

Associate Professor

Department of Microbiology and Immunology,  
Institute for Immunology and Immunological Diseases  
Yonsei University College of Medicine

### **Education**

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| 2002 | Ph.D. Biotechnology, Yonsei University, Seoul, Korea   |
| 1996 | M.S. Biotechnology, Yonsei University, Seoul, Korea    |
| 1994 | B.S. Food Engineering, Yonsei University, Seoul, Korea |

### **Employment**

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| 2012 – Current | Assistant / Associate Professor, Department of Microbiology and Immunology, Yonsei University College of Medicine     |
| 2010 – 2012    | Assistant Professor, Division of Biosciences and Bioinformatics, Myongji University                                   |
| 2004 – 2010    | Postdoctoral Fellow / Research Associate, Kimmel Cancer Institute, Thomas Jefferson University, Philadelphia, PA, USA |
| 2002 – 2004    | Senior Researcher, National Creative Research Initiative Center for Cell Death, Korea University, Seoul, Korea        |

### **Selected Publications**

1. Son S, Hwang I, Han SH, Shin JS, **Yu JW**. Advanced glycation end products impair NLRP3 inflammasome-mediated immune responses in macrophages. *J Biol Chem* (2017) *in press*
2. Jeon SA, Lee E, Hwang I, Han B, Park S, Son S, Yang J, Hong S, Kim CH, Son J, **Yu JW**. NLRP3 Inflammasome Contributes to Lipopolysaccharide-induced Depressive-like Behaviors via Indoleamine 2,3-dioxygenase Induction. *Int J Neuropsychopharmacol* (2017) *in press*
3. Yang J, Lee KM, Park S, Cho Y, Lee E, Park JH, Shin SO, Son J, Yoon SS, **Yu JW**. Bacterial

- secretant from *Pseudomonas aeruginosa* dampens inflammasome activation in a quorum sensing-dependent manner. *Front Immunol* (2017) 8, 333
4. Jang J\*, Park S\*, Hur HJ, Cho HJ, Hwang I, Kang YP, Im I, Lee H, Lee E, Yang W, Kang HC, Kwon SW, **Yu JW\*\***, Kim DW\*\*. 25-hydroxycholesterol contributes to cerebral inflammation of X-linked adrenoleukodystrophy through activation of the NLRP3 inflammasome activation. *Nat Commun* (2016) 7, 13129 (\*\*Co-correspondence)
  5. Park S, Won JH, Hwang I, Hong S, Lee HK, **Yu JW**. Defective mitochondrial fission augments NLRP3 inflammasome activation. *Sci Rep* (2015) 5, 15489
  6. Won JH, Park S, Hong S, Son S, **Yu JW**. Rotenone-induced impairment of mitochondrial electron transport chain confers a selective priming signal for NLRP3 inflammasome activation. *J Biol Chem* (2015) 290, 27425-27437
  7. Hwang I, Yang J, Hong S, Lee EJ, Lee SH, Fernandes-Alnemri T, Alnemri ES, **Yu JW**. Non-transcriptional regulation of NLRP3 inflammasome signaling by IL-4. *Immunol Cell Biol* (2015) 93, 591-599
  8. Park S, Juliana C, Hong S, Datta P, Hwang I, Fernandes-Alnemri T, **Yu JW\***, Alnemri ES\*. The mitochondrial anti-viral protein MAVS associates with NLRP3 and regulates its inflammasome activity. *J Immunol* (2013) 191, 4358-4366 (\*Co-correspondence)
  9. **Yu JW\***, Farias A, Hwang I, Fernandes-Alnemri T, Alnemri ES\*. Ribotoxic stress through p38 mitogen-activated protein kinase activates *in vitro* the human pyrin inflammasome. *J Biol Chem* (2013) 288, 11378-11383 (\*Co-correspondence)
  10. Hong S, Hwang I, Lee YS, Park S, Lee WK, Fernandes-Alnemri T, Alnemri ES, Kim YS, **Yu JW**. Restoration of ASC expression sensitizes colorectal cancer cells to genotoxic stress-induced caspase-independent cell death *Cancer Lett.* (2013) 331, 183-191
  11. Fernandes-Alnemri T\*, **Yu JW\***, Juliana C, Solorzano L, Kang SW, Wu J, Datta P, McCormick M, Huang L, McDermott E, Eisenlohr L, Landel CP, Alnemri ES. The AIM2 inflammasome is critical for innate immunity to *Francisella tularensis*. *Nature Immunol* (2010) 11, 385-393 (\* equal contribution)
  12. Fernandes-Alnemri T\*, **Yu JW\***, Wu J, Datta P, Alnemri ES. AIM2 activates the inflammasome and cell death in response to cytoplasmic DNA. *Nature* (2009) 458, 509-513 (\* equal contribution)
  13. **Yu JW**, Fernandes-Alnemri T, Datta P, Wu J, Juliana C, Solorzano L, McCormick M, Zhang Z, Alnemri ES. Pyrin activates the ASC pyroptosome in response to engagement by autoinflammatory

PSTPIP1 mutants. *Molecular Cell* (2007) 28, 214-227

14. **J-W Yu\***, J Wu\*, Z Zhang, P Datta, I Ibrahimi, S Taniguchi, J Sagara, T Fernandes-Alnemri, ES Alnemri. Cryopyrin and pyrin activate caspase-1, but not NF- $\kappa$ B, via ASC oligomerization. *Cell Death Differ* (2006) 13(2): 236-249
15. Park HS\*, **Yu JW\***, Cho JH\*, Kim MS\*, Huh SH, Ryoo K, Choi EJ. Inhibition of Apoptosis-Signaling Kinase 1 (ASK1) by nitric oxide through a thiol-redox mechanism. *J Biol Chem* (2004) 279(9): 7584-7590 (\*equal contribution)