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Diet influence in proteins of breast milk from different origins

Ruben Lopez-Nicolas, Diana C Figueredo, Lorena Fernandez-Palacios, Gaspar Ros-Berruazo and Carmen Frontela-Saseta
University of Murcia, Spain

Breast feeding has numerous health benefits, protecting against a wide range of immediate and longer term adverse health outcomes; these benefits can be attributed to the bioactive proteins present in human milk among other factors. We studied 2 bioactive proteins: Lactoferrin (LF) and haptocorrin (HC). The most common purpose known for LF and HC is the assistance in the absorption of iron and vitamin B12, respectively. But less known roles for these proteins are their antimicrobial activity, prebiotic effect, involvement in immune-competence and promotion of gastrointestinal tract development. We determined the concentration of lactoferrin and haptocorrin of breast milk from different mothers from Egypt, Honduras and Spain. The study was designed to compare these concentrations and determine if diet is a key factor in breast milk composition. Several breast milk samples were analyzed from each point of origin during the 2nd to 4th month after birth. The procedure used for the analysis of LF and HC was the Western-Blot. The results showed that lactoferrin is present in all three countries being Spain the country with most of this protein. Meanwhile, haptocorrin was the most present protein in Egypt and Honduras. We can conclude that the differences observed on the protein content of breast milk in the three countries could be due to the different diets consumed by mothers.

Biography

Ruben Lopez-Nicolas has completed his PhD at the University of Murcia (2017) and Postdoctoral studies in several reputed centres as ProDigest, Rowett Institute for Nutrition and Health, and University of Leeds. He is a young researcher who has published numerous high quality papers in different scientific journals of Molecular Biology and Human Nutrition and has been invited as speaker in several national and international conferences. Nowadays, he is a member of ERC Expert Committee to evaluate "Starting Grants", as well as member of Young Researcher Committee in SATIN (an EU project from 7th Framework Programme).

rubenln@um.es

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