

Short CV: José A. Villadangos

Jose Villadangos is a Professor of the University of Melbourne with a dual appointment in the Department of Microbiology and Immunology at the Peter Doherty Institute and the Department of Biochemistry and Molecular Biology at the Bio21 Institute. Jose obtained his Ph. D. from the Universidad Autonoma de Madrid in 1994. Subsequently he trained at MIT (Cambridge, USA), Harvard Medical School (Boston, USA), and The Walter and Eliza Hall Institute (WEHI, Melbourne, Australia). He started his own laboratory at WEHI in 2001 and moved to The University of Melbourne in 2011.

José has authored over 120 original articles, reviews and book chapters. He has received funding from the Human Frontiers Science Program, the Leukemia and Lymphoma Society, the Cancer Research Institute, the Anti-Cancer Council, the National Health and Medical Research Council of Australia and the Australian Research Council. José is the Editor-in-Chief of *Molecular Immunology* and was the President of the *International Congress of Immunology* 2016 held in Melbourne. He is an *Honorary Life Member* and recipient of the *Derek Rowley Medal* of the *Australasian Society for Immunology*.

The current research interests of the Villadangos laboratory include: (i) Mechanisms of antigen presentation by classical and non-classical MHC molecules; (ii) The development and regulation of dendritic cell functions; (ii) Regulation of membrane proteostasis by ubiquitination; (iii) Adoptive T cell therapy against cancer; (iv) Anti-viral immunity.

Selected Publications (Primary, past five years only)

A. Roquilly, H. E. McWilliam, C. Jacqueline, Z. Tian, R. Cinotti, M. Rimbart, L. Wakim, I. Caminschi, M. H. Lahoud, G. T. Belz, A. Kallies, J. D. Mintern, K. Asehnoune, J. A. Villadangos. 2017. Local modulation of antigen presenting cell development after resolution of pneumonia induces long-term susceptibility to secondary infections. *Immunity* 47:135-147.

H. Liu, R. Darwiche, J. Guan, V. Vuong, S. Ishido, N L. La Gruta, D. H. Gray, J. A. Villadangos* and J. D. Mintern*. 2016. Ubiquitin ligase MARCH 8 cooperates with CD83 to control surface MHC II expression in thymic epithelium and CD4 T cell selection. *J. Exp. Med.* 213: 1695-1703.

H. E. McWilliam, S. B.G. Eckle, A. Theodossis, L. Liu, Z. Chen, J. M. Wubben, D. P. Fairlie, R. A. Strugnell, J. D. Mintern, J. McCluskey, J. Rossjohn and J. A. Villadangos. 2016. The intracellular pathway for the presentation of vitamin B-related antigens by the antigen-presenting molecule MR1. *Nat. Immunol.* 17: 531-537

J. D. Mintern, C. Macri, W. J. Chin, S. E. Panozza, E. Segura, N. L. Patterson, P. Zeller, D. Bourges, S. Bedoui, P. J. McMillan, A. Idris, C. Nowell, A. Brown, K. Radford, A. P. R. Johnston, J. A. Villadangos. 2015. Differential use of autophagy by primary dendritic cells specialised in cross-presentation. *Autophagy.* 11: 906-917.

L. M. Wakim, J. Smith, I. Caminschi, M. H. Lahoud, J. A. Villadangos. 2015. Antibody-targeted vaccination to lung dendritic cells generates tissue-resident memory CD8 T cells that are highly protective against influenza virus infection. *Mucosal Immunol.* 8:1060-71.

J. Vega-Ramos, A. Roquilly, Y. Zhan, L.J. Young, J. D. Mintern and J. A. Villadangos. 2014. Inflammation conditions mature dendritic cells to retain the capacity to present new antigens but with altered cytokine secretion function. *J. Immunol.* 193:3851-3859.

Y. Xu, P. Lindemann, J. Vega-Ramos, J. G. Zhang, J. A. Villadangos. 2014. Developmental Regulation of Synthesis and Dimerization of the Amyloidogenic Protease Inhibitor Cystatin C in the Hematopoietic System. *J. Biol. Chem.* 289: 2730-2740.

S. Prato, Y. Zhan, J. D. Mintern, J. A. Villadangos. 2013. Rapid deletion and inactivation of CTLs upon recognition of a number of target cells over a critical threshold. *J. Immunol.* 191: 3534-3544.

L. M. Wakim, N. Gupta, J. D. Mintern and J. A. Villadangos. 2013. Enhanced survival of lung tissue-resident memory CD8⁺ T cells during infection with influenza virus due to selective expression of IFITM3. *Nat. Immunol.* 14: 238-245.

Selected Publications (Reviews)

H. E. G. McWilliam and J. A. Villadangos. 2017. How MR1 Presents a Pathogen Metabolic Signature to Mucosal-Associated Invariant T (MAIT) Cells. *Trends Immunol In press.*

J. A. Villadangos. 2016. Antigen-specific impairment of adoptive cell therapy against cancer: players, mechanisms, solutions and a hypothesis. *Immunol Rev* 272:169-182.

A. Roquilly and J. A. Villadangos. 2015. The role of dendritic cell alterations in susceptibility to hospital-acquired infections during critical-illness related immunosuppression. *Mol Immunol.* 68: 120-123.

J. D. Mintern, C. Macri, J. A. Villadangos. 2015. Modulation of antigen presentation by intracellular trafficking. *Curr Opin Immunol* 34: 16-21.

J. Vega-Ramos, A. Roquilly, K. Asehounne and J. A. Villadangos. 2014. Modulation of dendritic cell antigen presentation by pathogens, tissue damage and secondary inflammatory signals. *Curr. Opin. Pharmacol.* 17: 64

J. M. Moffat, J. D. Mintern and J. A. Villadangos. 2013. Control of MHC II antigen presentation by ubiquitination. *Curr. Opin. Immunol.* 25: 109-114.

E. Segura and J. A. Villadangos. 2011. A modular and combinatorial view of the antigen cross-presentation pathway in dendritic cells. *Traffic* 12:1677-1685.

P. I. Bird, J. A. Trapani and J. A. Villadangos. 2009. "Endolysosomal proteases and their inhibitors in immunity". *Nat. Rev. Immunol.* 9: 871-882.

J.A. Villadangos and L. Young. 2008. "Antigen-presentation properties of plasmacytoid dendritic cells". *Immunity.* 29: 352-361.

J. A. Villadangos and P. Schnorrer. 2007. "Intrinsic and cooperative antigen presenting functions of dendritic-cell subsets in vivo" *Nat. Rev. Immunol.* 7: 543-555.