

# Shaghayegh Mahmoudi

Tehran, Iran.

☎ (+98) 933-798-6217 | ✉ Shaqayeqmahmoudi@gmail.com | 🔗 shaqayeq-m.github.io | 🌐 Shaghayegh-M

## Education

### 🏛 University of Science and Culture (USC)

- B.Sc. in Cellular and Molecular Biology
- Cumulative GPA: **19.40/20.00 (4/4)**

Tehran, Iran

Sep. 2019 – Feb. 2023

## Research Interests

- Neuropsychiatric Disease
- Sleep Disorder
- Neurodegenerative Disease
- Brain Circuits
- learning & Memory
- Neurogenetics

## Experiences

### Internship at National Brain Mapping Lab (NBML)

Aug. 2023

- Prepared subjects for EEG sessions (electrode placement, impedance checking, and adjusting the eye tracker).
- Identified and rejected artifacts meticulously to ensure data quality.
- Runned cognitive tests on subjects.

### Internship at Skin and Stem Cell Research Center (SSRC)

Oct. - Dec. 2022

- Studied eye drops produced from Umbilical Cord Blood.
- Participated in the culturing of stem cells, adhering to strict protocols for maintaining cell viability.

### Teaching Assistant

Sep. 2021- Jan. 2023

- Cellular and Molecular Biology2 course
- Biostatistics course

## Technical Skills

### Computer Skills:

- **Proficient:** Microsoft Office (Excel, Word, PowerPoint), Mendeley
- **Intermediate:** RStudio, SPSS, GeneRunner,  $\text{\LaTeX}$

**Laboratory Techniques:** PCR/qPCR, Recombinant DNA, DNA/RNA Extraction, Microarray, Gel Electrophoresis, Bacterial Culture, Western Blotting, Spectrophotometry, Primer Design, Flow Cytometry

**Languages:** Persian (Native), English (TOEFL: Overall 97 (R:25 - L:27 - S:23 - W:22)).

## Academic Projects

### srRNA-based Cancer Vaccines

- *Genetics in-course exercise*
- Explored various methods of cancer vaccine development.
- Conducted research on self-replicating RNA cancer vaccine types, with a focus on therapeutic vaccines targeting HPV.

### Genetic Engineering

- *Genetic Engineering in-course exercise*
- Conducted research on recombinant vaccines.
- Explored methods of gene therapy and assessed their efficiency for treating cancer and inherited diseases.

### Molecular Biology book by Robert F. Weaver, 5th edition

- *Translation of the book to Persian*
- Participated in translating chapters 9 and 10.

### Molecular Medicine: Genomics to Personalized Healthcare book by R. J. Trent, 4th edition

- *Translation of the book to Persian*
- Participated in translating chapters 3 and 4.

## Covid-19 Vaccines and their Mechanisms

- *Virology in-course exercise*

- Studied the mechanisms underlying various Covid-19 vaccine platforms, including mRNA-based vaccines, viral vector vaccines, and protein subunit vaccines.
- Gained insights into the stages of vaccine development, from preclinical research to regulatory approval & distribution.

## Honors & Membership

- Student member of “**Neuroscience Association of National Brain Mapping Lab (NBML).**” *Nov. 2022 - Present*
- Received University of Science and Culture ‘**Straight**’ **M.Sc. Admission offer as an Exceptional Talented Student** and exempt from taking the university entrance exam. *Jul. 2023*
- **Ranked 1<sup>st</sup>** among B.Sc. Cellular and Molecular Biology graduate students at the University of Science and Culture. *Jul. 2023*
- Student member of “**Cellular and Molecular Association of University of Science & Culture.**” *May 2022 - Mar. 2023*
- Contributor writer in 4<sup>th</sup>, 5<sup>th</sup> & 6<sup>th</sup> issues “**Biocan magazine at Union of Biology Students of Iran.**” *Magazine Jan. 2020 - May 2023*
- Contributor writer in 2<sup>nd</sup> & 3<sup>rd</sup> issues “**Genomics magazine at University of Science & Culture.**” *Magazine Oct. 2019 - Jun. 2021*

## Selected Courses

### B.Sc. Courses (Grade/20.00)

- Cellular and Molecular Biology 1&2 (20/20), Molecular Genetics (20/20), Genetic Engineering (20/20), Metabolism Biochemistry (20/20), Biostatistics (19.75/20.00)

### Online Courses

- “**Data Analyst in R**”- Offered by Dataquest
- “**Basic, Clinical & Cognitive Neuroscience Diploma**” - Offered by Neurotract **Certificate**
- “**Fundamentals of Neuroscience Parts 1&2**” - Offered by edX
- “**Elementary Steps toward AI**” - Offered by Tehran University of Medical Science(TUMS)

## Attended Seminars & Workshops

### Seminars

- “**Visual Neuroscience**”- University of Tehran **Certificate** *Sep. 2023*
- “**Second International and Forth National CRISPR Symposium**”- NIGBE **Certificate** *Jun. 2022*
- “**Cryobiology in Organs and Sexual Samples**” - Royan International Education Center(RIEC) **Certificate** *Mar. 2022*
- “**mRNA Technology in Research and Medicine**”- Iranian Biologists Union **Certificate** *Oct. 2021*
- “**Microorganisms in Health and Disease**”- Union of Biology Students of Iran **Certificate** *Sep. 2021*

### Workshops

- “**Vaccine and Vaccination, from Design to Administration**”- Razi Vaccine & Serum Research **Certificate** *Mar. 2022*
- “**Principles of Gene Editing and sgRNA Design Workshop**”- NIGBE **Certificate** *Jun. 2022*
- “**DNA Extraction, PCR, and DNA Paternity Test**”- Atieh Negar Gene Alborz **Certificate** *Sep. 2021*
- “**Pharmacy Technician Course**”- Academic Center for Education, Culture and Research *Feb. - Mar. 2021*

## References

### Dr. Hassan Rassouli

- ASSISTANT PROFESSOR - UNIVERSITY OF SCIENCE AND CULTURE
- ✉ hassan.rassouli@royaninstitute.org

### Dr. Reza Omani Samani

- ASSISTANT PROFESSOR - UNIVERSITY OF SCIENCE AND CULTURE
- ✉ samani@royaninstitute.org

### Dr. Abdollah Mohammadian

- EEG DATA ANALYST - NATIONAL BRAIN MAPPING LAB
- ✉ Mohammadian@nbml.ir

### Dr. Meysam Gachpazan

- ASSISTANT PROFESSOR - UNIVERSITY OF SCIENCE AND CULTURE
- ✉ Gachpazanm961@mums.ac.ir