TITLE: QUANTITATIVE DIAGNOSIS OF ZIKA VIRUS BY STANDARDIZATION WITH SYBR GREEN

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ABSTRACT:
The Zika virus (ZIKV) is the etiological agent of fever zika, caused in humans and transmitted by mosquitoes of the *Aedes* genus. Currently, little is known about its pathogenesis, but has already been detected in saliva, urine, amniotic fluid and semen. About 80% of the outbreaks caused are asymptomatic. However, zika fever is a disease that lasts approximately one week and presents as main symptoms: fever, arthralgia, myalgia, headache, rash, conjunctivitis and malaise, with a chance of neurological complications such as Guillain-Barré syndrome and microcephaly. Its diagnosis is made mainly through virus isolation via culture of cells and serological methods to confirm the identity of ZIKV, a long process that makes the treatment and epidemiological control of the disease more difficult. However, the best way to confirm the disease is through molecular diagnosis, such as the polymerase chain reaction (PCR) with reverse transcription PCR (RT-PCR) which has provided a rapid and sensitive method for identification and early detection of ZIKV. This work aims to present a new pair of oligonucleotides for the quantitative diagnosis of viral load of the Zika virus based on high sensitivity regions described in the literature, using the RT-PCR and quantitative PCR (qPCR) techniques the by SYBR Green assay. In this work, the protocol using the pair of primers located in the junction region of the capsid and pre-Membrane (C-prM) genes of the ZIKV in the RT-PCR and qPCR with SYBR Green proved to be a more sensitive method and with efficiency higher than 90%, for the analysis of samples. The results obtained demonstrate that the methodology used in the present work is capable of performing the diagnosis of Zika virus without cross-recognition with other viruses and can be used in the routine detections of laboratories.

Keywords: RT-PCR, qPCR, Zika virus, Sybr Green and Diagnostic

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