

Woong-Kyung SUH, Ph.D.

Research Unit Director
Immune Regulation Laboratory
Montreal Clinical Research Institute (IRCM)
110 Pine Avenue West Montreal, Quebec
H2W 1R7
e-mail: woong-kyung.suh@ircm.qc.ca

ACADEMIC AND WORK EXPERIENCE

2017-2019	Director, Division of Immunity and Viral Infections, IRCM
2015	Associate Research Professor, Department of Medicine, University of Montreal
2014	Associate Research Professor, IRCM
2008	Assistant Research Professor, Department of Medicine, University of Montreal
2008	Adjunct Professor, Dept. of Microbiology & Immunology and Division of Experimental Medicine, McGill University
2005	Assistant Research Professor, IRCM
1999-2005	Post-doctoral fellow at Ontario Cancer Institute
1998-1999	Post-doctoral fellow at Harvard University
1993-1997	Ph.D. Dept. of Biochemistry, University of Toronto
1990-1992	Military Duties in Korean Army
1988-1990	M.Sc. Dept. of Microbiology, Seoul National University, Seoul, Korea
1984-1988	B.Sc. Dept. of Microbiology, Seoul National University, Seoul, Korea

HONOURS AND AWARDS

2020	2020 SITC Team Science Award from Society for Immunotherapy of Cancer (SITC)
------	--

2018	Teaching Award (Excellence in Innovative Teaching), Faculty of Medicine, University of Montreal
2007-2012	CIHR New Investigator Award
2002-2005	Post-Doctoral Fellowship from Cancer Research Institute
1998-1999	Post-Doctoral Fellowship from Jane Coffin Childs Memorial Fund for Medical Research
1995-1998	Steve Fonyo Studentship from National Cancer Institute of Canada

PUBLICATIONS

Manuscripts submitted (1):

Panneton V, Mindt B, Bouklouch Y., Chang J, Witalis M, Li J, Stancescu A, Bouchard, A, Bradley J, Randall T, Fritz J, **Suh WK*** ICOS costimulation is indispensable for the differentiation of T follicular regulatory cells. Manuscript submitted to Nature Communications, Feb 2021.

Published papers (35):

Bouchard A, Witalis M, Chang J, Panneton V, Li J, Bouklouch Y, **Suh WK***. Hippo Signal Transduction Mechanisms in T Cell Immunity. *Immune Netw.* 2020 Oct 19;20(5):e36. doi: 10.4110/in.2020.20.e36. eCollection 2020 Oct. PMID: 33163244

Witalis M, Chang J, Zhong M-C, Bouklouch Y, Panneton V, Li J, Buch T, Kim SJ, Kim WS, Ko YH, Veillette A, **Suh WK*** Progression of AITL-like tumors in mice is driven by Tfh signature proteins and T-B crosstalk. *Blood Adv.* 2020 Mar 10;4(5):868-879. doi: 10.1182/bloodadvances.2019001114. PMID: 32130407

Panneton V, Chang J, Witalis M, Li J, **Suh WK***. Inducible T-cell co-stimulator: Signaling mechanisms in T follicular helper cells and beyond. *Immunol Rev.* 2019 Sep;291(1):91-103. doi: 10.1111/imr.12771. Review. PubMed PMID: 31402504.

Bagherzadeh Yazdchi S, Witalis M, Meli AP, Leung J, Li X, Panneton V, Chang J, Li J, Nutt SL, Johnson RL, Lim DS, Gu H, King IL, **Suh WK***. Hippo Pathway Kinase Mst1 Is Required for Long-Lived Humoral Immunity. *J Immunol.* 2019 Jan 1;202(1):69-78. doi: 10.4049/jimmunol.1701407. Epub 2018 Nov 26. PubMed PMID: 30478091; PubMed Central PMCID: PMC6310088.

Zhang M, Wu Y, Bastian D, Iamsawat S, Chang J, Daenthanasanmak A, Nguyen HD, Schutt S, Dai M, Chen F, **Suh WK***, Yu XZ*. Inducible T-Cell Co-Stimulator Impacts Chronic Graft-Versus-Host Disease by Regulating Both Pathogenic and Regulatory T Cells. *Front Immunol.* 2018 Jun 22;9:1461. doi: 10.3389/fimmu.2018.01461. eCollection 2018. PubMed PMID: 29988391; PubMed Central PMCID: PMC6023972.

Panneton V, Bagherzadeh Yazdchi S, Witalis M, Chang J, **Suh WK***. ICOS Signaling

Controls Induction and Maintenance of Collagen-Induced Arthritis. *J Immunol*. 2018 May 1;200(9):3067-3076. doi: 10.4049/jimmunol.1701305. Epub 2018 Mar 26. PubMed PMID: 29581356.

Shalaby KH, Al Heialy S, Tsuchiya K, Farahnak S, McGovern TK, Risse PA, **Suh WK**, Qureshi ST, Martin JG. The TLR4-TRIF pathway can protect against the development of experimental allergic asthma. *Immunology*. 2017 Sep;152(1):138-149. doi: 10.1111/imm.12755. Epub 2017 Jun 20. PubMed PMID: 28502093; PubMed Central PMCID: PMC5543728.

Leung J, St-Onge P, Stagg J, **Suh WK***. Synergistic effects of host B7-H4 deficiency and gemcitabine treatment on tumor regression and anti-tumor T cell immunity in a mouse model. *Cancer Immunol Immunother*. 2017 Apr;66(4):491-502. doi: 10.1007/s00262-016-1950-2. Epub 2017 Jan 10. PubMed PMID: 28074226.

Leconte J, Bagherzadeh Yazdchi S, Panneton V, **Suh WK***. Inducible costimulator (ICOS) potentiates TCR-induced calcium flux by augmenting PLC γ 1 activation and actin remodeling. *Mol Immunol*. 2016 Nov;79:38-46. doi: 10.1016/j.molimm.2016.09.022. Epub 2016 Sep 29. PubMed PMID: 27693916.

Suh WK*. Life of T follicular helper cells. *Mol Cells*. 2015 Mar;38(3):195-201. doi: 10.14348/molcells.2015.2331. Epub 2014 Dec 24. Review. PubMed PMID: 25537859; PubMed Central PMCID: PMC4363718.

Rahbar R, Lin A, Ghazarian M, Yau HL, Paramathas S, Lang PA, Schildknecht A, Elford AR, Garcia-Batres C, Martin B, Berman HK, Leong WL, McCready DR, Reedijk M, Done SJ, Miller N, Youngson B, **Suh WK**, Mak TW, Ohashi PS. B7-H4 expression by nonhematopoietic cells in the tumor microenvironment promotes antitumor immunity. *Cancer Immunol Res*. 2015 Feb;3(2):184-95. doi: 10.1158/2326-6066.CIR-14-0113. Epub 2014 Dec 19. PubMed PMID: 25527357.

Leung J, **Suh WK***. The CD28-B7 Family in Anti-Tumor Immunity: Emerging Concepts in Cancer Immunotherapy. *Immune Netw*. 2014 Dec;14(6):265-76. doi: 10.4110/in.2014.14.6.265. Epub 2014 Dec 22. Review. PubMed PMID: 25550693; PubMed Central PMCID: PMC4275384.

Rashkovan M, Vadnais C, Ross J, Gigoux M, **Suh WK**, Gu W, Kosan C, Möröy T. Miz-1 regulates translation of Trp53 via ribosomal protein L22 in cells undergoing V(D)J recombination. *Proc Natl Acad Sci U S A*. 2014 Dec 16;111(50):E5411-9. doi: 10.1073/pnas.1412107111. Epub 2014 Dec 2. PubMed PMID: 25468973; PubMed Central PMCID: PMC4273400.

Gigoux M, Lovato A, Leconte J, Leung J, Sonenberg N, **Suh WK***. Inducible costimulator facilitates T-dependent B cell activation by augmenting IL-4 translation. *Mol Immunol*. 2014 May;59(1):46-54. doi: 10.1016/j.molimm.2014.01.008. Epub 2014 Jan 31. PubMed PMID: 24486724.

Chen H, Fu T, **Suh WK**, Tsavachidou D, Wen S, Gao J, Ng Tang D, He Q, Sun J, Sharma P. CD4 T cells require ICOS-mediated PI3K signaling to increase T-Bet expression in the setting of anti-CTLA-4 therapy. *Cancer Immunol Res*. 2014 Feb;2(2):167-76. doi: 10.1158/2326-6066.CIR-13-0155. Epub 2013 Nov 19. PubMed PMID: 24778280; PubMed Central PMCID: PMC4004958.

Li J, Heinrichs J, Leconte J, Haarberg K, Semple K, Liu C, Gigoux M, Kornete M, Piccirillo CA, **Suh WK**, Yu XZ. Phosphatidylinositol 3-kinase-independent signaling pathways contribute to ICOS-

mediated T cell costimulation in acute graft-versus-host disease in mice. *J Immunol.* 2013 Jul 1;191(1):200-7. doi: 10.4049/jimmunol.1203485. Epub 2013 May 31. PubMed PMID: 23729441; PubMed Central PMCID: PMC4318500.

Leung J, **Suh WK***. Host B7-H4 regulates antitumor T cell responses through inhibition of myeloid-derived suppressor cells in a 4T1 tumor transplantation model. *J Immunol.* 2013 Jun 15;190(12):6651-61. doi: 10.4049/jimmunol.1201242. Epub 2013 May 17. PubMed PMID: 23686485.

Gao X, Gigoux M, Yang J, Leconte J, Yang X*, **Suh WK***. Anti-chlamydial Th17 responses are controlled by the inducible costimulator partially through phosphoinositide 3-kinase signaling. *PLoS One.* 2012;7(12):e52657. doi: 10.1371/journal.pone.0052657. Epub 2012 Dec 20. PubMed PMID: 23285133; PubMed Central PMCID: PMC3527575.

Ma W, Ortiz-Quintero B, Rangel R, McKeller MR, Herrera-Rodriguez S, Castillo EF, Schluns KS, Hall M, Zhang H, **Suh WK**, Okada H, Mak TW, Zhou Y, Blackburn MR, Martinez-Valdez H. Coordinate activation of inflammatory gene networks, alveolar destruction and neonatal death in AKNA deficient mice. *Cell Res.* 2011 Nov;21(11):1564-77. doi: 10.1038/cr.2011.84. Epub 2011 May 24. PubMed PMID: 21606955; PubMed Central PMCID: PMC3365639.

Li J, Semple K, **Suh WK**, Liu C, Chen F, Blazar BR, Yu XZ. Roles of CD28, CTLA4, and inducible costimulator in acute graft-versus-host disease in mice. *Biol Blood Marrow Transplant.* 2011 Jul;17(7):962-9. doi: 10.1016/j.bbmt.2011.01.018. Epub 2011 Mar 27. PubMed PMID: 21447398; PubMed Central PMCID: PMC3131782.

Gigoux M, Shang J, Pak Y, Xu M, Choe J, Mak TW, **Suh WK***. Inducible costimulator promotes helper T-cell differentiation through phosphoinositide 3-kinase. *Proc Natl Acad Sci U S A.* 2009 Dec 1;106(48):20371-6. doi: 10.1073/pnas.0911573106. Epub 2009 Nov 13. PubMed PMID: 19915142; PubMed Central PMCID: PMC2787139.

Suh WK*, Chaudhuri J*. Lymphocytes in action. Symposium on Lymphocyte Activation and Signalling. *EMBO Rep.* 2008 Sep;9(9):841-6. doi: 10.1038/embor.2008.150. PubMed PMID: 18688253; PubMed Central PMCID: PMC2529354.

Guo F, Iclozan C, **Suh WK**, Anasetti C, Yu XZ. CD28 controls differentiation of regulatory T cells from naive CD4 T cells. *J Immunol.* 2008 Aug 15;181(4):2285-91. PubMed PMID: 18684917; PubMed Central PMCID: PMC2688779.

Suh WK, Wang S, Duncan GS, Miyazaki Y, Cates E, Walker T, Gajewska BU, Deenick E, Dawicki W, Okada H, Wakeham A, Itie A, Watts TH, Ohashi PS, Jordana M, Yoshida H, Mak TW. Generation and characterization of B7-H4/B7S1/B7x-deficient mice. *Mol Cell Biol.* 2006 Sep;26(17):6403-11. PubMed PMID: 16914726; PubMed Central PMCID: PMC1592821.

Vidric M, **Suh WK**, Dianzani U, Mak TW, Watts TH. Cooperation between 4-1BB and ICOS in the immune response to influenza virus revealed by studies of CD28/ICOS-deficient mice. *J Immunol.* 2005 Dec 1;175(11):7288-96. PubMed PMID: 16301634.

Suh WK, Wang SX, Jheon AH, Moreno L, Yoshinaga SK, Ganss B, Sodek J, Grynepas MD, Mak TW. The immune regulatory protein B7-H3 promotes osteoblast differentiation and bone mineralization. *Proc Natl Acad Sci U S A*. 2004 Aug 31;101(35):12969-73. Epub 2004 Aug 18. PubMed PMID: 15317945; PubMed Central PMCID: PMC516502.

Suh WK, Tafuri A, Berg-Brown NN, Shahinian A, Plyte S, Duncan GS, Okada H, Wakeham A, Odermatt B, Ohashi PS, Mak TW. The inducible costimulator plays the major costimulatory role in humoral immune responses in the absence of CD28. *J Immunol*. 2004 May 15;172(10):5917-23. PubMed PMID: 15128772.

Okada H, Bakal C, Shahinian A, Elia A, Wakeham A, **Suh WK**, Duncan GS, Ciofani M, Rottapel R, Zúñiga-Pflücker JC, Mak TW. Survivin loss in thymocytes triggers p53-mediated growth arrest and p53-independent cell death. *J Exp Med*. 2004 Feb 2;199(3):399-410. PubMed PMID: 14757745; PubMed Central PMCID: PMC2211792.

Suh WK, Gajewska BU, Okada H, Gronski MA, Bertram EM, Dawicki W, Duncan GS, Bukczynski J, Plyte S, Elia A, Wakeham A, Itie A, Chung S, Da Costa J, Arya S, Horan T, Campbell P, Gaida K, Ohashi PS, Watts TH, Yoshinaga SK, Bray MR, Jordana M, Mak TW. The B7 family member B7-H3 preferentially down-regulates T helper type 1-mediated immune responses. *Nat Immunol*. 2003 Sep;4(9):899-906. Epub 2003 Aug 17. PubMed PMID: 12925852.

Okada H, **Suh WK**, Jin J, Woo M, Du C, Elia A, Duncan GS, Wakeham A, Itie A, Lowe SW, Wang X, Mak TW. Generation and characterization of Smac/DIABLO-deficient mice. *Mol Cell Biol*. 2002 May;22(10):3509-17. PubMed PMID: 11971981; PubMed Central PMCID: PMC133802.

Lieberson R, Mowen KA, McBride KD, Leautaud V, Zhang X, **Suh WK**, Wu L, Glimcher LH. Tumor necrosis factor receptor-associated factor (TRAF)2 represses the T helper cell type 2 response through interaction with NFAT-interacting protein (NIP45). *J Exp Med*. 2001 Jul 2;194(1):89-98. PubMed PMID: 11435475; PubMed Central PMCID: PMC2193447.

Suh WK, Derby MA, Cohen-Doyle MF, Schoenhals GJ, Früh K, Berzofsky JA, Williams DB. Interaction of murine MHC class I molecules with tapasin and TAP enhances peptide loading and involves the heavy chain alpha3 domain. *J Immunol*. 1999 Feb 1;162(3):1530-40. PubMed PMID: 9973410.

Suh WK, Mitchell EK, Yang Y, Peterson PA, Waneck GL, Williams DB. MHC class I molecules form ternary complexes with calnexin and TAP and undergo peptide-regulated interaction with TAP via their extracellular domains. *J Exp Med*. 1996 Aug 1;184(2):337-48. PubMed PMID: 8760787; PubMed Central PMCID: PMC2192707.

Williams DB, Vassilakos A, **Suh WK**. Peptide presentation by MHC class I molecules. *Trends Cell Biol*. 1996 Jul;6(7):267-73. PubMed PMID: 15157453.

Suh WK, Cohen-Doyle MF, Früh K, Wang K, Peterson PA, Williams DB. Interaction of MHC class I molecules with the transporter associated with antigen processing. *Science*. 1994 May 27;264(5163):1322-6. PubMed PMID: 8191286.