

Supplementary Information for:

Carbohydrate-Mediated Interactions Between Chloroviruses and the Immune System

Immacolata Speciale¹, Anna Notaro¹, Sven Bruijns², Yvette van Kooyk², Ahmed Esmael^{3,4}, Antonio Molinaro¹, Fabio Balzarini², Ernesto Rodriguez², Thomas M. Petro⁵, Irina V Agarkova⁴, Gary L Pattee⁶, James L Van Etten⁴, Cristina De Castro^{1*} and Fabrizio Chiodo^{2,7*}

¹Department of Chemical Sciences, University of Napoli, via Cintia 21, 80126 Napoli, Italy

²Department of Molecular Cell Biology and Immunology, Amsterdam UMC, Vrije Universiteit Amsterdam, Amsterdam, The Netherlands, 1081 HV.

³Botany and Microbiology Department, Faculty of Science, Benha University, Benha 13518, Egypt.

⁴Department of Plant Pathology and Nebraska Center for Virology, University of Nebraska-Lincoln, Lincoln NE 69583-0900, United States.

⁵Department of Oral Biology, University of Nebraska Medical Center, Lincoln, NE, United States.

⁶Bryan Health Network, 2631 S. 70th Street, Lincoln, NE 68506 and University of Nebraska Medical Center, Omaha, NE 68198, United States.

⁷Institute of Biomolecular Chemistry, National Research Council (CNR), Pozzuoli, Napoli, Italy

*corresponding authors: Fabrizio Chiodo (f.chiodo@icb.cnr.it) and Cristina De Castro (decastro@unina.it)

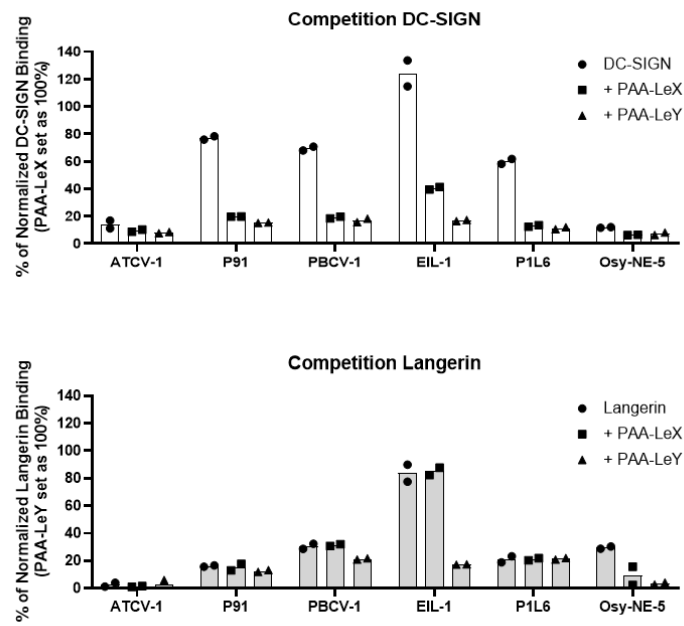


Fig. S1: DC-SIGN and Langerin binding-competition assay. DC-SIGN and Langerin were pre-incubated with 10 ug/mL of PAA-LeX or PAA-LeY for 30 minutes at room temperature. After the pre-incubation, lectins were added to the viral glycoproteins coated ELISA wells. The experiments were performed in duplicate, and data are expressed as % of lectins binding setting the PAA-LeX or PAA-LeY as 100%. Error bars indicate standard deviations.

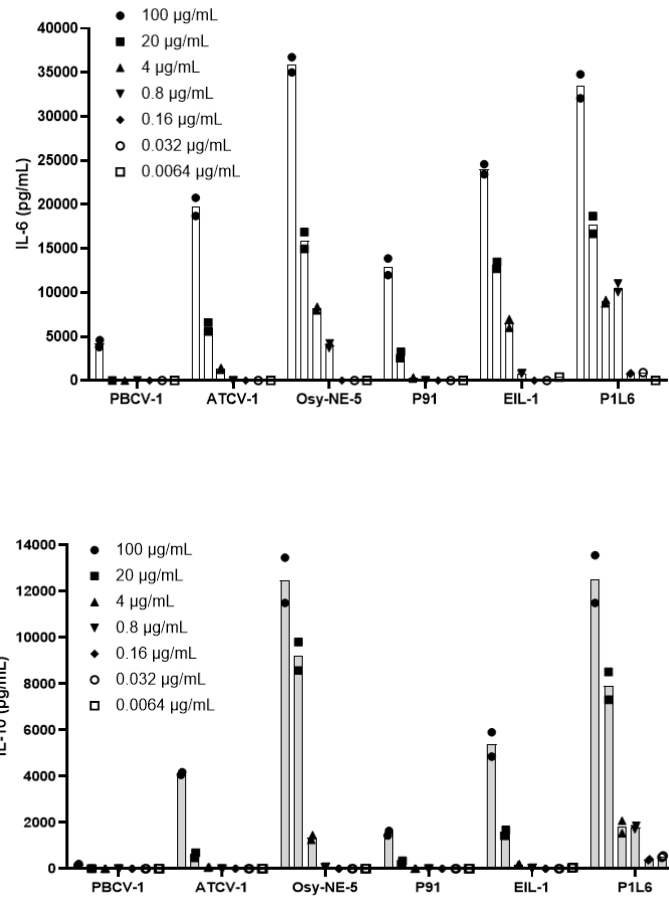


Fig S2: IL-6 (upper panel) and IL-10 (lower panel) secretion from human monocytes-derived dendritic cells (n=2) stimulated with different concentration of the studied viral glycoproteins detected via ELISA in the supernatants after 20 h stimulation. Mean values from two different experiments (two different human donors) are reported. Error bars indicate standard deviations.