

Time Series Analysis of Leptospirosis Incidence and Its Relationship with the Rainfall Index in the City of Recife – PE, 2007 - 2016

**Jesy Karolayne Sales dos Santos¹, Carlos Raphael Araújo Daniel²,
André Luiz Pinto dos Santos³, Guilherme Rocha Moreira⁴**

Abstract: This paper goal is time series analysis and beta regression in the incidence of leptospirosis and its relationship with the rainfall indexes in the city of Recife from 2007 to 2016. The analysis resulted in better performance of the predictions of two proposed models, SARIMA and beta regression.

Keywords: Leptospirosis, rainfall, times series analysis, forecasting performance

¹ Departamento de Estatística e Ciência Atuarial - UFS. email: jesy.sales.comunic@gmail.com.

² Departamento de Estatística e Ciência Atuarial - UFS. email: raphael_crad@yahoo.com.br

³ Universidade Federal Rural de Pernambuco-PPGBEA-UFRPE. email: andredefensor@hotmail.com

⁴ Universidade Federal Rural de Pernambuco-PPGBEA-UFRPE. email: guirocham@gmail.com