Curriculum vitae

Mohammad Rasouli Koohi

Rasht, Guilan, Iran | mohammadrasooli.koohi@gmail.com | +989116947873
LinkedIn – Google Scholar

EDUCATION

Master of Science (M.Sc.) in Biotechnology
University of Tehran | Sep 2021-Jan 2024
GPA: 16.85/20
Thesis: Investigating the effect of metabolome on epigenetic changes of cancer cells using methods based on machine learning | Thesis evaluation: Excellent (19.85/20)

Bachelor of Science (B.Sc.) in Molecular Biology
University of Guilan | Sep 2017-Jul 2021
GPA: 16.38/20

SCIENTIFIC SKILLS

Programming | R, Python

Computational | Machine Learning, RNA-seq and ChIP-seq Data Analysis, Multi-omics

Experimental | Cell Culture, Western Blot, SDS-PAGE, DNA Extraction, PCR

RESEARCH EXPREINCES

Meta-analysis of COVID-19 Patient Outcomes in Cancer Therapy: Analyzing 100+ Research Papers and Preprocessing Dataset for Further Analysis
Supervisor: Dr. Raheleh Roudi | Stanford University (Remotely) | Feb 2024 – Mar 2024

Investigated MSC secretome's impact on cancer targets through co-culture experiments with qRT-PCR, Western blot, and Cell culture
Supervisor: Dr. Fatemeh Safari | University of Guilan | Feb 2023 – Jan 2024

Master Thesis: Investigating the effect of metabolome on epigenetic changes of cancer cells using methods based on machine learning
Supervisor: Dr. Mahya Mehrmohamadi | University of Tehran | Sep 2022 – Dec 2023

PUBLICATIONS

Peer-Reviewed Papers

Rasouli M, Mehrmohamadi M. (2025). Investigating the effect of metabolome on epigenetic changes of cancer cells using methods based on machine learning. Submitted: *PLOS Computational Biology*.

Rasouli M, Safari F, Sobhani N, Roudi R. (2025). Investigation of MSC secretome on breast cancer gene expression: A bioinformatic approach to identify differentially expressed genes. *Computational Biology Chemistry*. https://doi.org/10.1016/j.compbiolchem.2024.108331

Rasouli M, Alavi M, D'Angelo A, Sobhani N, Roudi R, Safari F. (2024). Exploring the dichotomy of the mesenchymal stem cell secretome: Implications for tumor modulation via cell-signaling pathways. *International Immunopharmacology*. https://doi.org/10.1016/j.intimp.2024.113265

Rasouli M, Safari F, Sobhani N, Alavi M, Roudi R. (2023). Regulation of Cellular-Signaling Pathways by Mammalian Proteins Containing Bacterial EPIYA or EPIYA-Like Motifs Predicted to be Phosphorylated. *DNA Cell Biology*. https://doi.org/10.1089/dna.2023.0350

Book Chapters

Rasouli M., Safari F., Kanani M.H. (2024). Principles of Hanging Drop Method (Spheroid Formation) in Cell Culture. *Methods in Molecular Biology (Springer)*. https://doi.org/10.1007/7651_2024_527

Rasouli M., Safari F. "Principles of Indirect Co-culture Method Using Transwell. *Methods in Molecular Biology (Springer)*. https://doi.org/10.1007/7651_2024_537

ACADEMIC HONORS AND AWARDS

Rank *8th* among almost 9000 participants in Cell and Molecular Biology Master Exam | 2021
Being accepted for the second round of National Molecular Biology Olympiad | 2021
Awarded a fully-funded scholarship for Master's degree in Biotechnology | 2021
Awarded a fully-funded scholarship for Bachelor's degree in Mol Biology | 2017

LANGUAGE PROFICIENCY

***English*:** TOEFL 97 (R: 25, L:25, S:26, W:21) ***Persian*:** Native

REFERENCES

Dr. Mahya Mehrmohamadi, Assistant Professor, Department of Biotechnology, University of Tehran
mehrmohamadi@ut.ac.ir

Dr. Fatemeh Safari, Associate professor at Department of Biology, University of Guilan
fsafari@guilan.ac.ir

Dr. Raheleh Roudi, Molecular Imaging Program at Stanford, Department of Radiology, Stanford University
roudi@stanford.edu