### Accepted Manuscript

Title: K48-linked polyubiquitination of dengue virus NS1 protein inhibits its interaction with the viral partner NS4B

Authors: Maria Isabel Giraldo, Oscar Vargas-Cuartas, Juan Carlos Gallego-Gomez, Pei-Yong Shi, Leonardo Padilla-Sanabria, Jhon Carlos Castaño-Osorio, Ricardo Rajsbaum

PII: S0168-1702(17)30582-8

DOI: https://doi.org/10.1016/j.virusres.2017.12.013

Reference: VIRUS 97318

To appear in: Virus Research

Received date: 13-9-2017 Revised date: 22-12-2017 Accepted date: 29-12-2017

Please cite this article as: Giraldo, Maria Isabel, Vargas-Cuartas, Oscar, Gallego-Gomez, Juan Carlos, Shi, Pei-Yong, Padilla-Sanabria, Leonardo, Castaño-Osorio, Jhon Carlos, Rajsbaum, Ricardo, K48-linked polyubiquitination of dengue virus NS1 protein inhibits its interaction with the viral partner NS4B.Virus Research https://doi.org/10.1016/j.virusres.2017.12.013

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.



## ACCEPTED MANUSCRIPT

# K48-linked polyubiquitination of dengue virus NS1 protein inhibits its interaction with the viral partner NS4B

Maria Isabel Giraldo<sup>1,4</sup>, Oscar Vargas-Cuartas<sup>1</sup>, Juan Carlos Gallego-Gomez<sup>2</sup>, Pei-Yong Shi<sup>3</sup>, Leonardo Padilla-Sanabria<sup>1</sup>, Jhon Carlos Castaño-Osorio<sup>1</sup>, and Ricardo Rajsbaum<sup>4,5\*</sup>

Maria Isabel Giraldo<sup>1,4</sup>, migirald@utmb.edu

Oscar Vargas-Cuartas<sup>1</sup>, ovargascuartas@gmail.com

Juan Carlos Gallego-Gomez<sup>2</sup>, carlos.gallego@udea.edu.co

Pei-Yong Shi<sup>3</sup>, peshi@utmb.edu

Leonardo Padilla-Sanabria<sup>1</sup>, lpadilla@uniquindio.edu.co

Jhon Carlos Castaño-Osorio<sup>1</sup>, jhoncarlos@uniquindio.edu.co

Ricardo Rajsbaum<sup>4,5\*</sup>, rirajsba@utmb.edu

<sup>1</sup>Centro de Investigaciones Biomédicas, Universidad del Quindío, Cra 15 Cl 12N Armenia, Colombia, <sup>2</sup>Grupo de Medicina Molecular y de Traslación, Universidad de Antioquia, Cra. 51 D No. 62 – 29, Medellin, Colombia, <sup>3</sup>Department of Biochemistry and Molecular Biology, <sup>4</sup>Department of Microbiology and Immunology, and <sup>5</sup>Institute for Human Infections and Immunity, University of Texas Medical Branch, Galveston, Texas, USA.

\*Corresponding author. Mailing address: Department of Microbiology and Immunology,

University of Texas Medical Branch, 301 University Blvd, Galveston, TX, 77555, USA.

Phone: (409) 772-4917. E-mail: rirajsba@utmb.edu

#### Highlights

- Bioinformatics and mass spectrometry analysis identified ubiquitination of multiple lysine residues on DENV-NS1.
- Dengue NS1 undergoes modification by K48-linked polyubiquitin chains.
- K189, a lysine residue previously shown to be important for efficient DENV replication, was identified as a ubiquitination site on DENV-NS1
- Ubiquitin deconjugation of NS1 reduces NS1 interaction with the viral protein NS4B.

#### Download English Version:

# https://daneshyari.com/en/article/8751922

Download Persian Version:

https://daneshyari.com/article/8751922

<u>Daneshyari.com</u>