

“Curriculum Vitae”

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Personal information:

Name: Parisa

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Current position: Assistant professor of Medical Immunology, Faculty of Medicine, Hamadan University of Medical Sciences

Educations:

- **PhD.** Medical Immunology, Mazandaran University of Medical Science, School of Medicine, Sari, Iran (2017-2022)

PhD Thesis:

The evaluation of Dimethyl Fumarate (DMF) effect on behavior of Fibroblast-like synoviocytes (FLS) derived from synovium of rheumatoid arthritis patients and monitoring of it in collagen-induced arthritic (CIA) model

- **M.Sc.** Medical Immunology; Kermanshah University of Medical Sciences, School of Medicine, Kermanshah, Iran; (2014-2017)

M.Sc. Thesis:

The correlation between plasma levels of vitamin D and epigenetic changes of FoxP3 gene in rheumatoid arthritis patients

- **B.Sc.** Medical Laboratory Technology; Tehran University of Medical Sciences, Faculty of Paramedicine, Tehran, Iran; (2010-2014)

Honors and Awards:

1. Top ranked researcher in 12th Tabari festival, Mazandaran University of Medical Sciences (2023)
2. Top ranked researcher in 9th Tabari festival, Mazandaran University of Medical Sciences (2020)
3. Ranking first in comprehensive exam of Immunology, Mazandaran University of Medical Sciences (2019)
4. Distinguished student of Immunology, Mazandaran University of Medical Sciences (2019)
5. Distinguished student of Immunology, Kermanshah University of Medical Sciences (2017)

Publications:

1. Books

Zafari P, 1400, Rheumatoid arthritis and experimental animal models. Tehran, Noavaran Danesh.

2. Papers

Research Papers:

- Ghaffari, S., Fateh, S., Faramarzi, F., Rafiei, A., Razavipour, M., & **Zafari, P.** The effect of tranexamic acid on synovium of patients undergoing arthroplasty and anterior cruciate ligament reconstruction surgery. *Naunyn-Schmiedeberg's archives of pharmacology*, 2023; 396(12), 3733–3742.
- **Zafari, P.**, Taghadosi, M., Faramarzi, F., Rajabinejad, M., & Rafiei, A. Dimethyl Fumarate Inhibits Fibroblast Like Synoviocytes-mediated Inflammation and Joint Destruction in Rheumatoid Arthritis. *Inflammation*, 2023; 46(2), 612–622.
- Faramarzi F, **Zafari P**, Alimohammadi M, Golpour M, Ghaffari S, Rafiei A. Inhibitory Effects of Cold Atmospheric Plasma on Inflammation and Tumor-Like Feature of Fibroblast-Like Synoviocytes from Patients with Rheumatoid Arthritis. *Inflammation*. 2022 Jun 17. doi: 10.1007/s10753-022-01703-3. PMID: 35713788.
- **Zafari P**, Rafiei A, Faramarzi F, Ghaffari S, Amiri AH, Taghadosi M. Human fibroblast-like synoviocyte isolation matter: a comparison between cell isolation from synovial tissue and synovial fluid from patients with rheumatoid arthritis. *Revista da Associação Médica Brasileira* 2021;67:1654-8
- Khave LJ, **Zafari P**, Pirsalehi A, Salari S, Baghestani A, Akbari ME, et al. Association between thrombocytopenia and platelet profile with morbidity/mortality of severe and non-severe COVID-19 patients. *Revista da Associação Médica Brasileira* 2021;67:1670-5
- **Zafari P**, Yadani Z, Akhavan-Niaki H, Rafiei A. Effect of Cold Atmospheric Plasma on Gene Expression and Methylation of Genes Involved in Colorectal Cancer. *Journal of Mazandaran University of Medical Sciences* 2022;31(204):26-39
- Samimi, Zahra, Bahareh Kardideh, Maryam Chalabi, **Parisa Zafari**, Mahdi Taghadosi. The plasma Tumor Necrosis Factor- α (TNF- α) does not have any correlation with

disease activity in rheumatoid arthritis patients treated with disease modifying anti-rheumatic drugs (DMARDs). *Braz. J. Pharm. Sci.*, 2020, vol.56.

- Samimi Z, Izadpanah A, Feizollahi P, Roghani SA, Assar S, **Zafari P**, et al. The Association between the Plasma Sugar and Lipid Profile with the Gene Expression of the Regulatory Protein of mTOR (Raptor) in Patients with Rheumatoid Arthritis. *Immunol Invest.* 2020;1-12.
- Mahdi T, Soraya B, Sasan G,....., and **Parisa Z**. The Correlation Between Plasma Levels of Vitamin D and Epigenetic Alterations of Treg-Specific Demethylated Region (TSDR) in Rheumatoid Arthritis Patients. *Acta Medica Iranica.* 2019;57(6).
- Samimi Z, Kardideh B, **Zafari P**, Bahrehmand F, Roghani SA, Taghadosi M. The impaired gene expression of adenosine monophosphate-activated kinase (AMPK), a key metabolic enzyme in leukocytes of newly diagnosed rheumatoid arthritis patients. *Mol Biol Rep.* 2019;46(6):6353-60.
- Fekri A, **Zafari P**, Solimani B, Iranshahi N, Taghaddosi M. Increased gene expression of integrin $\beta 7$ in newly diagnosed rheumatoid arthritis patients. *International Journal of Biomedicine and Public Health.* 2019;2(1):1-5.
- Iranshahi N, Assar S, Amiri SM, **Zafari P**, Fekri A, Taghadosi M. Decreased Gene Expression of Epstein-Barr Virus-Induced Gene 3 (EBI-3) may Contribute to the Pathogenesis of Rheumatoid Arthritis. *Immunol Invest.* 2019;48(4):367-77.
- **Zafari P**, Yari K, Mostafaei S, Iranshahi N, Assar S, Fekri A, et al. Analysis of Helios gene expression and Foxp3 TSDR methylation in the newly diagnosed Rheumatoid Arthritis patients. *Immunol Invest.* 2018;47(6):632-42.
- **Zafari P**, Mostafaei S, Iranshahi N, Jalili C, Taghadosi M. Relationship between vitamin D plasma level and Foxp3 gene expression among rheumatoid arthritis patients. *Scientific Journal of Kurdistan University of Medical Sciences.* 2018;22(6):40-8.
- Iranshahi N, Amiri SM, **Zafari P**, Taghadosi M. The correlation between rheumatoid factor and anti-cyclic citrullinated peptides with gene expression of FoxP3 in rheumatoid artheritis patients. *International Journal of Biomedicine and Public Health.* 2018;1(1):6-11.

Systematic review and meta-analysis papers:

- Hafezi N, Alizadeh-Navaei R, Golpour M, **Zafari P**, Ajami A. Role of Frizzled receptor expression on patients' survival with gastrointestinal cancers: A systematic review with meta-analysis. *Caspian Journal of Internal Medicine* 2022;13(1):1-9
- **Zafari P**, Zarifian A, Alizadeh-Navaei R, Taghadosi M, Rafiei A, Samimi Z, et al. Asymmetric and symmetric dimethylarginine concentration as an indicator of cardiovascular diseases in rheumatoid arthritis patients: a systematic review and meta-analysis of case-control studies. *Clinical rheumatology*. 2020:1-8.
- **Zafari P**, Zarifian A, Alizadeh-Navaei R, Taghadosi M, Rafiei A. Association between polymorphisms of cytokine genes and brucellosis: A comprehensive systematic review and meta-analysis. *Cytokine*. 2020;127:154949.
- Hejrati A, Taghadosi M, Alizadeh-Navaei R,....., and **Zafari P**. Neopterin serum level does not reflect the disease activity in rheumatoid arthritis: A systematic review and meta-analysis. *IUBMB Life*. 2020;72(12):2563-71.
- Iranshahi N, **Zafari P**, Yari K, Alizadeh E. The most common genes involved in epigenetics modifications among Iranian patients with breast cancer: A systematic review. *Cellular and Molecular Biology*. 2016;62(12):116-22.

Narrative Review papers:

- Paniri, A., Hosseini, M. M., Amjadi-Moheb, F., Tabaripour, R., Soleimani, E., Langroudi, M. **P.**, **Zafari**, P., & Akhavan-Niaki, H. The epigenetics orchestra of Notch signaling: a symphony for cancer therapy. *Epigenomics*, 2023; 10.2217/epi-2023-0270.
- Faramarzi F, **Zafari P**, Alimohammadi M, Moonesi M, Rafiei A, Bekeschus S. Cold Physical Plasma in Cancer Therapy: Mechanisms, Signaling, and Immunity. *Oxidative Medicine and Cellular Longevity* 2021;2021
- Sellegounder D, **Zafari P**, Rajabinejad M, Taghadosi M, Kapahi P. Advanced glycation end products (AGEs) and its receptor, RAGE, modulate age-dependent COVID-19 morbidity and mortality. A review and hypothesis. *International Immunopharmacology*. 2021:107806.
- Moradinasab S, Pourbagheri-Sigaroodi A, **Zafari P**, Ghaffari SH, Bashash D. Mesenchymal stromal/stem cells (MSCs) and MSC-derived extracellular vesicles in COVID-19-induced ARDS: Mechanisms of action, research progress, challenges, and opportunities. *Int*

Immunopharmacol. 2021 Aug;97: 107694. doi: 10.1016/j.intimp.2021.107694. Epub 2021 Apr 28. PMID: 33932694; PMCID: PMC8079337

- **Zafari P**, Golpour M, Hafezi N, Bashash D, Esmaili SA, Tavakolinia N, et al. Tuberculosis comorbidity with rheumatoid arthritis: Gene signatures, associated biomarkers, and screening. *IUBMB Life*. 2020.
- Hejrati A, Hasani B, Esmaili M, Bashash D,.....and **Zafari P**. Role of exosome in autoimmunity, with a particular emphasis on rheumatoid arthritis. *International journal of rheumatic diseases*. 2020.
- Hejrati A, Rafiei A, Soltanshahi M,..... and **Zafari P**. Innate immune response in systemic autoimmune diseases: a potential target of therapy. *Inflammopharmacology*. 2020:1-18.
- Tahaghoghi-Hajghorbani S, **Zafari P**, Masoumi E, Rajabinejad M, Jafari-Shakib R, Hasani B, et al. The role of dysregulated immune responses in COVID-19 pathogenesis. *Virus Research*. 2020:198197.
- Keshavarz A, Pourbagheri-Sigaroodi A, **Zafari P**, Bagheri N, Ghaffari SH, Bashash D. Toll-like receptors (TLRs) in cancer; with an extensive focus on TLR agonists and antagonists. *IUBMB life*. 2020.
- Mokhtari, Y, Pourbagheri-Sigaroodi, A, **Zafari, P**, Bagheri, N, Ghaffari, SH, Bashash, D. Toll-like receptors (TLRs): An old family of immune receptors with a new face in cancer pathogenesis. *J Cell Mol Med*. 2021; 25: 639– 651
- Yazdani Z, Rafiei A, Golpour M, **Zafari P**, Moonesi M, Ghaffari S. IL-35, a double-edged sword in cancer. *Journal of Cellular Biochemistry*. 2020;121(3):2064-76.
- Radmanesh F, Mahmoudi M, Yazdanpanah E, Keyvani V, Kia N, Nikpoor AR, **Zafari P**, et al. The immunomodulatory effects of mesenchymal stromal cell-based therapy in human and animal models of systemic lupus erythematosus. *IUBMB life*. 2020;72(11):2366-81.
- **Zafari P**, Rafiei A, Esmaili SA, Moonesi M, Taghadosi M. Survivin a pivotal antiapoptotic protein in rheumatoid arthritis. *J Cell Physiol*. 2019;234(12):21575-87.
- Amjadi O, Rafiei A, Mardani M, **Zafari P**, Zarifian A. A review of the immunopathogenesis of Brucellosis. *Infectious Diseases*. 2019;51(5):321-33

Presentation in congresses:

- **Parisa Zafari**, Nasrin Iranshai, Mahdi Taghadosi. The correlation between vitamin D plasma levels with Foxp3 gene expression in Rheumatoid arthritis patients. 14th international congress of immunology and Allergy of Iran. 26-28 April, 2018, Tehran, Iran.
- Mahdi Taghadosi, **Parisa Zafari**, Nasrin Iranshahi. Analysis of the gene expression of Helios and the methylation status of Foxp3 TSDR sequence in the newly diagnosed Rheumatoid Arthritis patients. 14th international congress of immunology and Allergy of Iran. 26-28 April, 2018, Tehran, Iran.
- Nasrin Iranshahi, Seyed Mojtaba Amiri, **Parisa Zafari**, Mahdi Taghadosi. The correlation between rheumatoid factor (RF) and anti-cyclic citrullinated peptides (Anti-CCP) with gene expression of FoxP3 in rheumatoid artheritis patients. 14th international congress of immunology and Allergy of Iran. 26-28 April, 2018, Tehran, Iran.
- Nasrin Iranshahi, shirin Assar, **Parisa Zafari**, Seyed Mojtaba Amiri, Adel Fekri, Mahdi Taghadosi. Importance of immunological biomarkers in assessment of disease activity and progression in rheumatoid arthritis. 14th international congress of immunology and Allergy of Iran. 26-28 April, 2018, Tehran, Iran.
- Mahdi Taghadosi, Adel Fekri, **Parisa Zafari**, Nasrin Iranshahi. The Increased Expression of Integrin β 7 Gene in Peripheral Blood Leukocytes of the Newly Diagnosed Rheumatoid Arthritis Patients. 14th international congress of immunology and Allergy of Iran. 26-28 April, 2018, Tehran, Iran.
- Nasrin Iranshahi, shirin Assar, Seyed Mojtaba Amiri, **Parisa Zafari**, Mahdi Taghadosi. Association between gene expression of Interlukine-35 subunits with plasma neopterin and disease activity in rheumatoid arthritis patients. 14th international congress of immunology and Allergy of Iran. 26-28 April, 2018, Tehran, Iran
- Nasrin Iranshahi, Shirin Assar, **Parisa Zafari**, Seyed Mojtaba Amiri, Adel Fekri, Mahdi Taghadosi. Clinical Characteristics in Rheumatoid Arthritis: Correlation between Neopterin, RF, Anti-CCP and Disease Duration with Disease Activity. The Third International Congress of Immunology, Asthma & Allergy. 15-17 February, 2017. Tehran,Iran.
- **Parisa Zafari**, Nasrin Iranshahi, Mohammad-Taher Moradi, Kheirollah Yari. Association of Manganese superoxide dismutase (MnSOD rs4880) gene polymorphism with the risk of

periodontitis disease. 13th international congress of immunology and Allergy of Iran. 19-26 April,2016. Tabriz, Iran.

- Nasrin Iranshahi, **Parisa Zafari**, Mohammad-Taher Moradi, Kheirollah Yari. Analysis of interleukin-1 β (3954 C/T) genetic polymorphism and its association with gastric cancer. 13th international congress of immunology and Allergy of Iran. 19-26 April,2016. Tabriz, Iran.

Running projects:

- The investigation of Dimethyl Fumarate (DMF) effect on the modulation of TH17/Treg balance in collagen induced arthritis (CIA) model in Lewis Rats, Sari, Iran

Experiences:

Teaching:

- **Pharmacy student**

Immunology course, Mazandaran university of medical science, Ramsar campus

- **Medical students:**

Immunology course, Mazandaran university of medical science, Ramsar campus

Practical immunology, Kermanshah university of medical science, 2016

- **Paramedical students:**

Immunology course, Mazandaran university of medical science, 2018-2019

Technical skills:

Establishment of collagen induced arthritis (animal model of RA)

Developing of ELISA

SDS-PAGE, Western Blotting

MACS

Affinity chromatography

Methylation analysis

Tissue Culture of a variety of mammalian cells including, primary cells, white blood cells, cell lines, etc.

Different methods of DNA and RNA extraction, cDNA synthesis

Developing RT-PCR, and Real-time PCR

Additional skills:

- Referee of more than 50 papers in medical field for international publishers
- Writing systematic review and meta-analysis paper
- Primer designing for real time PCR and methylation specific PCR(Professional)
- Intermediate to advanced knowledge in using the following software packages: Statistic software, Allele ID, Reference Manager, Gene Banking

Recommendations: Available on request