Predictors of human milk immune responses to gastrointestinal bacteria

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Introduction

Human milk benefits maternal and child health through multiple immune factors. Antibodies, cytokines, white blood cells, and antimicrobial factors protect infants against infection and influence immune system development [1]. We have developed a protocol to describe milk *in vitro* immune responses for use across a range of field conditions to support further investigation of the immune system of milk.

We used this protocol to describe milk *in vitro* immune responses to gastrointestinal bacteria among women in upstate New York. Here, we evaluate predictors of pro-inflammatory responses to *Salmonella enterica*, a gastrointestinal pathogen. We predicted stronger pro-inflammatory responses associated with:

- infectious disease symptoms in mothers or children [2]
- maternal immune-mediated disease (allergy or autoimmunity)
- maternal investment [3]

Methods

Findings

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References:
[1] Goldman AS. 2007. *Breastfeed Med* 2(4):195-204.
[2] Breakey AA et al. 2015. *Evol Med Pub Health* 2015(1):21-31.
[3] Wander K, Mattison SM. 2013. *Proc R Soc B* 280(1768):20131359.