

# Breastfeeding reduces immune activation in primary respiratory syncytial virus infection

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In epidemiological studies of respiratory syncytial virus (RSV) disease, breast milk has proven to be beneficial. However, a host mechanism that is associated with both disease severity and that is capable of being modulated by breast milk, has not yet been identified. Both the predominance of interleukin-10 (IL-10) over interferon- $\gamma$  (IFN- $\gamma$ ), and high soluble interleukin-2 receptor antagonist (sCD25) concentrations have been associated with RSV severity. We explored if they were modulated by breastfeeding. Previously healthy Chilean infants from Santiago with RSV infection (n = 349) were consecutively enrolled in the study if they were term births, without underlying pathology. Breastfeeding was described as absent or present, and if partial or exclusive. Immune response was expressed through plasma concentrations of IFN- $\gamma$ , IL-10 and sCD25, obtained both in the acute and the recovery phase. The acute phase sCD25 concentrations were lower in the breastfed (13.8 ng/mL, n = 133), compared