

# Curriculum Vitae

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## Affiliation

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## Education

**Ph.D.**  
Catholic University Medical College  
March.1998 - February. 2002

**B.S**  
Korea University  
March.1993 - February. 1997

## Professional Carrier

2016 – Present	<b>Professor</b> Department of Medical Life Science, College of Medicine, Catholic University Med.College Seoul, Korea
2010 – 2016	<b>Associate Professor</b> Rheumatism Research Center in Catholic Research Institutes of Medical Science, Catholic University Med.College Seoul, Korea
2006 – 2010	<b>Research Assistant Professor</b> Rheumatism Research Center in Catholic Research Institutes of Medical Science, Catholic University Med.College Seoul, Korea

## Selected International Publication (SCI) (2021-2019, corresponding author)

31. Metformin Attenuates Monosodium-Iodoacetate-Induced Osteoarthritis via Regulation of Pain Mediators and the Autophagy-Lysosomal Pathway.

Na HS, Kwon JY, Lee SY, Lee SH, Lee AR, Woo JS, Jung K, Cho KH, Choi JW, Lee DH, Min HK, Park SH, Kim SJ, **Cho ML**. Na HS, et al. Among authors: **cho ml**. Cells. 2021 Mar 19;10(3):681. doi: 10.3390/cells10030681.

30. Short-chain fatty acid butyrate induces IL-10-producing B cells by regulating circadian-clock-related genes to

ameliorate Sjögren's syndrome.

Kim DS, Woo JS, Min HK, Choi JW, Moon JH, Park MJ, Kwok SK, Park SH, **Cho ML**. Kim DS, et al. Among authors: **cho ml**. *J Autoimmun*. 2021 May;119:102611. doi: 10.1016/j.jaut.2021.102611. Epub 2021 Feb 22.

29. The anti-arthritis effect of sulforaphane, an activator of Nrf2, is associated with inhibition of both B cell differentiation and the production of inflammatory cytokines.

Moon SJ, Jhun J, Ryu J, Kwon JY, Kim SY, Jung K, **Cho ML**, Min JK. Moon SJ, et al. Among authors: **cho ml**. *PLoS One*. 2021 Feb 16;16(2):e0245986. doi: 10.1371/journal.pone.0245986. eCollection 2021.

28. Combination Treatment With Metformin and Tacrolimus Improves Systemic Immune Cellular Homeostasis by Modulating Treg and Th17 Imbalance.

Lee SK, Park MJ, Jhun JY, Beak JA, Choi JW, Rye JY, Jang JW, Bae SH, Yoon SK, Choi HJ, You YK, **Cho ML**, Choi JY. Lee SK, et al. Among authors: **cho ml**. *Front Immunol*. 2021 Jan 8;11:581728. doi: 10.3389/fimmu.2020.581728. eCollection 2020

27. GRIM19 Impedes Obesity by Regulating Inflammatory White Fat Browning and Promoting Th17/Treg Balance.

Jhun J, Woo JS, Lee SH, Jeong JH, Jung K, Hur W, Lee SY, Ryu JY, Moon YM, Jung YJ, Song KY, Chang K, Yoon SK, Park SH, **Cho ML**.

26. Myeloid-derived suppressor cells therapy enhance immunoregulatory properties in acute graft versus host disease with combination of regulatory T cells.

Park MJ, Baek JA, Kim SY, Jung KA, Choi JW, Park SH, Kwok SK, **Cho ML**. Park MJ, et al. Among authors: **cho ml**. *J Transl Med*. 2020 Dec 14;18(1):483. doi: 10.1186/s12967-020-02657-6.

25. GRIM-19 Ameliorates Multiple Sclerosis in a Mouse Model of Experimental Autoimmune Encephalomyelitis with Reciprocal Regulation of IFN $\gamma$ /Th1 and IL-17A/Th17 Cells.

Moon J, Lee SH, Lee SY, Ryu J, Jhun J, Choi J, Kim GN, Roh S, Park SH, **Cho ML**. Moon J, et al. Among authors: **cho ml**. *Immune Netw*. 2020 Oct 19;20(5):e40. doi: 10.4110/in.2020.20.e40. eCollection 2020 Oct.

24. Liposome/gold hybrid nanoparticle encoded with CoQ10 (LGNP-CoQ10) suppressed rheumatoid arthritis via STAT3/Th17 targeting.

Jhun J, Moon J, Ryu J, Shin Y, Lee S, Cho KH, Kang T, **Cho ML**, Park SH. Jhun J, et al. Among authors: **cho ml**. *PLoS One*. 2020 Nov 6;15(11):e0241080. doi: 10.1371/journal.pone.0241080. eCollection 2020.

23. Combinatorial treatment with Lactobacillus acidophilus LA-1, vitamin B, and curcumin ameliorates the progression of osteoarthritis by inhibiting the pro-inflammatory mediators.

Jhun J, Min HK, Na HS, Kwon JY, Ryu J, Cho KH, Choi J, Jung K, Lee SY, Kim SJ, Yang CW, Park SH, **Cho ML**. Jhun J, et al. Among authors: **cho ml**. *Immunol Lett*. 2020 Dec;228:112-121. doi: 10.1016/j.imlet.2020.10.008. Epub 2020 Nov 1.

22. Lactobacillus sakei suppresses collagen-induced arthritis and modulates the differentiation of T helper 17 cells and regulatory B cells.

Jhun J, Min HK, Ryu J, Lee SY, Ryu JG, Choi JW, Na HS, Lee SY, Jung Y, Park SJ, Park MS, Kwon B, Ji GE, **Cho ML**, Park SH. Jhun J, et al. Among authors: **cho ml**. *J Transl Med*. 2020 Aug 15;18(1):317. doi: 10.1186/s12967-020-02477-8.

21. Brown adipose tissue ameliorates autoimmune arthritis via inhibition of Th17 cells.

Moon J, Kim D, Kim EK, Lee SY, Na HS, Kim GN, Lee A, Jung K, Choi JW, Park SH, Roh S, **Cho ML**. Moon J, et al. Among authors: **cho ml**. *Sci Rep*. 2020 Jul 23;10(1):12374. doi: 10.1038/s41598-020-68749-x.

20. The establishment of a rheumatoid arthritis primate model in *Macaca fascicularis*.

Na HS, Lee SY, Min HK, Park WJ, Lee JH, Cho KH, Hong SH, Kim DH, Jhun J, Choi JW, Kim SM, Kwok SK, **Cho ML**, Park SH. Na HS, et al. Among authors: **cho ml**. *J Transl Med*. 2020 Jun 30;18(1):264. doi: 10.1186/s12967-020-02402-z.

19. FTY720 ameliorates GvHD by blocking T lymphocyte migration to target organs and by skin fibrosis inhibition. Ryu J, Jhun J, Park MJ, Baek JA, Kim SY, Cho KH, Choi JW, Park SH, Choi JY, **Cho ML**. *J Transl Med*. 2020 Jun 6;18(1):225. doi: 10.1186/s12967-020-02386-w.
18. Interleukin-1-Interleukin-17 Signaling Axis Induces Cartilage Destruction and Promotes Experimental Osteoarthritis. Na HS, Park JS, Cho KH, Kwon JY, Choi J, Jhun J, Kim SJ, Park SH, **Cho ML**. *Front Immunol*. 2020 May 5;11:730. doi: 10.3389/fimmu.2020.00730. eCollection 2020.
17. Inhibition of RIPK3 Pathway Attenuates Intestinal Inflammation and Cell Death of Inflammatory Bowel Disease and Suppresses Necroptosis in Peripheral Mononuclear Cells of Ulcerative Colitis Patients. Lee SH, Kwon JY, Moon J, Choi J, Jhun J, Jung K, Cho KH, Darlami O, Lee HH, Jung ES, Shin DY, Lee BI, **Cho ML**. *Immune Netw*. 2020 Jan 27;20(2):e16. doi: 10.4110/in.2020.20.e16. eCollection 2020 Apr.
16. Metabolic abnormalities exacerbate Sjögren's syndrome by and is associated with increased the population of interleukin-17-producing cells in NOD/ShiLtJ mice. Hwang SH, Park JS, Yang S, Jung KA, Choi J, Kwok SK, Park SH, **Cho ML**. *J Transl Med*. 2020 May 5;18(1):186. doi: 10.1186/s12967-020-02343-7.
15. Metformin rescues rapamycin-induced mitochondrial dysfunction and attenuates rheumatoid arthritis with metabolic syndrome. Kim EK, Min HK, Lee SY, Kim DS, Ryu JG, Na HS, Jung KA, Choi JW, Park SH, **Cho ML**. *Arthritis Res Ther*. 2020 Apr 10;22(1):77. doi: 10.1186/s13075-020-02174-3.
14. A bispecific soluble receptor fusion protein that targets TNF- $\alpha$  and IL-21 for synergistic therapy in inflammatory arthritis. Park JS, Yoo SH, Lim MA, Ryu JG, Oh HJ, Hwang SH, Yang S, Jung KA, Yoon S, Park BC, Park SH, Kim HY, **Cho ML**, Park YW. *FASEB J*. 2020 Jan;34(1):248-262. doi: 10.1096/fj.201900816RR. Epub 2019 Nov 21.
13. IL-17 Induced Stromal Cell-Derived Factor-1 and Profibrotic Factor in Keloid-Derived Skin Fibroblasts via the STAT3 Pathway. Lee SY, Kim EK, Seo HB, Choi JW, Yoo JH, Jung KA, Kim DS, Yang SC, Moon SJ, Lee JH, **Cho ML**. *Inflammation*. 2020 Apr;43(2):664-672. doi: 10.1007/s10753-019-01148-1.
12. Suberoylanilide Hydroxamic Acid Attenuates Autoimmune Arthritis by Suppressing Th17 Cells through NR1D1 Inhibition. Kim DS, Min HK, Kim EK, Yang SC, Na HS, Lee SY, Choi JW, Jung KA, Kwok SK, Park SH, **Cho ML**. *Mediators Inflamm*. 2019 Oct 24;2019:5648987. doi: 10.1155/2019/5648987. eCollection 2019.
11. Retinoic Acid Receptor-Related Receptor Alpha Ameliorates Autoimmune Arthritis via Inhibiting of Th17 Cells and Osteoclastogenesis. Park JS, Moon SJ, Lim MA, Byun JK, Hwang SH, Yang S, Kim EK, Lee H, Kim SM, Lee J, Kwok SK, Min JK, Lee MO, Shin DY, Park SH, **Cho ML**. *Front Immunol*. 2019 Oct 4;10:2270. doi: 10.3389/fimmu.2019.02270. eCollection 2019.
10. Interleukin-21-mediated suppression of the Pax3-Id3 pathway exacerbates the development of Sjögren's syndrome via follicular helper T cells. Park JS, Kim SM, Choi J, Jung KA, Hwang SH, Yang S, Kwok SK, **Cho ML**, Park SH. *Cytokine*. 2020 Jan;125:154834. doi: 10.1016/j.cyto.2019.154834. Epub 2019 Sep 3. *Cytokine*. 2020.
09. Immune modulation by rebamipide in a mouse model of Sjogren's syndrome via T and B cell regulation.

Jin-Sil P, Sun-Hee H, SeungCheon Y, JeongWon C, Kyung-Ah J, Mi-La C, Sung-Hwan P. Immunol Lett. 2019 Oct;214:1-7. doi: 10.1016/j.imlet.2019.07.005. Epub 2019 Aug 14.

08. Interleukin-21-mediated suppression of the Pax3-Id3 pathway exacerbates the development of Sjögren's syndrome via follicular helper T cells.

Park JS, Kim SM, Choi J, Jung KA, Hwang SH, Yang S, Kwok SK, **Cho ML**, Park SH. Cytokine. 2019 Sep 3;125:154834. doi: 10.1016/j.cyto.2019.154834

07. Daurinol Attenuates Autoimmune Arthritis via Stabilization of Nrp1-PTEN-Foxp3 Signaling in Regulatory T Cells.

Park MJ, Moon SJ, Lee EJ, Kim EK, Baek JA, Kim SY, Jung KA, Lee SH, Choi JW, Kim DS, Min JK, Park SH, Shin D, **Cho ML**. Front Immunol. 2019 Jul 17;10:1526. doi: 10.3389/fimmu.2019.01526. eCollection 2019.

06. Metformin improves salivary gland inflammation and hypofunction in murine Sjögren's syndrome.

Kim JW, Kim SM, Park JS, Hwang SH, Choi J, Jung KA, Ryu JG, Lee SY, Kwok SK, **Cho ML**, Park SH. Arthritis Res Ther. 2019 Jun 4;21(1):136. doi: 10.1186/s13075-019-1904-0.

05. Metformin Augments Anti-Inflammatory and Chondroprotective Properties of Mesenchymal Stem Cells in Experimental Osteoarthritis.

Park MJ, Moon SJ, Baek JA, Lee EJ, Jung KA, Kim EK, Kim DS, Lee JH, Kwok SK, Min JK, Kim SJ, Park SH, **Cho ML**. J Immunol. 2019 Jul 1;203(1):127-136. doi: 10.4049/jimmunol.1800006. Epub 2019 May 29.

04. Cottonseed Oil Protects Against Intestinal Inflammation in Dextran Sodium Sulfate-Induced Inflammatory Bowel Disease.

Park JS, Choi J, Hwang SH, Kim JK, Kim EK, Lee SY, Lee BI, Park SH, **Cho ML**. J Med Food. 2019 Jul;22(7):672-679. doi: 10.1089/jmf.2018.4323. Epub 2019 May 21. PMID:31112045

03. Inhibition of IL-17 ameliorates systemic lupus erythematosus in Roquin<sup>san/san</sup> mice through regulating the balance of TFH cells, GC B cells, Treg and Breg.

Lee SY, Lee SH, Seo HB, Ryu JG, Jung K, Choi JW, Jhun J, Park JS, Kwon JY, Kwok SK, Youn J, Park SH, **Cho ML**. Sci Rep. 2019 Mar 26;9(1):5227.

02. RIPK1 inhibition attenuates experimental autoimmune arthritis via suppression of osteoclastogenesis.

Jhun J, Lee SH, Kim SY, Ryu J, Kwon JY, Na HS, Jung K, Moon SJ, **Cho ML**, Min JK. J Transl Med. 2019 Mar 15;17(1):84.

01. Protein inhibitor of activated STAT3 reduces peripheral arthritis and gut inflammation and regulates the Th17/Treg cell imbalance via STAT3 signaling in a mouse model of spondyloarthritis.

Min HK, Choi J, Lee SY, Seo HB, Jung K, Na HS, Ryu JG, Kwok SK, **Cho ML**, Park SH. J Transl Med. 2019 Jan 10;17(1):18.