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Expression of microRNA-3148 and its correlation with copy number variation of the *TLR7* gene in Mayan women with systemic lupus erythematosus from Mexico

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Systemic lupus erythematosus (SLE) is a multisystem autoimmune disease characterized by autoantibody production. It is a multifactorial disease with a variety of clinical manifestations and it is found most often in women. Genetic factors have been associated with the development of SLE. Copy number variations (CNV) of genes as well as epigenetic factors such as microRNAs (miR) have been involved. The aim of this study was to correlate the expression of miR-3148 with CNV of *TLR7* gene in Mayan women with systemic lupus erythematosus from Yucatán. We studied 100 women diagnosed with SLE and 100 healthy women as a control group. The CNV and miR-3148, was determined by real-time PCR (Q-PCR) using TaqMan probes. The results indicate that 17% of the patients present more than two copies of the *TLR7* gene, with respect to the controls. Correlation was found between CNV and *TLR7* mRNA ($r = 0.4080$, $n = 0.0016$) and between miR-3148 and mRNA ($r = 0.5950$, $p = 0.0002$) in the patients, suggesting that both variables can be risk markers to develop the disease.

Biography

Guillermo Valencia Pacheco has a PhD in Biomedical Sciences (Immunology). He is a Research Professor at the Research Center of the University of Yucatan and Head of the Hematology Laboratory. His line of research is in autoimmune diseases. He teaches Immunology at pre and postgraduate level. He has published more than 10 articles in indexed journals. He is a member of the Mexican Society of Immunology.

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