Correlation between miRNA-16 and DENV-4 expression in human cells

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The Dengue virus (VDEN) has 4 serotypes and its one arbovirus medical importance. There are approximately 100 million cases reported each year in more than 100 countries in the world, with up to 22000 deaths. In Brazil were reported more than 750.00 in the first quarter. Technological advances are showing that miRNAs have important role in the maintenance of the viral replication cycle inside human cells, acting in the viral genome or in cellular mRNAs. This work Proposed to evaluate the expression of miRNA 16 in cell lines of human hepatocytes (HepG2 and Huh7.5) infected by VDEN4 relating them with the viral replication process. The quantification of viral load was used the method of RT-qPCR. The quantification of mir-16 in selected targets was through a RT-qPCR using Taqman and specific initiators. After analysis it was possible to detect that the peak of viral infection occurred 72 hours post infection in two cell lines used in the study. The rates of miRNA 16 demonstrated that they had a significant statistically expression with 72 hours post infection. The mir-16 has an action linked to cellular apoptotic processes, since same active eventually apoptosis pathway caspases dependent. The observer that there is a link between this miRNA and the viral infection process, so this small RNA gives indications of being regulated DENV-4 during the viral replicate process.

Palavra-Chave: MicroRNA, Dengue Virus, Apoptosis

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