

Curriculum Vitae



Farhad salari, PhD

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Current Position

Associate professor, Department of immunology, School of Medicine, Kermanshah
University of Medical Sciences, Kermanshah Iran

EDUCATION

PhD. in Immunology, July 2014

Mashhad University of Medical Sciences, Mashhad, Iran

MSc. in immunology, September 2006

B.S. in Biology, June 2003

Department of biology, Razi University of Sciences, Kermanshah, Iran

Publications

1. Maralbashi S, Aslan C. Kahroba H, Asadi M, Sadegh Soltani-Zangbar M, Haghnava N, Jadidi F, Salari F, Tohid Kazemi T. Docosahexaenoic acid (DHA) impairs hypoxia-induced cellular and exosomal overexpression of immune-checkpoints and immunomodulatory molecules in different subtypes of breast cancer cells. *BMC Nutr.* 2024 Mar 4; 10(1):41.
2. Dashtbin, S., Aravand, A., Salari, F., Alvandi, A., Abiri, R. The inhibitory effect of *Lactobacillus rhamnosus* on p38 mitogen-activated protein kinase pathway activation and the expression of interleukin-17A. *Reviews and Research in Medical Microbiology.* 2024, 35(3):167-173
3. Amin Mohedin J, Rezaeiemanesh A, Asadi S, Haddadi M, Abdul Ahmed B, Gorgin Karaji A, Salari F. Resolvin D1 (Rvd1) Attenuates In Vitro LPS-Stimulated Inflammation Through Downregulation of miR-155, miR -146, miR -148 and Kruppel Like Factor 5. *Rep Biochem Mol Biol.* 2024 Jan;12(4):566-574.
4. Azadinejad H, Feizollahi P, Rezaeiemanesh A, Salari F, Gorgin Karaji A. Relationship Between IL-10 Single Nucleotide Polymorphisms (rs1800871, rs1800872, and rs1800896) and the Severity of COVID-19. *Genet Test Mol Biomarkers.* 2024 Nov; 28(11):438-444.
5. Rasouli S, Alizadeh S.A, Abdolsamadi M, Mohassel Y, Safari F, Salari F, Mahdih N, Ahdi Khosroshahi S, Bahman Akbari B. The Association Between the C-Reactive Protein Gene Variants rs1130864 and rs2794521 and Obstructive Sleep Apnea in the Iranian Kurdish Population. *Genet Test Mol Biomarkers.* 2024 Dec;28(12):485-491
6. Asadi G, Feizollahi P, Rajabinejad M, Falahi S, Rezaei Varmaziar F, Faryadi E, Gorgin Karaji A, Salari F, Rezaeiemanesh A. Comparison of the efficacy of combined budesonide and fexofenadine versus combined fluticasone propionate and fexofenadine on the expression of class-4 semaphorins and their receptors in the peripheral blood cells of patients with allergic rhinitis. *Heliyon.* 2024 Jan 15; 10(1):e22924.
7. Motamedi H, Abiri R, Salari F, Jalili C, Alvandi A. Reduction of UreB and CagA expression level by siRNA construct in *Helicobacter pylori* strain SS1. *BMC Microbiol.* 2023 Dec 19;23(1):401.
8. Asadi G, Feizollahi P, Rajabinejad M, Falahi S, Rezaei Varmaziar F, Faryadi E, Gorgin Karaji A, Salari F, Rezaeiemanesh A. Comparison of the efficacy of combined budesonide and fexofenadine versus combined fluticasone propionate and fexofenadine on the expression of class-4 semaphorins and their receptors in the peripheral blood cells of patients with allergic rhinitis. *Heliyon.* 2024 Jan 15;10(1):e22924.
9. Daneshfar N, Falahi S, Gorgin Karaji A, Rezaeiemanesh A, Mortazavi SHR, Akbari B, Eivazi A, Salari F. Association of Single Nucleotide Polymorphisms (SNPs) of Chemoattractant Receptor23 (ChemR23) Gene with Susceptibility to Allergic Rhinitis. *Biochem Genet.* 2023 Nov 22.

10. Eivazi A, Akbari B, Falahi S, Gorgin Karaji A, Rezaeiemanesh A, Mortazavi SHR, Daneshfar N, Salari F. Association of Rs7217186 Polymorphism of Arachidonic Acid 15-Lipoxygenase (ALOX15) Gene with Susceptibility to Allergic Rhinitis. *Rep Biochem Mol Biol*. 2023 Jul;12(2):269-76.
11. Molaie M, Lotfi R, Heidari Moghadam R, Rezaeiemanesh A, Karaji AG, Salari F. Imbalanced serum levels of resolvin E1 (RvE1) and leukotriene B4 (LTB4) may contribute to the pathogenesis of atherosclerosis. *Prostaglandins Other Lipid Mediat*. 2023 Sep 11;169:106781.
12. Feizollahi P, Zamanian MH, Falahi S, Salari F, Mahmoudi Z, Faryadi E, Gorgin Karaji A, Rezaeiemanesh A. Association of IFIH1 and DDX58 genes polymorphism with susceptibility to COVID-19. *Med Microbiol Immunol*. 2023 Jun;212(3):221-9.
13. Bagherinia E, Falahi S, Mortazavi SH, Salari F, Rezaeiemanesh A, Karaji AG. Co-treatment with Fexofenadine and Budesonide Increases FoxP3 Gene Expression in Patients with Allergic Rhinitis. *Am J Rhinol Allergy*. 2023 Mar 7:19458924231160596.
14. Hassani SS, Karamali N, Rajabinejad M, Ashjari D, Afshar Hezarkhani L, Gorgin Karaji A, Salari F, Rezaeiemanesh A. Dysregulation of Long Noncoding RNA NEAT1/miR-199a-5/BiP Axis in Patients with Diabetic Neuropathy. *Lab Med*. 2023;54(2):160-5.
15. Koohyanizadeh F, Mortazavi SH, Salari F, Falahi S, Rezaeiemanesh A, Gorgin Karaji A. Association between IL-27p28 gene polymorphisms and susceptibility to allergic rhinitis. *International Journal of Immunopathology and Pharmacology*. 2022;36.
16. Mahmoudi Z, Karamali N, Roghani SA, Assar S, Pournazari M, Soufivand P, Salari F, Rezaeiemanesh A. Efficacy of DMARDs and methylprednisolone treatment on the gene expression levels of HSPA5, MMD, and non-coding RNAs MALAT1, H19, miR-199a-5p, and miR-1-3p, in patients with rheumatoid arthritis. *Int Immunopharmacol*. 2022 Jul;108:108878.
17. Falahi S, Zamanian MH, Feizollahi P, Rezaeiemanesh A, Salari F, Mahmoudi Z, Gorgin Karaji A. Evaluation of the relationship between IL-6 gene single nucleotide polymorphisms and the severity of COVID-19 in an Iranian population. *Cytokine*. 2022 Jun;154:155889.
18. Mohammadi P, Hesari M, Chalabi M, Salari F, Khademi F. An overview of immune checkpoint therapy in autoimmune diseases. *Int Immunopharmacol*. 2022 Jun;107:108647.
19. Rajabinejad M, Asadi G, Ranjbar S, Varmaziar FR, Karimi M, Salari F, Karaji AG, Rezaeiemanesh A, Hezarkhani LA. The MALAT1-H19/miR-19b-3p axis can be a fingerprint for diabetic neuropathy. *Immunol Lett*. 2022 May;245:69-78.
20. Ashjari D, Karamali N, Rajabinejad M, Hassani SS, Afshar Hezarkhani L, Afshari D, Gorgin Karaji A, Salari F, Rezaeiemanesh A. The axis of long non-coding RNA MALAT1/miR-1-3p/CXCR4 is dysregulated in patients with diabetic neuropathy. *Heliyon*. 2022 Mar;8(3):e09178.
21. Asadi G, Falahi S, Rajabinejad M, Feizollahi P, Mortazavi SH, Gorgin Karaji A, Salari F, Rezaeiemanesh A. Altered Expression of Long Non-Coding RNAs NEAT1, H19, and MALAT1 in Peripheral Blood Cells of Patients with Allergic Rhinitis after Treatment with Pharmaceutical Combinations of Budesonide and Fexofenadine versus Fluticasone Propionate and Fexofenadine. *Scientific Journal of Kurdistan University of Medical Sciences*. [Original Research]. 2023;28(1):74-86.

22. Askari AA, Feizollahi P, Rezaeiemanesh A, Salari F, Gorgin Karaji A. The effect of treatment with fexofenadine and fluticasone propionate on the gene expression levels of Th9 transcription factors in patients with allergic rhinitis. *Heliyon*. 2021 Dec;7(12):e08556.
23. Falahi S, Salari F, Rezaeiemanesh A, Mortazavi SH, Koohyanizadeh F, Lotfi R, Gorgin Karaji A. Association of interleukin-12B rs6887695 with susceptibility to allergic rhinitis. *Immunol Res*. 2021 Apr;69(2):189-95.
24. Falahi S, Karaji AG, Koohyanizadeh F, Rezaeiemanesh A, Salari F. A comprehensive in Silico analysis of the functional and structural impact of single nucleotide polymorphisms (SNPs) in the human IL-33 gene. *Comput Biol Chem*. 2021 Oct;94:107560.
25. Davoodi A, Lotfi R, Mortazavi SH, Gorgin Karaji A, Rezaeiemanesh A, Salari F. Retinoic Acid Correlates with Reduced Serum IL-10 And TGF- β in Allergic Rhinitis. *Reports of Biochemistry and Molecular Biology*. [Original Article]. 2021;9(4):399-407.
26. Asadi G, Rezaei Varmaziar F, Karimi M, Rajabinejad M, Ranjbar S, Gorgin Karaji A, Salari F, Afshar Hezarkhani L, Rezaeiemanesh A. Determination of the transcriptional level of long non-coding RNA NEAT-1, downstream target microRNAs, and genes targeted by microRNAs in diabetic neuropathy patients. *Immunol Lett*. 2021 Apr;232:20-6.
27. Rajabinejad M, Ranjbar S, Afshar Hezarkhani L, Salari F, Gorgin Karaji A, Rezaeiemanesh A. Regulatory T cells for amyotrophic lateral sclerosis/motor neuron disease: A clinical and preclinical systematic review. *J Cell Physiol*. 2020 Jun;235(6):5030-40.
28. Rajabinejad M, Asadi G, Ranjbar S, Afshar Hezarkhani L, Salari F, Gorgin Karaji A, Rezaeiemanesh A. Semaphorin 4A, 4C, and 4D: Function comparison in the autoimmunity, allergy, and cancer. *Gene*. 2020 Jul 1;746:144637.
29. Lotfi R, Davoodi A, Mortazavi SH, Gorgin Karaji A, Tarokhian H, Rezaeiemanesh A, Salari F. Imbalanced serum levels of resolvin E1 (RvE1) and leukotriene B4 (LTB4) in patients with allergic rhinitis. *Mol Biol Rep*. 2020 Oct;47(10):7745-54.
30. Koohyanizadeh F, Karaji AG, Falahi S, Rezaeiemanesh A, Salari F. In silico prediction of deleterious single nucleotide polymorphisms in human interleukin 27 (IL-27) gene. *Meta Gene*. 2020 2020/09/01;25:100710.
31. Halashi B, Tarokhian H, Sayad B, Salari F, Gorgin Karaji A. Comparison of the sensitivity and specificity of modified Rose Bengal and ELISA test in the diagnosis of brucellosis. *Scientific Journal of Kurdistan University of Medical Sciences*. [Applicable]. 2020;25(3):1-13.
32. Falahi S, Mortazavi SHR, Salari F, Koohyanizadeh F, Rezaeiemanesh A, Gorgin Karaji A. Association between IL-33 Gene Polymorphism (Rs7044343) and Risk of Allergic Rhinitis. *Immunol Invest*. 2020 Aug 12:1-11.
33. Rajabinejad M, Salari F, Gorgin Karaji A, Rezaeiemanesh A. The role of myeloid-derived suppressor cells in the pathogenesis of rheumatoid arthritis; anti- or pro-inflammatory cells? *Artif Cells Nanomed Biotechnol*. 2019 Dec;47(1):4149-58.
34. Lotfi R, Rezaeiemanesh A, Mortazavi SH, Karaji AG, Salari F. Immunoresolvents in asthma and allergic diseases: Review and update. *J Cell Physiol*. 2019 Jun;234(6):8579-96.
35. Aslan C, Maralbashi S, Salari F, Kahroba H, Sigaroodi F, Kazemi T, Kharaziha P. Tumor-derived exosomes: Implication in angiogenesis and antiangiogenesis cancer therapy. *J Cell Physiol*. 2019 Aug;234(10):16885-903.

36. Salari F, Vahedi F, Varasteh AR, Ketabdar H, Chamani J, Sankian M. Enhanced sublingual immunotherapy by TAT-fused recombinant allergen in a murine rhinitis model. *Int Immunopharmacol*. 2017 Jul;48:118-25.
37. Salari F, Varasteh AR, Vahedi F, Hashemi M, Sankian M. Down-regulation of Th2 immune responses by sublingual administration of poly (lactic-co-glycolic) acid (PLGA)-encapsulated allergen in BALB/c mice. *Int Immunopharmacol*. 2015 Dec;29(2):672-8.
38. Salari F, Vahedi F, Chamani J, Varasteh A, Ketabdar H, Sankian M. Efficient expression of a soluble lipid transfer protein (LTP) of *Platanus orientalis* using short peptide tags and structural comparison with the natural form. *Biotechnol Appl Biochem*. 2015 Mar-Apr;62(2):218-25.
39. Khakzad MR, Salari F, Javanbakht M, Hojati M, Varasteh A, Sankian M, Meshkat M. Transforming growth factor beta 1 869T/C and 915G/C polymorphisms and risk of autism spectrum disorders. *Rep Biochem Mol Biol*. 2015 Apr;3(2):82-8.
40. Khakzad MR, Saffari A, Mohamadpour N, Sankian M, Varasteh A, Salari F, Meshkat M. TLR4 and TLR2 expression in biopsy specimens from antral and corporal stomach zones in *Helicobacter pylori* infections. *Rep Biochem Mol Biol*. 2014 Oct;3(1):29-37.
41. Tajik N, Salari F, Ghods AJ, Hajilooi M, Radjabzadeh MF, Mousavi T. Association between recipient ICAM-1 K469 allele and renal allograft acute rejection. *Int J Immunogenet*. 2008 Feb;35(1):9-13.
42. Tajik N, Salari F, Hajilooi M, Amoli M, Salekmoghaddam A. Rapid detection of intercellular adhesion molecule 1 (G241R and K469E) polymorphisms by a novel PCR-SSP assay. *Tissue Antigens*. 2007 Apr;69(4):338-41.

Presentations

- 1- R Lotfi, S H Mortazavi, A Gorgin karaji, F Salari. Increased serum levels of resolvin E1 but no difference in serum levels of resolvin D1 in allergic rhinitis patients compared to healthy subjects. Poster presentation in 14th international congress of immunology and allergy 26-28 April 2018, Tehran iran.
- 2- S Maralbashi, F Salari, M Javadian, N Shekari, C Aslan, M Asadi, T Kazemi. Comparative study of the effects of oshexanoic acid (DHA), Linoleic acid (LA) and taxol in decreasing the expression of miR-10b and miR-20a oncomirs in triple-negative metastatic breast cancer cell line. Poster presentation in 14th international congress of immunology and allergy 26-28 April 2018, Tehran iran.
- 3- E Bagherinia, S H Mortazavi, F Salari, A Gorgin karaji. Budesonide and fexofenadine treatment reduce blood eosinophils and serum IgE in allergic rhinitis. Poster presentation in 14th international congress of immunology and allergy 26-28 April 2018, Tehran iran.
- 4- A Mehrmanesh, E Bagherinia, S H Mortazavi, F Salari, A Gorgin karaji. Effect of treatment with fluticasone propionate and fexofenadine on blood eosinophil percentage and serum IgE level in allergic rhinitis. Poster presentation in 14th international congress of immunology and allergy 26-28 April 2018, Tehran iran.

- 5- E Bagherinia, S H Mortazavi, F Salari, A Gorgin karaji. Treatment of allergic rhinitis with fexofenadine and budesonide reduces clinical symptoms and improves the quality of life. Poster presentation in 14th international congress of immunology and allergy 26-28 April 2018, Tehran iran.
- 6- R Rezaeianpour, R Lotfi, F Khamoushi, S H Mortazavi, A Gorgin karaji, F Salari. Correlation of serum resolvins and quality of life in allergic rhinitis. Poster presentation in 14th international congress of immunology and allergy 26-28 April 2018, Tehran iran.
- 7- A Davoodi, F Khamoshi, M Molaei, S H Mortazavi, A Gorgin karaji, F Salari. The relation between vitamin A and serum IgE level with quality of life in patients with allergic rhinitis. Poster presentation in 14th international congress of immunology and allergy 26-28 April 2018, Tehran iran.
- 8- F Salari, AR Varasteh, F Vahedi, M Hashemi, M Sankain: Down-regulation of Th2 immune responses by sublingual administration of poly (lactic-co-glycolic) acid (PLGA)-encapsulated allergen in BALB/c mice. Poster presentation in 3rd international congress on Nano Science & Nano Technology, July 2-3, 2015, Istanbul, turkey
- 9- F Salari, F Vahedi, AR Varasteh, M Sankian: Evaluation of allergen-specific sublingual immunotherapy of *Platanus orientalis* pollinosis using polylactic-co-glycolic acid in mice. Poster presentation in EAACI congress jun 11-15, 2011, Istanbul, turkey
- 10- N Tajik, F Salari, M Hajilooi, T Mosavi, A Salek Moghaddam: ICAM-1 G241R and K469E genetic polymorphisms in an Iranian population. Poster presentation in international conference of immunogenomics and immunomics, Oct 8-12, 2006, Budapest, Hungary
- 11- N Tajik, F salari, T kazemi, A Ghods, M Hajilooi, A Salek-Moghaddam: Association between ICAM-1 E469K gene polymorphism and kidney allograft acute rejection. Poster presentation in international conference of immunology, Tissue Antigens Volume 67 number 6 jun 2006 Oslo Norway, 8-11, 2006

Recent/Current Research

1. Comparison of Lipoxin A4 Serum and Lipoxin A4 Receptor Gene Expression Levels in Peripheral Blood Cells in Patients with Allergic and Non-Allergic Rhinitis with Healthy Controls
2. Study of serum levels of retinoic acid and its relation with $\alpha 4\beta 1$, $\alpha 4\beta 7$ Gene Expression and CCL17, CCL22, CCL28 serum levels in Patients with Rhinitis and health control
3. The Comparison of Resolvin E1& D1 Serum Levels and Gene Expression Levels of Omega-3 Receptor (GPR120) and PPAR γ in Peripheral Blood Cells in Patients with Rhinitis with Healthy Controls

4. The effect of docosahexaenoic acid (DHA) on cellular and exosomal expression CD39, CD73, CD47 and their modulated miRNAs in breast metastatic cell line MDA-MB-231
5. Comparative study of the effect of DHA and LA fatty acids on the expression of immunomodulating molecule, MICA and its controlling miRNAs in metastatic breast cancer cell line
6. Comparative Study of serum level of resolvin E1, eicosapentaenoic acid and gene expression of PPAR- γ and NF- κ B transcription factors in peripheral blood leukocytes in atherosclerotic patients and in healthy subjects
7. In silico design and in vitro analysis of cellular and humoral immunogenicity of polypeptide vaccine of Haemophilus
8. The comparison of the levels of GATA-3, ROR γ t and FOXP3 transcription factors gene expression in peripheral Blood cells of Allergic Rhinitis, Non-Allergic Rhinitis and Healthy persons
9. Comparison of retinoic acid, IL-10, and TGF- β Serum Levels and FOXP3 Gene Expression Levels in Peripheral Blood Cells between Patients with Rhinitis and Healthy Controls
10. The Study of association of single nucleotide polymorphisms (rs153109 A>G and rs181206 T>C) of IL-27-P28 gene with IL-27 serum level and susceptibility to allergic rhinitis in Iranian Kermanshah populations
11. Survey of frequency of interleukin 33 genetic variants (rs7044343 C>T, rs1929992 A>G, rs12551256 A>G) and their relation with interleukin 33 serum level in allergic rhinitis patients in Kermanshah
12. Investigation the effect of probiotic Lactobacillus rhamnosus on MAP kinase and inflammasome signaling pathway in mouse model of multiple sclerosis
13. Investigation the effect of probiotic Lactobacillus rhamnosus on NF- κ B pathway in mouse model of multiple sclerosis
14. Micro- and macronutrient intake in patients with rhinitis and their relationship to quality of life: a case-control study
15. Investigation of genetic variation in P40 and BAFF genes in patients with allergic rhinitis in Kermanshah
16. A comparison survey of GATA-3, ROR γ t and FOXP3 genes expression levels in peripheral blood cells of rhinitis patients, before and after treatment with Fluticasone propionate and Fexofenadine.
17. The study of genetic variants of Chemerin receptor 23 (rs4964676 G>A, rs35121177 G>A, rs73201532 C>T, rs4373981 G>C) with the risk of allergic rhinitis
18. The association of genetic variants of rs7217186 C>T, rs2619112 A> G of lipoxygenase 15 gene with susceptibility to allergic rhinitis in Kermanshah province
19. A Comprehensive in Silico Analysis of the Functional and Structural Impact of Single Nucleotide Polymorphisms (SNPs) in the Human IL-33 Gene
20. Investigation of the effect of resolvin D1 on MALAT1 lncRNA, miR-103a-3p micro-RNA pathway, and KLF4 gene expression levels in vascular smooth muscle cell line treated with LPS
21. Investigation of the effect of Resolvin D1 (RvD1) on Beclin-1 and MAP1LC3-II gene expression, proteins of autophagy pathway in THP-1 cell line
22. Investigation of the effect of resolvin D1 on kruppel like factor 2, MiRNA 27a, and MiRNA 223 in the LPS stimulated HUVEC cell line

23. Investigation of the effect of resolvin D1 on regulation of KLF5 and related MicroRNAs in LPS-stimulated THP1 cells

Experience

Teaching

Medical student:

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|------------------------|---------------------|---------------|
| • Immunology course | Kermanshah Univ.Med | 2014 -present |
| • practical immunology | Kermanshah Univ.Med | 2014 -present |
| • Immunology course | Hormozgan Univ. Med | 2006-2007 |
| • Immunology course | Azad Univ.Hormozgan | 2006-2007 |

Post-Graduate (MSc student):

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|-------------------|---------------------|------------|
| • Immunochemistry | Kermanshah Univ.Med | 2014 -2015 |
| • Immunology 2 | Kermanshah Univ.Med | 2014 -2015 |

Workshop presentation

- RNA extraction and RT-PCR for post graduate student. Mashhad University, Mashhad, Iran. 2011
- Primer design, RFLP & SSP PCR, RNA extraction, cDNA synthesis, Real Time PCR.Mashhad University, Mashhad, Iran. 2012
- ELISA: development and troubleshooting. Kermanshah University, Kermanshah, Iran.2016
- Concept map. Kermanshah University, Kermanshah, Iran.2017

Technical Skills

- Development of ELISA.
- Immunochemistry techniques including Dot Blotting, SDS-PAGE, Western Blotting, SRID, DID, Immunoelectrophoresis.
- Different methods of DNA and RNA extraction, cDNA synthesis and gene cloning.
- Developing Real time PCR, RT-PCR, PCR-SSP, PCR-RFLP
- Experience in Synthesis of PLGA Nanoparticles

Additional Skills:

Computer skills

- Microsoft office (Including Word, PowerPoint and Excel)
- EndNote

- Reference manager
- SPSS
- Bioinformatics software: like “Gene runner” and “Primer premier”

Languages: Persian – Kurdish – English