

정용우 (Yong Woo Jung)

Current Position

Assistant Professor
Dept. of Pharmacy, College of Pharmacy
Korea University
Sejong, 339-700, Korea
Phone: 82-44-860-1618
Email: yjung@korea.ac.kr, yjung11@hanmail.net

Education

1992	Korea University	Biology	B.S.
1994	Korea University	Zoology	M.S.
2005	University of Alabama at Birmingham	Pathology	Ph.D.

Professional Experiences

2005	Post-doctoral Employee	University of Alabama at Birmingham Dept. of Microbiology
2005 - 2011	Postdoctoral Associate	Yale University School of Medicine Dept. of Immunobiology
2011- present	Assistant Professor	Korea University Dept. of Pharmacy

Research Interest

1. Immune response to viral infections or cancers
2. Generation of memory T cells and development of vaccine
3. Pathogenesis of allergic asthma and rheumatoid arthritis
4. Recruitment of immune cells

Presentations

1993 Finding of insect antimicrobial peptide from *Bombix morii*. Annual meeting of the Korean Zoological Scientists

2000 Evolutionary conservation of the *mb-1* (Ig α) and *B29* (Ig β) genes. Annual meeting of the American Association of Immunologists

2004 Key roles for TLR4 and neutrophils in the recruitment of antigen-specific CD4⁺ T cells into the lung. Annual meeting of the American Association of Immunologists

2006 Gr-1⁺ cells induce the expression of matrix metalloproteinases (MMPs) that are crucial for antigen-stimulated recruitment of Th cells into murine airways. Annual

meeting of American Academy of Asthma, Allergy and Immunology
 2009 Differential localization of effector and memory T cell subsets. Annual
 meeting of the American Association of Immunologists
 2011 Differential localization of effector and memory T cell subsets. 제 12 회
 한국수지상세포연구회 정기 심포지움
 2011 Niches for the Development of Memory T Cells in Response to Acute Viral
 Infection. The Fall International Convention of The Pharmaceutical Society of Korea
 2012 Organic Specific Immune Response to Acute LCMV Infections. International
 Symposium and Annual Meeting of the Korean Society for Microbiology and
 Biotechnology
 2013 Lymphocytes in Non-Lymphoid Tissues 2013 춘계 한국면역학회 학술대회

Publications

1. 2005 Nabe, T., C.L. Zindl, **Y.W. Jung**, R. Stephens, T.P. Atkinson, D.D. Chaplin. Induction of a late asthmatic response associated with airway inflammation including mast cell hyperplasia in mice. *European Journal of Pharmacology*, 2005 Oct 3; 521: 144-155.
2. 2006 **Jung, Y.W.**, T.R. Shoeb, C.T. Weaver, D.D. Chaplin. Antigen and LPS play synergistic roles in the effector phase of airway inflammation in mice. *American Journal of Pathology*, 2006 May; 168(5): 1425-34.
3. 2009 Kim, B.N., D. Kang, S.C. Cho, T.W. Park, M.H. Lim, Y.C. Chung, J.W. Kim, J.W. Hwang, H.J. Yoo, U.S. Chung, J.W. Son, J.C. Yang, S.K. Chung, J.Y. Lee, **Y.W. Jung**. Shorter dinucleotide repeat length in the DRD5 gene is associated with attention deficit hyperactivity disorder. *Psychiatric Genetics*, 2009 Feb; 19(1): 57.
4. 2009 **Jung, Y.W.**, C. Zindl, J. Lai, C.T. Weaver, D.D. Chaplin. MMP induced by Gr-1⁺ cells are crucial for the recruitment of Th cells into the airways. *European Journal of Immunology*, 2009 Aug; 39(8): 2281-2292.
5. 2010 Hinson, E.R., N.S. Joshi, J.H. Chen, C. Rahner, **Y.W. Jung**, X. Wang, S.M. Kaech, P. Cresswell. Viperin is highly induced in neutrophils and macrophages during acute and chronic lymphocytic choriomeningitis virus infection. *Journal of Immunology*, 2010 May 15; 184: 5723-5731.
6. 2010 Hand, T.W., W. Cui, **Y.W. Jung**, E. Sefik, N.S. Joshi, A. Chandele, Y. Liu and S.M. Kaech. Differential effects of STAT5 and PI3K/AKT signaling on effector and memory CD8 T-cell survival. *Proceedings of the National Academy of Sciences of U.S.A.*, 2010 Sep 21; 107(38): 16601-16606. (See *Research Highlight*—T cell signaling. *Nature Reviews Immunology*, 2010 Oct; 10: 677.)
7. 2010 **Jung, Y.W.** and S.M. Kaech. Like parent, like child: inheritance of effector T cell traits. *Immunity*, 2010 Sep 24; 33(3): 296-298.

8. 2010 **Jung, Y.W.**, R.L. Rutishauser, N.S. Joshi, A.M. Haberman and S.M. Kaech. Differential localization of effector and memory CD8 T cell subsets in lymphoid organs during acute viral infection. *Journal of Immunology*, 2010 Nov 1; 185: 5315-5325. (See the commentary in *In this issue*. *Journal of Immunology*, 2010; 185: 4963-4964)
9. 2010 **Jung, Y.W.** and T.W. Park. Environmental risk factors in tic disorders. *Journal of the Korean Academy of Child and Adolescent Psychiatry*, 2010; 21: 133-140.
10. 2010 Lai, J-F, C.L. Zindl, L.B. Duffy, T.P. Atkinson, **Y.W. Jung**, N. van Rooijen, K.B. Waites, D.C. Krause and D.D. Chaplin. Critical role of macrophages and their activation via MyD88-NFkB signaling in lung innate immunity to *Mycoplasma pneumoniae*. *PLoS One*, 2010 Dec 23;5(12):e14417.
11. 2011 Kim M.S., S.B. Kil, H-J Kim, S-R Yoon, D.B. Oh, K.W. Hwang, W.J. Jun, S.I. Shim, K-D Kim, **Y.W. Jung**, S-Y Park, K.S. Kwon, I. Choi and J.W. Chung. Protein Expression Analysis in Hematopoietic Stem Cells during Osteopontin-Induced Differentiation of Natural Killer Cells. *Biomolecules & Therapeutics*, 2011 Apr; 19(2): 206-210.
12. 2011 Marshall, H.D., A. Chandele, Y.W. Jung, H. Meng, A. Poholek, I.A. Parish, R. Rustishauser, W. Cui, S.H. Kleinstein, J. Craft and S.M. Kaech. Differential Expression of Ly6C and T-bet Distinguish Effector and Memory Th1 CD4(+) Cell Properties during Viral Infection. *Immunity*, 2011 Oct 28; 35(4): 633-646.
13. 2012 Lee, M.Y., B. Sun, S. Schliffke, Z. Yue, M. Ye, J. Paavola, E.C. Bozkulak, P.J. Amos, Y. Ren, R. Ju, **Y.W. Jung**, X. Ge, L. Yue, B.E. Ehrlich and Y. Qyang. Derivation of unfunctional ventricular cardiomyocytes using endogenous promoter sequence from murine embryonic stem cells. *Stem Cell Research*. 2012 Jan; 8(1): 49-57
14. 2013 Kim, Y.J., Shin, H.S., Lee, J.H., **Y.W. Jung**, Kim, H.B., Ha, U.H. Pneumolysin-mediated expression of β -defensin 2 is coordinated by p38 MAP kinase-MKP1 in human airway cells. *Journal of Microbiology*, 2013 Apr; 51(2): 194-1999
15. 2013 Ok, K., **Y.W. Jung**, Jee, J., Byun, Y. Facile Docking and Scoring Studies of Carborane Ligands with Estrogen Receptor. *Bulletin of the Korean Chemical Society*, 2013 Apr 20; 34(4):1051-1054
16. 2013 Woo, D.K. *, **Y.W. Jung** *, O'Brien, K.M., Poyton, R.O. Molecular characterization of a mitochondrial mutant carrying point mutations in the 3' untranslated region of the COX3 mRNA from *Saccharomyces cerevisiae* *Animal Cells and Systems*, 2013 Apr; 17(2): 80-87 (*These authors contributed equally.)

17. 2013 Lee, H., Cho, H., Um, S., Kim, I., Sung, G., Lee, T., Lee, S., **Y.W. Jung**, Shin, Y.S., Kang, H. Dysregulation of KSHV replication by the Extracts from *Carthamus tinctorius L.* Journal of Microbiology, 2013 Aug; 51(4): 490-498
18. 2013 Yeo, K.B., Ha, U., **Y.W. Jung**, Kang, T.J., Paek, S.P. Specific detection of inflamed cells using TLR1 antibody and its secondary antibody-conjugated nano-beads. Enzyme and Microbial Technology, 2013 Sep 10; 53(4): 223-8
19. 2013 **Y.W. Jung**, Lee, H., Kim, J.Y., Koo, E.J., Oh, K.S. Yuk, S.H. Pluronic-based core/shell nanoparticles for drug delivery and diagnosis Current Medicinal Chemistry, 2013 Sep; 20(28): 3488-3499
20. 2013 Lee, J., Park, S., Yoon, S., **Y.W. Jung**, Byun, Y., Yuk, S.H., Jeon, M.K., Kang, S.K., Lee, E.H. Multicomponent system of NPS-1034, an orally administered lung cancer drug candidate, with sulfonic acids and solid state characterization Crystal Growth & Design, 2013 Sep;13(9):3958-3968
21. 2013 Park, H.J., Kang, K.M., Dybvig, K., Lee, B.L., **Y.W. Jung**^{*}, Lee, I.H.^{*} Interaction of cationic antimicrobial peptides with *Mycoplasma pulmonis* FEBS Letters, 2013 Oct 11;587(20):3321-6 (* co-corresponding authors)
22. 2013 Shin, H.S., Lee, J.H., Paek, S.H., **Y.W. Jung**, Ha, U.H. Pseudomonas aeruginosa-dependent upregulation of TLR2 influences host responses to a secondary Staphylococcus aureus infection. FEMS Pathogen and Diseases, 2013 Nov;69(2):149-56
23. 2013 Lee, J., Boerrigter, S.X., **Y.W. Jung**, Byun, Y., Yuk, S.H., Byrn, S.R., Lee, E.H. Organic vapor sorption method of isostructural solvates and polymorph of tenofovir disoproxil fumarate. European Journal of Pharmaceutical Sciences, 2013 Nov 18; 50(3-4): 253-262
24. 2013 Bae, J.E., Do, J.Y., Kwon, S.H., Lee, S.D., **Y.W. Jung**, Kim, S.C., Chae, K.S. Electromagnetic field-induced converse cell growth during a long-term observation. International Journal of Radiation Biology, 2013 Dec;89(12):1035-44
25. 2013 Kim, H.G., Jo, S., Yeon, S., Kim, K.H., Chung, J.W., Park, T.W., Byun, Y., Lee, E.H., Park, Y.I., **Y.W. Jung** Pluronic nanoparticles do not modulate immune responses mounted by macrophages Macromolecular Research, 2013 Dec, 21(12), 1355-1359
26. 2014 Kim, K.H., Yeon, S.M., Kim, H.G., Lee, H., Kim, S.K., Han, S.H., Min, K.J., Byun, Y., Lee, E.H., Lee, K.S., Yuk, S.H., Ha, U.H., **Y.W. Jung**. Single-Walled Carbon Nanotubes Induce Cell Death and Transcription of TNF- α in Macrophages Without Affecting Nitric Oxide Production. Inflammation, 2014 Feb;37(1):44-54
27. 2014 Lee SH^{*}, An HS^{*}, **Jung YW**^{*}, Lee EJ, Lee HY, Choi ES, An SW, Son H, Lee SJ, Kim JB, Min KJ. Korean mistletoe (*Viscum album coloratum*) extract

- extends the lifespan of nematodes and fruit flies *Biogerontology*. 2014 Apr;15(2):153-64. (*These authors contributed equally.)
28. 2014 Bae KS, Kim SY, Park SY, Jeong AJ, Lee HH, Lee J, Cho YS, Leem SH, Kang TH, Bae KH, Kim JH, **Jung YW**, Jun W, Yoon SR, Lee SC, Chung JW Identification of lactoferrin as a human dedifferentiation factor through the studies of reptile tissue regeneration mechanisms *Journal of Microbiology and Biotechnology*. 2014 Jun 28;24(6):869-78.
 29. 2014 Kim, K.H., Kim, H.G., Yeon, S.M., Choi, H.S., Kang, H., Park, H., Park, T.W., Pack, S.P., Lee, E.H., Byun, Y., Lee, K.S., Ha, U., **Y.W. Jung** Diverse influences of androgen disrupting chemicals on immune responses mounted by macrophages *Inflammation*, 2014 Jun;37(3):649-56
 30. 2014 Lee HH, Park H, Sung GH, Lee K, Lee T, Lee I, Park MS, **Jung YW**, Shin YS, Kang H, Cho H. Anti-influenza effect of *Cordyceps militaris* through immunomodulation in a DBA/2 mouse model *Journal of Microbiology*. 2014 Aug;52(8):696-701.
 31. 2014 Park WS, Kim KM, **Jung YW**, Lim MH A case of mental retardation with paraphilia treated with depot leuprorelin *J Korean Med Sci*. 2014 Sep;29(9):1320-4.
 32. 2015 Son M, Lee M, Ryu E, Moon A, Jeong CS, **Jung YW**, Park GH, Sung GH, Cho H, Kang H Genipin as a novel chemical activator of EBV lytic cycle *Journal of Microbiology*. 2015 Feb;53(2):155-65
 33. 2015 Kim, H.G., Yeon, S.M., Park, J., Kim, S.K., Kang, H., Cha, E., Park, H., Han, S.H., Jeon, Y., Park, Y.I., Park, T.W., **Y.W. Jung** Estrogenic Endocrine-Disrupting Chemicals Modulate the Production of Inflammatory Mediators and Cell Viability of Lipopolysaccharide-Stimulated Macrophages *Inflammation*, 2015 Apr;38(2):595-605
 34. 2016 Park IS, Han Yg, Chung HJ, **Jung YW**, Kim Y, Kim H SUMOylation regulates nuclear localization and stability of TRAIIP/RNF206 *BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS* 2016 Feb 19;470(4):881-7
 35. 2016 Discovery of an Interleukin 33 Inhibitor by Molecular Docking Simulation and NMR Analysis *BULLETIN OF THE KOREAN CHEMICAL SOCIETY* 2016 Feb 37: 117-118
 36. 2016 Subedi M, Minn I, Chen J, Kim Y, Ok K, **Jung YW**, Pomper MG, Byun Y Design, synthesis and biological evaluation of PSMA/hepsin-targeted heterobivalent ligands *Eur J Med Chem*. 2016 Aug 8;118:208-18.
 37. 2016 **Jung, Y.W.***, H.G. Kim, C.J. Perry, and S.M. Kaech* CCR7 expression alters memory CD8 T-cell homeostasis by regulating occupancy in IL-7- and IL-15-dependent niches *Proceedings of The National Academy of Sciences of The United States of America* 2016 Jul 19;113(29):8278-83 *Co-corresponding

38. 2017 Yeon SM, Lee JH, Kang D, Bae H, Lee KY, Jin S, Kim JR, **Jung YW***, Park TW*. A cytokine study of pediatric Tourette's disorder without obsessive compulsive disorder Psychiatry Research Jan;247:90-96 *Co-corresponding
39. 2017 Hwang E, Cheong HK, Kim SY, Kwon O, Blain KY, Choe S, Yeo KJ, **Jung YW**, Jeon YH, Cheong C. Crystal structure of the EnvZ periplasmic domain with CHAPS FEBS Lett. 2017 May;591(10):1419-1428
40. 2017 Lee NS, Kim S, **Jung YW**, Kim H. Eukaryotic DNA damage responses: Homologous recombination factors and ubiquitin modification. in press
41. 2017 Yoon IS, Park H, Kwak HW, **Jung YW**, Nam JH. Macrophage-derived insulin-like growth factor-1 affects influenza vaccine efficacy through the regulation of immune cell homeostasis. In press

Research Support

Yale University Liver Center Pilot Project (09/2008 – 08/2009)

Co-investigator with Susan M. Kaech.

한국연구재단 신진과학자 (05/2011 – 04/2014)

한국연구재단 전략연구 (11/2014 – 10/2017)

한국연구재단 중견과학자 (03/2017 – 02/2020)

한국생명공학연구원 위탁연구 (2014 – 2017)

Awards and Honors

1992 Academic Excellence Award, Korea University, Korea

1993 Research Assistance, Korea University, Korea

2006 American Academy of Allergy, Asthma and Immunologist, ST*AR Program Travel Award

2009 AAI Trainee Abstract Award Annual meeting of the American Association of Immunologists

2012 The best lecture award, Korea University, Korea

2013 The best lecture award, Korea University, Korea

2016 미래창조과학부 우수연구성과

Teaching Experience

1993 Teaching Assistance: Animal Physiology Lab

2011 – present Assistant professor in the Department of Pharmacy, Korea University: Physiology, Pathophysiology, Immunology, Advanced Immunology