

Breast milk calcium mystery revealed

7 May 2015, by Robert Burgin



Carolina and New York, is published as the Essential role of Orai1 store-operated calcium channels in lactation in *Proceedings of the National Academy of Sciences*.

More information: "Essential role of Orai1 store-operated calcium channels in lactation." *PNAS* 2015 112 (18) 5827-5832; published ahead of print April 20, 2015, [DOI: 10.1073/pnas.1502264112](https://doi.org/10.1073/pnas.1502264112)

Provided by University of Queensland

UQ researchers have discovered how calcium is transferred into mother's milk.

Breakthrough research at the University of Queensland has unlocked a mysterious process essential to breastfeeding.

School of Pharmacy trio Dr Felicity Davis, Professor Gregory Monteith and Professor Sarah Roberts-Thomson have combined to explain how calcium is transferred into mother's milk.

The discovery could have implications for [cancer treatment](#).

"Using rodent models, we have demonstrated that at least 50 per cent of [calcium ions](#) in a mother's milk comes from one specific protein called Orai1," Dr Davis said.

"There's also an unanticipated revelation that Orai1 is a master regulator of milk ejection and pivotal to the survival of mammalian young.

"Inadvertently, a better understanding of mammary gland biology and lactation will help us identify processes that may be important in some breast cancers."

The study, which involved researchers in North

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