Jean Marshall, PhD

Position/Title

Professor and Head, Department of Microbiology and Immunology, Dalhousie University

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Education/Training

1977 – 1980 University of Manchester (UK), BSc (Hons) Biochemistry
1980 – 1983 University of Manchester (UK), PhD Immunology
1983 – 1986 University of Manchester (UK), Postdoctoral fellow, Immunology
1986 – 1989 McMaster University (Ontario, Canada), Postdoctoral fellow, Pathology

Positions and Employment

1989-1993	Assistant Professor, Department of Pathology – McMaster University, Ontario, Canada
1993-1997	Associate Professor, Department of Pathology - McMaster University, Ontario, Canada
1997-1999	Associate Professor, Departments of Microbiology & Immunology and Pathology, Dalhousie University, Nova Scotia, Canada
1999-present	Professor, Departments of Microbiology & Immunology and Pathology - Dalhousie University, Nova Scotia, Canada
2005-present	Professor and Head, Department of Microbiology & Immunology - Dalhousie University, Nova Scotia, Canada

Selected peer-reviewed publications:

1. L. Portales-Cervantes, I. Haidl, P. Lee, **J.S. Marshall**. Virus-infected human mast cells enhance Natural Killer cell functions. Journal of Allergy and Clinical Immunology (Submitted April, 2014)

2. Y-T Fang, Y-T Lu, S-W Wan, J-H Yao, C-F Lin, L-J Hsu, M. G. Brown, **J.S. Marshall**, R. Anderson, Y-S Lin. Autophagy Facilitates Antibody-Enhanced Dengue Virus Infection in Human Mast Cells. PLOS ONE (Submitted March 2014)

3. M. Tunis, **J.S. Marshall**. Toll-like receptor 2 as a key regulator of oral tolerance. Mediators of Inflammation (Submitted January 2014)

4. Sharon A. Oldford and **J. S. Marshall.** Mast cells as targets for immunotherapy of solid tumors. Molecular Immunology (under revision)

5. M. Tunis, K.C. Carson, **J.S. Marshall**, Toll-like receptor 2 activators inhibit oral tolerance induction and enhance IgA responses to oral antigen in mice. Mucosal Immunology (under revision)

6. A.J. MacNeil, S. Jiao, L.A. McEachern, Y.J. Yang, A. Dennis, H. Yu, Z. Xu, **J.S. Marshall**, T.J. Lin. MAPK kinase 3 is a tumour suppressor with reduced copy number in breast cancer. Cancer Research 74;162 (01/2014)

7. S. Waserman, P. Nair, D. Snider, M. Conway, L. Jayaram, L. McCleary, J. Dolovich, F. E. Hargreave, and **J.S. Marshall**. Local and systemic immunological parameters associated with remission of asthma symptoms in children. Allergy, Asthma and Clinical Immunology 8;8(1):16 (2012) [Epub ahead of print]

8. S. Maltby, J. Bennett, E. J. DeBruin, M. J. Gold, M. Tunis, **J.S. Marshall** and K. M. McNagny. IL-7Ra and L-selectin, but not CD103 or CD34, are required for murine peanut-induced anaphylaxis. Allergy, Asthma and Clinical Immunology 8(1):15 (2012)

9. M. Tunis, W. Dawicki, K.C. Carson, J. Wang, **J.S. Marshall**, Mast Cells and IgE activation do not alter the development of oral tolerance in a mouse model. J Allergy Clin Immunol. Sep;130(3):705-715.e1. doi: 10.1016/j.jaci.2012.04.011. (2012) (Epub 2012 May 18)

10. M.G. Brown, S.M. McAlpine, Y.Y. Huang, I.D. Haidl, A. Al-Afif, **J.S. Marshall**, and R. Anderson. RNA Sensors Enable Human Mast Cell Anti-Viral Chemokine Production and IFN-mediated Protection in Response to Antibody-Enhanced Dengue Virus Infection. PLoS in press (2012)

11. S. M. McAlpine, T. B. Issekutz and **J.S. Marshall**. Virus stimulation of human mast cells results in the recruitment of CD56+ T cells by a CCR5-dependent mechanism. Faseb J fj.11-188979 (March 2012)

12. E.J. Albert, J. Duplisea and **J.S. Marshall**. Tissue eosinophilia during DDS colitis in mice is highly dependent on TLR2 and independent of mast cells. Epub 2010 Dec 23 Am J. Pathol. 178(1):150-60. (2011)

13. M. G. Brown, L. L. Hermann, A. C. Issekutz, **J.S. Marshall**, D. Rowter, A. Al-Afif, R. A. Anderson. Dengue virus infection of mast cells triggers endothelial cell activation. J Virol. 85(2):1145-50. (2011) Epub 2010 Dec 23

14. S. Da'as, E. Teh, J. T. Dobson, E. McBride, H. Wang, D. Neuberg, **J. Marshall**, T-J. Lin, J. Berman. Zebrafish mast cells possess an FcεRI-like receptor and participate in innate and adaptive immune responses. Dev Comp Immunol. 35(1):125-34. (2011)

15. S. A. Oldford, I. Haidl, M. A. Howatt, C. A. Leiva, B. Johnston, **J.S. Marshall**, (2009). A critical role for mast cells and mast cell derived IL-6 in TLR2-mediated inhibition of tumor growth. J Immunol. 185(11):7067-76 (2010) (Paper selected by the "Faculty of 1000")

16. Ian Haidl, S.M. Burke and **J.S. Marshall**. Enhancement of mast cell IL-6 production by combined TLR and NOD-like receptor activation. Int Arch Allergy Immunol 2011;154(3):227-35. Epub 2010 Sep 21

17. W. Dawicki, N. Xu and **J.S. Marshall.** Mast cells, histamine and IL-6 regulate the selective influx of dendritic cell subsets into an inflamed lymph node. J. Immunol 184(4):2116-23 (2010)

18. Z. Yang and **J.S. Marshall**. Zymosan treatment of mouse mast cells enhances dectin-1 and induces dectin-1 dependent reactive oxygen species (ROS) generation. Immunobiology 214(4):321-30 (2009)

19. M. Brown, Y.Y. Huang, **J.S. Marshall**, C. A. King, D. W. Hoskin and R. A. Anderson. Dramatic caspase-dependent apoptosis in antibody-enhanced dengue virus infection of human mast cells. J. Leukocyte Biol, 85(1):71-80 (2009)

20. J.Y. Yang, W. Chan, S.O. Carrigan, W.M. Chen, K. Roth, T. Akiyama, J. Inoue, **J.S. Marshall,** J. Berman and T.-J. Lin. TRAF6 specifically contributes to FCЄRI-mediated cytokine production but not mast cell degranulation J. Biol Chem 283(46):32110-8 (2008)

21. S.M. Burke, T.B. Issekutz, M. Shmulevitz, P. Lee and **J.S. Marshall.** Human mast cell activation with virus-associated stimuli leads to the selective chemotaxis of natural killer cells by a CXCL8-dependent mechanism. Blood, 111(12):5467-76 (2008)

22. E. J. Albert and **J.S. Marshall**. Aging in the absence of TLR2 is associated with reduced IFN-γ responses in the large intestine and increased severity of induced colitis J. Leukocyte Biol, 83(4):833-842 (2008)

23. E. J. Albert, K. Sommerfeld, S. Gophna, **J.S. Marshall** and U. Gophna. The gut microbiota of toll-like receptor 2-deficient mice exhibits lineage-specific modifications. Environmental Microbiol Reports 2008

24. R. O'Sullivan, S. O. Carrigan, **J.S. Marshall** and T.-J. Lin. Signal transducer and activator of transcription 4 (STAT4), but not IL-12 contributes to *Pseudomonas aeruginosa*-induced lung inflammation in mice. Immunobiology, 213(6):469-79 (2008)

Book Chapters (Last Five Years)

Haidl, **J.S. Marshall**. Human mast cell activation with viruses and pathogen products. Mast Cell Responses to Pathogen Products. Methods of Molecular Biology. Editors, K.M. McNagny, M.R. Hughes (in press)

S. A. Oldford and **J.S. Marshall** Mast cell modulation of the tumor microenvironment. In Tumor Immunoenvironment. Edited by Michael R. Shurin, Viktor Umansky & Anatoli M. Malyguine. p. 479-509 Springer (2013)

J.S. Marshall, M. Brown and R. Pawankar. Mast cell and basophil activation by IgE and toll-like receptors. In Allergy Frontiers: Classification and Pathomechanisms, Allergy Frontiers Volume 2, pp 113-133 Springer (2010)