

## Curriculum Vitae

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### Education and Degrees

2000 - 2004 B. Sc. in Pharmacy, College of Pharmacy, Seoul National University, Seoul, Korea

2004 - 2010 Ph.D. in Immunology, College of Pharmacy, Seoul National University, Seoul, Korea  
(Dissertation advisor: Dr. Chang-Yuil Kang)

### Positions and Employment

Oct 2010 – Dec 2010 Researcher, Research Institute of Pharmaceutical Sciences, Seoul National University, Seoul, Korea (Supervisor: Dr. Chang-Yuil Kang)

Jan 2011 – Dec 2013 Postdoctoral fellow, Department of immunology, MD Anderson Cancer Center, Houston TX (Supervisor: Dr. Chen Dong)

Jan 2014 – Jan 2016 Postdoctoral fellow, Department of immunology, MD Anderson Cancer Center, Houston TX (Supervisor: Dr. Seon Hee Chang)

Mar 2016 – Dec 2017 Postdoctoral Researcher, College of Pharmacy, Seoul National University, Seoul, Korea (Supervisor: Dr. Yeonseok Chung)

Jan 2018 – Feb 2020 Research assistant professor, Research Institute of Pharmaceutical Sciences, Seoul National University, Seoul, Korea (Supervisor: Dr. Yeonseok Chung)

Mar 2020 – present Assistant professor, Division of Life Sciences, Incheon National Univ., Incheon, Korea

### Publications

1. Jeon I, Lee JM, Shin KS, Kang T, Park MH, Seo H, Song B, Koh CH, Choi J, Shin YK, **Kim BS**, Kang CY. Enhanced Immunogenicity of Engineered HER2 Antigens Potentiates Antitumor Immune Responses. *Vaccines (Basel)*. 2020 Jul 22;8(3):403. doi: 10.3390/vaccines8030403.
2. Choi G, Na H, Kuen DS, **Kim BS\***, Chung Y\*. Autocrine TGF- $\beta$ 1 Maintains the Stability of Foxp3<sup>+</sup> Regulatory T Cells via IL-12R $\beta$ 2 Downregulation. *Biomolecules*. 2020 May 27;10(6):819. doi: 10.3390/biom10060819. (\*Co-corresponding authors)
3. Kuen DS, **Kim BS**, Chung Y. IL-17-Producing Cells in Tumor Immunity: Friends or Foes? *Immune Netw*. 2020 Feb 7;20(1):e6. doi: 10.4110/in.2020.20.e6. eCollection 2020 Feb.

4. Koh CH, Kim IK, Shin KS, Jeon I, Song B, Lee JM, Bae EA, Seo H, Kang TS, **Kim BS**, Chung Y, Kang CY. GITR Agonism Triggers Antitumor Immune Responses through IL21-Expressing Follicular Helper T Cells. *Cancer Immunol Res.* 2020 May;8(5):698-709. doi: 10.1158/23266066.CIR-19-0748. Epub 2020 Mar 2
5. **Kim BS**, Clinton J, Wang Q, Chang SH. Targeting ST2 expressing activated regulatory T cells in Kras-mutant lung cancer. *Oncoimmunology.* 2019 Nov 2;9(1):1682380. doi: 10.1080/2162402X.2019.1682380. eCollection 2020.
6. Song B, Lee JM, Park YJ, Kim IK, **Kim BS**, Shin KS, Jeon I, Koh CH, Bae EA, Seo H, Byun Y, Kang CY. Differentiation of c-Kit<sup>+</sup> CD24<sup>+</sup> natural killer cells into myeloid cells in a GATA-2dependent manner. *FASEB J.* 2020 Mar;34(3):4462-4481. doi: 10.1096/fj.201902662R. Epub 2020 Jan 27.
7. Shin KS, Jeon I, **Kim BS**, Kim IK, Park YJ, Koh CH, Song B, Lee JM, Lim J, Bae EA, Seo H, Ban YH, Ha SJ, Kang CY. Monocyte-derived dendritic cells dictate the memory differentiation of CD8<sup>+</sup> T cells during acute infection. *Front Immunol.* 2019 Aug 16;10:1887. doi: 10.3389/fimmu.2019.01887. eCollection 2019.
8. Kim IK, Koh CH, Jeon I, Shin KS, Kang TS, Bae EA, Seo H, Ko HJ, **Kim BS**, Chung Y, Kang CY. GM-CSF promotes antitumor immunity by inducing Th9 cell responses. *Cancer Immunol Res.* 2019 Mar;7(3):498-509. doi: 10.1158/2326-6066.CIR-18-0518. Epub 2019 Feb 6.
9. Park YJ, Ryu H, Choi G, **Kim BS**, Hwang ES, Kim HS, Chung Y. IL-27 confers a protumorigenic activity of regulatory T cells via CD39. *Proc Natl Acad Sci U S A.* 2019 Feb 19;116(8):3106-3111. doi: 10.1073/pnas.1810254116. Epub 2019 Feb 4.
10. Bae EA, Seo H, **Kim BS**, Choi J, Jeon I, Shin KS, Koh CH, Song B, Kim IK, Min BS, Han YD, Shin SJ, Kang CY. Activation of NKT cells in an anti-PD-1-resistant tumor model enhances antitumor immunity by reinvigorating exhausted CD8 T cells. *Cancer Res.* 2018 Jul 16. pii: canres.0734.2018. doi: 10.1158/0008-5472.CAN-18-0734. [Epub ahead of print]
11. Tanaka K, Martinez GJ, Yan X, Long W, Ichiyama K, Chi X, **Kim BS**, Reynolds JM, Chung Y, Tanaka S, Liao L, Nakanishi Y, Yoshimura A, Zheng P, Wang X, Tian Q, Xu J, O'Malley BW, Dong C. Regulation of pathogenic T helper 17 cell differentiation by steroid receptor coactivator-3. *Cell Rep.* 2018 May 22;23(8):2318-2329. doi: 10.1016/j.celrep.2018.04.088
12. Seo H, **Kim BS**, Bae EA, Min BS, Han YD, Shin SJ, Kang CY. IL21 Therapy combined with

- PD-1 and Tim-3 blockade provides enhanced NK cell antitumor activity against MHC class I-deficient tumors. *Cancer Immunol Res.* 2018 Jun; 6(6):685-695. doi: 10.1158/2326-6066.CIR17-0708. Epub 2018 Apr 3.
13. Lee JE, Lee JM, Park YJ, **Kim BS**, Jeon YT, Chung Y. Inhibition of autoimmune Th17 cells responses by pain killer ketamine. *Oncotarget.* 2017 May 31; 8(52):89475-89485. doi: 10.18632/oncotarget.18324. eCollection 2017 Oct 27.
14. Wang X, Ni L, Chang D, Lu H, Jiang Y, **Kim BS**, Wang A, Liu X, Zhong B, Yang X, Dong C. Cyclic AMP-Responsive Element-Binding Protein (CREB) is Critical in Autoimmunity by Promoting Th17 but inhibiting Treg Cell Differentiation. *EBioMedicine.* 2017 Nov;25:165-174. doi: 10.1016/j.ebiom.2017.10.010. Epub 2017 Oct 12.
15. Cho M, Lee JE, Lim H, Shin HW, Khalmuratova R, Choi G, Kim HS, Choi WS, Park YJ, Shim I, **Kim BS**, Kang CY, Kim JO, Tanaka S, Kubo M, Chung Y. Fibrinogen cleavage products and Toll-like receptor 4 promote the generation of programmed cell death 1 ligand 2-positive dendritic cells in allergic asthma. *J Allergy Clin Immunol.* 2017 Oct 14. pii: S00916749(17)31582-8. doi: 10.1016/j.jaci.2017.09.019.
16. **Kim BS**, Lu H, Ichiyama K, Chen X, Zhang YB, Mistry NA, Tanaka K, Lee YH, Nurieva R, Zhang L, Yang XO, Chung Y, Jin W, Chang SH, Dong C. Generation of ROR $\gamma$ <sup>+</sup> antigen-specific T regulatory 17 cells from Foxp3<sup>+</sup> precursors in autoimmunity. *Cell Rep.* 2017 Oct;21:195-207
17. Lee YH, Martin-Orozco N, Zheng P, Li J, Zhang P, Tan H, Park HJ, Jeong M, Chang SH, **Kim BS**, Xiong W, Zang W, Guo L, Liu Y, Dong ZJ, Overwijk WW, Hwu P, Yi Q, Kwak L, Yang Z, Mak TW, Li W, Radvanyi LG, Ni L, Liu D, Dong C. Inhibition of the B7-H3 immune checkpoint limits tumor growth by enhancing cytotoxic lymphocyte function. *Cell Res.* 2017 Aug;27(8):1034-1045. doi: 10.1038/cr.2017.90. Epub 2017 Jul 7.
18. Choi G, **Kim BS**, Park YJ, Shim I, Chung Y. Clonal Expansion of Allergen-specific CD4<sup>+</sup> T Cell in the Lung in the Absence of Lymph Nodes. *Immune Netw.* 2017 Jun;17(3):163-170. doi: 10.4110/in.2017.17.3.163. Epub 2017 Jun 20.
19. Seo H, Jeon I, **Kim BS**, Park M, Bae EA, Song B, Koh CH, Shin KS, Kim IK, Choi K, Oh T, Min J, Min BS, Han YD, Kang SJ, Shin SJ, Chung Y, Kang CY. IL-21-mediated reversal of NK cell exhaustion facilitates anti-tumour immunity in MHC class I-deficient tumours. *Nat Commun.* 2017 Jun 6;8:15776. doi: 10.1038/ncomms15776.

20. Kim YU\*, **Kim BS\***, Lim H, Wetsel RA, Chung Y. Enforced expression of CXCR5 drives T follicular regulatory-like features in Foxp3<sup>+</sup>Tcells. *Biomol Ther.* 2017 Mar 1;25(2):130-139. doi: 10.4062/biomolther.2016.075. (\*Co-first authors).
21. **Kim BS\***, Park YJ\*, Chung Y. Targeting IL-17 in autoimmunity and inflammation. *Arch Pharm Res.* 2016 Aug 30. [Epub ahead of print] Review. (\*Co-first authors).
22. Ichiyama K, Gonzalez-Martin A, **Kim BS**, Jin HY, Jin W, Xu W, Sabouri-Ghomi M, Xu S, Zheng P, Xiao C, Dong C. The MicroRNA-183-96-182 Cluster Promotes T Helper 17 Cell Pathogenicity by Negatively Regulating Transcription Factor Foxo1 Expression. *Immunity.* 2016 Jun 21;44(6):1284-98. doi: 10.1016/j.immuni.2016.05.015.
23. Kim IK, **Kim BS**, Koh CH, Seok JW, Shin KS, Bae EA, Lee GE, Jeon H, Cho J, Jung Y, Han D, Kwon BS, Lee HY, Chung Y, Kang CY. GITR costimulation facilitates tumor regression by inducing IL-9-producing helper T cells. *Nature Medicine.* 2015 Sep;21(9):1010-7. doi: 10.1038/nm.3922. Epub 2015 Aug 17.
24. Ichiyama K, Chen T, Wang X, Yan X, **Kim BS**, Tanaka S, Ndiaye-Lobry D, Deng Y, Zou Y, Zheng P, Tian Q, Aifantis I, Wei L, Dong C. The methylcytosine dioxygenase Tet2 promotes DNA demethylation and activation of cytokine gene expression in T cells. *Immunity.* 2015 Apr 21;42(4):613-26. doi: 10.1016/j.immuni.2015.03.005. Epub 2015 Apr 7.
25. Chung Y, Yamazaki T, **Kim BS**, Zhang Y, Reynolds JM, Martinez GJ, Chang SH, Lim H, Birkenbach M, Dong C. Epstein Barr Virus-Induced 3 (EBI3) Together with IL-12 Negatively Regulates T Helper 17-Mediated Immunity to *Listeria monocytogenes* Infection. *PLoS Pathog.* 2013 Sep;9(9):e1003628. doi:10.1371/journal.ppat.1003628. Epub 2013 Sep 19.
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27. **Kim BS**, Kim IK, Park YJ, Kim YS, Kim YJ, Chang WS, Lee YS, Kweon MN, Chung Y, Kang CY. Conversion of Th2 memory cells into Foxp3<sup>+</sup> regulatory T cells suppressing Th2-mediated allergic asthma. *Proc Natl Acad Sci U S A.* 2010 May 11;107(19):8742-7. doi: 10.1073/pnas.0911756107. Epub 2010 Apr 26.

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29. Chung Y, **Kim BS**, Kim YJ, Ko HJ, Ko SY, Kim DH, Kang CY. CD1d-restricted T cells license B cells to generate long-lasting cytotoxic antitumor immunity in vivo. *Cancer Res.* 2006 Jul 1;66(13):6843-50.