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## EPIGENETIC MODIFICATION ASSOCIATED WITH *B7-H1* IN CHALLENGE VIRUS STANDARD STRAIN (CVS) AND NIGERIAN STREET RABIES VIRUS INFECTED MICE.

**Ojedapo Comfort. E**

University of Lagos, Nigeria

**S**tatement of Research Problem: Rabies virus causes 55,000 deaths annually. The disease is preventable provided post-exposure prophylaxis (PEP) treatment is initiated timely; yet, it still poses a threat due to a number of reasons, such as under reporting and ignorance. The mechanism by which the rabies virus up regulates *B7-H1* which favors the infection, has not been fully understood and there is presently no cure or means of managing the disease once it has reached the brain. The Purpose of this study is to investigate the presence of epigenetic alterations involved in overexpression of *B7-H1* in host cells. Methodology & Theoretical Orientation: Mouse inoculation test and direct fluorescent antibody test methods were used for the animal studies. A real time quantitative PCR was used to measure expression levels of *B7-H1* and methylation specific quantitative PCR and ELISA was used for methylation analysis of *B7-H1*. Findings: From the result, there was an increase in mRNA expression of *B7-H1* as the disease progressed but there was no significant difference in the DNA methylation status and also *DNMT* and *HAT* levels between the infected and control group. Conclusion & significance: There is an overexpression of *B7-H1* as the disease progresses. However, the overexpression of *B7-H1* is not as a result of change in DNA methylation. Recommendations are made to check for other epigenetic modifications.