### **Accepted Manuscript**

Stochastic asymptotic analysis of a multi-host model with vector transmission

Manuel Adrian Acuña-Zegarra, Saúl Díaz-Infante



 PII:
 S0378-4371(18)30829-X

 DOI:
 https://doi.org/10.1016/j.physa.2018.06.105

 Reference:
 PHYSA 19799

To appear in: *Physica A* 

Received date : 26 August 2017 Revised date : 4 April 2018

Please cite this article as: M.A. Acuña-Zegarra, S. Díaz-Infante, Stochastic asymptotic analysis of a multi-host model with vector transmission, *Physica A* (2018), https://doi.org/10.1016/j.physa.2018.06.105

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

#### \*Highlights (for review)

### ACCEPTED MANUSCRIPT

- We formulate a vector-multi-host epidemic model with a stochastic perturbation.
- The model has a unique global and invariant solution justified by a Lyapunov result.
- Sufficient criteria to assure extinction and persistence is provided.
- We perform a simulation to extend and illustrate the main results.

Download English Version:

# https://daneshyari.com/en/article/7374616

Download Persian Version:

# https://daneshyari.com/article/7374616

Daneshyari.com