

BIOGRAPHY



Dr. Sin-Hyeog Im is a professor in POSTECH, KOREA. He is the board of directors for Pharmabiotic Research Institute (PRI), the president of the International Scientific Conference on Probiotics and Prebiotics (IPC), chairman of the organizing committee of FIMSA 2021 (Federation of Immunological Societies of Asia-Oceania). He also serves as associate editor or editorial board member in several journals such as *Beneficial Microbes*, *Frontiers in Immunology*, *Vaccines*, and others. Prof. Im received his Ph.D. at the Weizmann Institute of Science (2001, Rehovot, Israel) and completed postdoctoral training at the Harvard Medical School (2003, Boston, USA). He has started his lab as an independent principal investigator in the Gwangju Institute of Science and Technology (GIST) (2004-2014, Gwangju, Korea). Prof. Im received several awards such as CRI Irvington Postdoctoral Fellowships, Cancer Research Institute (2001), Young Investigator Award (The Society of Biological Research (SBR), 2003, USA), Top 100 achievements of national R&D (2011, Korean government), Academic Research Awards (2019, Life Science Award, Korean Society for Molecular and Cellular Biology), KAI-Genexine Award (2020 Grand Achievement Awards).

Prof. Im made an outstanding contribution to immunology, particularly to cellular and molecular mechanisms of immune tolerance in health and disease. His research activities cover (1) Role of transcription factors in immune regulation and tolerance (2) Molecular mechanism of *IL-10* gene regulation in immune cells (3) Reprogramming of immune system by rationally selected probiotic bacteria (4) identification of effector molecules and elucidation of the action mechanism of immune-regulatory probiotics (5) Development of microbiome therapeutics for allergy, autoimmunity, and cancer. He has published more than 140 scientific papers in high-impact journals such as *Cell*, *Immunity*, *Science Immunology*, *Nature Communications*, *PNAS*, etc.

Research keywords: Immune tolerance, Microbiome, Probiotics, Immune disorder, Probiotics, Live therapeutic products (LBP)

List of selected publications (corresponding author, 2017-2021)

1. Transcriptional repressor Capicua restrains follicular helper T cell differentiation and autoimmunity. ***Nature Commun.*** 2017, 16037 doi:10.1038/ncomms1603
2. Targeted Inhibition of the NCOA1/STAT6 Protein-Protein Interaction. ***J Am Chem Soc***, 2017 Nov 15; 39(45):16056-16059 1.
3. Cell surface polysaccharides of *Bifidobacterium bifidum* induce Foxp3+ regulatory T cells. ***Science Immunology***. 2018 Oct 19;3(28). pii: eaat6975. doi: 10.1126/sciimmunol.aat6975.
4. Inflammation-induced Id2 promotes plasticity in regulatory T cells. ***Nat Commun.*** 2018 Nov 9;9(1):4736
5. Ets1 suppresses T follicular helper type 2 cell differentiation to halt the onset of Systemic Lupus Erythematosus. ***Immunity***. 2018, Dec; 49(6):1034-1048.

6. Bifidobacterium bifidum presents on the cell surface a complex mixture of glucans and galactans with different immunological properties. **Carbohydr Polym.** 2019 Aug 15. 218:269-278.
7. Structural features and immunological perception of the cell surface glycans of Lactobacillus plantarum: a novel rhamnose-rich polysaccharide and teichoic acids. **Carbohydr Polym.** 2020; 233:115857.
8. Intestinal Microbiota Controls Acute Kidney Injury Severity by Immune Modulation. **Kidney Int.** 2020: S0085-2538(20)30553-6
9. Of Men in Mice: The Development and Application of a Humanized Gnotobiotic Mouse Model for Microbiome Therapeutics. **Exp Mol Med.** 2020. Sep;52(9):1383-1396. doi.org/10.1038/s12276-020-0473-2. (Invited review).
10. Harnessing the Bioresponsive Adhesion of Immuno-Bioglue for Enhanced Local Immune Checkpoint Blockade Therapy. **Biomaterials.** 2020: 263:120380
11. Probiotics-derived metabolite ameliorates skin allergy by promoting differentiation of FOXP3+ regulatory T cells. **J Allergy Clin Immunol** 2021. 147 (4), 1517-1521
12. Structural specificities of cell surface β -glucan polysaccharides determine commensal yeast mediated immuno-modulatory activities. **Nat Commun.** 2021. June 14; 12(1):3611