

Study suggests infant deaths can be prevented

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An international team of tropical medicine researchers have discovered a potential method for preventing low birth weight in babies born to pregnant women who are exposed to malaria. Low birth weight is the leading cause of infant death globally.

The findings of *Malaria Impairs Placental Vascular Development*, published today online ahead of print in *Cell Host & Microbe*, showed that the protein C5a and its receptor, C5aR, seem to control the blood vessel development in the mother's placenta. Without adequate blood vessels in the placenta, the baby's growth can't be sustained and the baby is born [low birth weight](#).

"There are few things more important to the human species than healthy pregnancies, yet we have a poor understanding of what causes adverse birth outcomes such as prematurity or stillbirths", says principal investigator, Dr. Kevin Kain, Director, SAR Labs, Sandra Rotman Center for Global Health, University Health Network and the University of Toronto. "These studies focus on women in Africa who have malaria, but may provide a better understanding of why poor birth outcomes occur, and how we might prevent them, anywhere in the world."

Researchers determined that excessive activation of a complement protein C5 occurs in [pregnant women](#) with [malaria](#) and alters the ability of the placenta to grow blood vessels required to sustain the developing baby.

When C5a-C5aR was blocked in genetic models, researchers found it increased placental blood vessels and improved survival and growth of the fetus. They replicated the study using a drug that blocked C5a with the same results.

Provided by University Health Network

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