

## **A Vaccine Based on a Modified Vaccinia Virus Ankara Vector Expressing Zika Virus Structural Proteins Controls Zika Virus Replication in Mice**

Patricia Pérez<sup>a</sup>, María Q. Marín<sup>a</sup>, Adrián Lázaro-Frías<sup>a</sup>, Nereida Jiménez de Oya<sup>b</sup>, Ana-Belén Blázquez<sup>b</sup>, Estela Escribano-Romero<sup>b</sup>, Carlos Óscar S. Sorzano<sup>c</sup>, Javier Ortego<sup>d</sup>, Juan-Carlos Sáiz<sup>b</sup>, Mariano Esteban<sup>a#</sup>, Miguel A. Martín-Acebes<sup>b#</sup> and Juan García-Arriaza<sup>a#</sup>

<sup>a</sup> Department of Molecular and Cellular Biology, Centro Nacional de Biotecnología (CNB), Consejo Superior de Investigaciones Científicas (CSIC), Madrid, Spain.

<sup>b</sup> Department of Biotechnology, Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (INIA), Madrid, Spain.

<sup>c</sup> Biocomputing Unit, Centro Nacional de Biotecnología (CNB), Consejo Superior de Investigaciones Científicas (CSIC), Madrid, Spain.

<sup>d</sup> Centro de Investigación en Sanidad Animal, INIA-CISA, Valdeolmos, Madrid, Spain.

#Address correspondence to Mariano Esteban ([mesteban@cnb.csic.es](mailto:mesteban@cnb.csic.es)), Miguel A. Martín-Acebes ([martin.mangel@inia.es](mailto:martin.mangel@inia.es)) and Juan García-Arriaza ([jfgarcia@cnb.csic.es](mailto:jfgarcia@cnb.csic.es))

	Total amount of splenocytes	CD8 (Total number)	CD8 (Total ZIKV-specific response)	CD107+ IFN $\gamma$ +TNF $\alpha$ +IL-2	CD107+ IFN $\gamma$ +TNF $\alpha$	CD107+ IFN $\gamma$	CD107+ TNF $\alpha$	CD107	Total CD107	Total IFN $\gamma$	Total IL-2	Total TNF $\alpha$
MVA-ZIKV / MVA-ZIKV	176,400,000	20,072,141	952,005 (4.74%)	54,934 (0.27%)	258,797 (1.29%)	208,058 (1.04%)	18,200 (0.09%)	412,017 (2.05%)	952,005 (4.74%)	521,789 (2.60%)	54,934 (0.27%)	331,931 (1.65%)
MVA-WT / MVA-WT	236,400,000	26,819,423	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)

**Table S1. Absolute numbers of ZIKV-specific CD8<sup>+</sup> T cells induced in mice immunized with MVA-ZIKV or MVA-WT.** The values represent the estimated absolute numbers of splenocytes, CD8<sup>+</sup> T cells and ZIKV-specific CD8<sup>+</sup> T cells producing CD107a and/or IFN- $\gamma$  and/or TNF- $\alpha$  and/or IL-2 against the ZIKV E protein peptide pool, obtained from Balb/c mice immunized with MVA-ZIKV or MVA-WT. The percentages are included between brackets, and are also represented in Fig. 5.