessels and allows more blood to supply the demands of the foetus. Most importantly, work in the laboratory suggests that it would not be toxic for the [foetus](#) like other [blood pressure medication](#).

"If this medication was used for short weeks during pregnancy, this would allow women at risk to keep their [blood pressure](#) under control until they reach full term, which would have huge benefits for the child," she said.

The drug would need to be tested in clinical trials. The new research by Professor Ganss's laboratory ties in with her work on cancer and the way [blood vessels](#) remodel themselves to feed tumours.

The paper, Regulator of G protein signalling 5 is a determinant of gestational hypertension and preeclampsia, has been published in the high impact factor journal *Science Translational Medicine*.

More information: *Sci Transl Med* 3 June 2015: Vol. 7, Issue 290, p. 290ra88 [DOI: 10.1126/scitranslmed.aaa5038](#)

Provided by University of Western Australia

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