

Khatere Mokhtari, PhD

Department of Cell and Molecular Biology and Microbiology

Faculty of Biological Science and Technology

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Education

- **Ph.D. in Cellular and Molecular Biology – Neuroscience**
Research Focus: Parkinson's disease, essential tremor, stroke, and neuroscience-related issues
 - **M.Sc. in Cellular and Molecular Biology**
Research Focus: Colorectal cancer
 - **B.Sc. in Genetics**
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Research Interests

- *Neurodegenerative diseases (Parkinson's disease, essential tremor, stroke)*
 - *Cancer biology and immunotherapy*
 - *Mechanistic pathways in surgery and inflammation*
 - *Drug delivery and therapeutic antibodies*
 - *microRNAs, stem cell therapy, and systems biology*
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Professional Experience

- **Current Collaboration:** Working with Professor Parvizi on inflammatory pathways in osteoarthritis and surgical infections.
- Collaborations with multiple **teaching and treatment hospitals**, including:
 - Taleghani Hospital
 - Shafa Yahyaian Hospital
 - Rasul Akram Hospital
 - Alzahra Hospital
 - Moheb-e-Mehr Hospital
 - Isabn-e-Maryam Hospital
 - Haft-e-Tir Hospital
- Affiliated with **renowned universities**:
 - Iran University of Medical Sciences
 - Isfahan University of Medical Sciences
 - Shahid Beheshti University of Medical Sciences

- ***Clinical Collaborations*** with physicians and surgeons in:
 - *Orthopedics*
 - *Gynecology*
 - *Internal Medicine*
 - *Oncology*
 - *Ophthalmology*
 - *Neurology and Neuroscience*
 - *Aesthetic Medicine*
 - *Veterinary Medicine*
 - *Dentistry*
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Academic Accomplishments

- ***Ranked 2nd*** in the National PhD Entrance Exam for Cellular and Molecular Biology
 - ***Top 4 finalist*** in the Annual Competitions of the Elite Society
 - ***Member of the National Elite Foundation***
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Published Papers (Selected)

- 1. Involvement of unsaturated fatty acid biosynthesis in CRC progression based on in vitro and in silico studies*
- 2. Colon cancer transcriptome*
- 3. Effects of intermittent fasting combined with physical exercise on cardiometabolic outcomes: systematic review and meta-analysis of clinical studies*
- 4. Identification of a novel interplaying loop of PPAR γ and respective lncRNAs are involved in colorectal cancer progress*
- 5. Unraveling the molecular and immunological landscape: exploring signaling pathways in osteoporosis*
- 6. Role of non-coding RNAs in osteoporosis*
- 7. Discovery of PELATON links to the INHBA gene in the TGF- β pathway in colorectal cancer using a combination of bioinformatics and experimental investigations*
- 8. Role of lncRNAs in brain tumors*

9. *The effects of probiotic supplementation and exercise training on liver enzymes and cardiometabolic markers in patients with non-alcoholic fatty liver disease: A systematic review and meta-analysis*
 10. *Pathological roles of miRNAs and pseudogene-derived lncRNAs in human cancers, and their comparison as prognosis/diagnosis biomarkers*
 11. *Determining expression changes of ANO7 and SLC38A4 membrane transporters in colorectal cancer*
 12. *Unraveling the Molecular Landscape of Osteoarthritis: A Comprehensive Review Focused on the Role of Non-Coding RNAs*
 13. *Glioblastoma multiforme: insights into pathogenesis, key signaling pathways, and therapeutic strategies*
 14. *Discovery of LINC01614 associated with the SPP1 gene in colorectal cancer*
 15. *Serum levels of oxidative stress, IL-8, and pepsinogen I/II ratio in Helicobacter pylori and gastric cancer patients: potential diagnostic biomarkers*
 16. *Extracellular vesicles: unlocking therapeutic potential in regenerative medicine*
 17. *Extracellular vesicles in reproductive medicines*
 18. *Multifaceted role of TRIM28 in health and disease*
 19. *The Impact of Exosomes on Bone Health: A Focus on Osteoporosis*
 20. *Exploring the Role of Wnt Signaling Pathway in Orthopedic Health and Disease: Mini-Review*
 21. *Insights into Gene Therapy Innovations for Orthopedic Disorders: A Mini-Review*
 22. *Comprehensive Analysis of Pediatric Elbow Injuries: A Cross-sectional Descriptive Study Investigating Frequency, Fracture Types, and Treatment Methods*
 23. *The Role of CA-125 Levels as a Prognostic Indicator for Response to Medical Treatment in Fallopian Ectopic Pregnancy*
 24. *Cross-cultural adaptation, validity and reliability of the Persian version of the Kerlan-Jobe Orthopedic Clinic shoulder and elbow score*
 25. *Investigating the Outcomes of Adolescent Treatment for Humerus Fractures Using Elastic Titanium Nails*
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Under Review Projects

1. *Impact of Obesity on Bone Health: Metabolic Interactions and Associated Pathologies*
 2. *Identification of lncRNA Associated with the SERPINE1 Gene in Colorectal Cancer Through TGF- β Pathway*
 3. *Biomarker Detection Methods in Eye Diseases*
 4. *A Comprehensive Review of Molecular Interactions and Signaling Pathways in Cancers and Neurodegenerative Diseases*
 5. *The Role of lncRNAs and miRNAs in OSCC Progression and Metastasis*
 6. *Comprehensive Analysis of Gene Expression and Regulatory Marker Profiles, Including Slc16A2, TMEM169, EBF3, and Associated CircRNAs and miRNAs in Oral Squamous Cell Carcinoma*
 7. *Unraveling Cellular and Molecular Insights: Exploring the Potential Efficacy and Limitations in Healing with Platelet-Rich Plasma*
 8. *Suppression of Circ_PTPRM Increases Drug Resistance to 5-Fu in Colorectal Cancer Through miR-432-5p Sponging*
 9. *Breast Cancer Transcriptome*
 10. *Innovative Insights into Osteosarcoma: Unraveling the Role of miRNAs, lncRNAs, and circRNAs in Tumorigenesis and Therapeutic Resistance*
 11. *Exosomes in Osteoarthritis: Emerging Roles in Pathogenesis, Diagnosis, and Therapeutic Potential*
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Published Books

1. *Comprehensive Techniques in Cellular and Molecular Sciences (Dr. Khatere Mokhtari) - Author*
2. *Management of Inflammatory Bowel Disease in Hospitalized Patients (Khatere Mokhtari, Dr. Amir Arya) - Translation*

3. *A Review of the Most Common Autoimmune Diseases (Dr. Khatere Mokhtari, Dr. Amir Arya) - Translation*
 4. *Fundamentals of Molecular Biology (Dr. Khatere Mokhtari, Dr. Abolghasem Esmaeili) - Translation*
 5. *Cancer Biomarkers in Body Fluids (Dr. Khatere Mokhtari, Dr. Mohammad Hossein Nasr Esfahani, Dr. Farzad Seyed Forootan) - Translation*
 6. ***Challenges in Upper Limb Orthopedic Surgery*** (Dr. Khatere Mokhtari, Dr. Mojtaba Bani Asadi) - Translation
 7. *Ocular Adnexal Lymphoma (Dr. Khatere Mokhtari, Dr. Amir Masoud Moieni) - Translation*
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Teaching Experience

- *Cell Culture*
 - *Molecular Biology Techniques*
 - *Genetic Engineering Techniques*
 - *Bioinformatics*
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Technical Skills

Computational Biology

- *Advanced Microarray Data Analysis in R*
- *Advanced RNA-Seq Data Analysis in R*
- *Pathway and Network Analysis*

Laboratory Skills

- ***Expert in cell and microbial culture***
 - ***Molecular Biology Techniques:*** Protein, RNA, and DNA extraction, cDNA synthesis, RT-PCR, Western Blot, ELISA, Immunocytochemistry, SDS-PAGE, Agarose Gel Electrophoresis
 - ***Genetic Engineering:*** Prokaryotic and eukaryotic cell transfection, gene cloning
 - ***Flow Cytometry and Advanced Microscopy Techniques***
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Languages

- ***English:*** Fluent (Academic Writing)
- ***Persian:*** Native

Awards & Honors

- *Invited speaker at international conferences on oncology and neurobiology*
 - *Reviewer for prestigious ISI journals*
 - *Keynote speaker at international conferences on basic and clinical science convergence*
 - *Executive team member for the International Conference on Basic and Clinical Science Convergence*
 - *Experience as a faculty member at the University of Isfahan, teaching graduate-level students*
 - *Developer and coordinator of clinical training proposals for residents in specialties such as orthopedics, including publication and dissemination strategies*
 - *Invited to submit articles to prestigious ISC journals*
 - *Successful publication in high-impact journals with impact factors above 10, contributing to interdisciplinary research and advancing clinical and basic science.*
 - *Contributor to orthopedic patent articles .*
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