

Reyhane Saberi

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Education

- **Graduated student** in Master of Science degree in Biotechnology Engineering (since 2022)

Sharif University of technology

- Supervisors: Professor [Shohre Mashayekhan](#) and: Professor [Soheila Yaghmaei](#)
- Thesis Title: Development and characterization of 3D-printing bioinks for cartilage tissue engineering

- **Bachelor of Science** in Chemical engineering majoring in biotechnology (2017-2021)

Isfahan University of technology

- Supervisors: Professor [Hamid Zilouei](#) and Professor [Saied Nouri Khorasani](#)
- Thesis Title: A review of common materials and methods in the construction of cartilage scaffolds in tissue engineering (Grade: 4/4)
- Overall.GPA:3.29/4 / GPA of Specialized courses in biotechnology 4/4

Research Interests

- Tissue engineering
- Biomaterials
- 3D Printing and 3D Bioprinting
- Immunoengineering
- Drug Delivery
- Organ-on-a-chip & organoid culture
- Computer Programming and Simulation
- Gene-activated scaffolds

Publications

- S. Ghasemi, A. Alibabaie, **R. Saberi**, M. Esmaceli, D. Semnani, and S. Karbasi, "Evaluation of the effects of zein incorporation on physical, mechanical, and biological properties of polyhydroxybutyrate electrospun scaffold for bone tissue engineering applications," Int J Biol Macromol, vol. 253, no. Pt 3, p. 126843, Dec 31 2023, doi: 10.1016/j.ijbiomac.2023.126843.
- R. Saberi, Sh. Mashayekhan, "Three Dimensional Bioprinting of Full-Scale, Patient-Specific Meniscus Constructs Using Crosslinker-Free Silk Fibroin Bioink" Accepted at the Royan international Twin congress reproductive medicine and stem cells.

Ongoing Projects

- Structure Engineering of Nanocomposites: A promising approach to treatment of Bone diseases (review).
- Advanced Dual-Nozzle Bioprinting of Crosslinker-Free Silk-Fibroin Hydrogel and Polycaprolactone for Meniscus Tissue Engineering.
- Development and characterization of self-standing bioinks for cartilage tissue engineering (submitted)

Experiences

- **Teaching Assistant**

Department of Chemical and Petroleum Engineering, *Sharif University of Technology*, Iran Tehran.

- Course: material and energy balance (Fall 2024)
- Course: Unit operations in chemical engineering (Spring 2024 fall 2025 spring 2025)
- Course: biochemical engineering (spring 2025)

➤ **Research Assistant**

Adult stem cells laboratory of **Royan institute**, Tehran, Iran (since 2024)

- Researcher and research assistant
(**Supervisor: Prof Mohamadreza Baghban Eslaminejad**)

Stem cells laboratory of **Sharif University of Technology**, Tehran, Iran. (since 2022)

- Assisted in reviewing several ISI manuscripts from prestigious journals
- Supported students in analyzing the experiment results, writing and editing papers
- Teaching Mimics software
(**Supervisor: Prof Shohre Mashayekhan**)

Department of Biomaterials and Tissue Engineering, School of Advanced Technologies in Medicine, **Isfahan University of Medical Sciences**, Isfahan, Iran. (2021-2022)

- Collaborated with a team of researchers to publish findings in academic journals
(**Supervisor: Prof. Saeed Karbasi**)

➤ **Internship**

Department of Animal Biotechnology, Reproductive Biomedicine Research Center, **Royan Institute**

- Collaborated with a team of researchers to publish findings in academic journals
- Assisted in reviewing and analysis of cell and animal tests performed on controlled release anticancer drugs
- Assisted in Performing FTIR and ATR tests
- Assisted in developing different Nanoparticles, Liposomes and Nanosomes to cancer treatment
- Assisted in animal surgical process and doing in vivo tests
(**Supervisor: Prof. Seyede Zohreh Mirahmadi-zare**)

➤ **Work**

- Working in **Biotex** Innovation Factory (Science and Technology Park of Sharif University of Technology) as a **research and development** engineer in the design of lipase enzyme. (2022-2023)
- Teaching mathematics to high school students (2017-2019)

➤ **Voluntary Executive Experiences**

- Member of the Board of Alzahra Charity Clinic

Workshops

- Laboratory Animal Ethics Training Workshop, Royan Education Center, Tehran Iran (2025)
- Cell culture and cryopreservation, Royan Education Center, Tehran Iran (2024)
- Design and manufacture of nanoparticles, Royan research Institute, Isfahan Iran (2023)

- Design and manufacture of microfluidic masks (2021)
- MATLAB Workshop, Isfahan University of technology, Isfahan Iran (2019)
- TA workshop, Sharif university of Technology, Tehran Iran (2024)

Honors and Awards

- Cooperation in organizing Emerging engineering techniques in Tissue Engineering: Bioprinting & Microfluidics Workshop in the **12th International Congress of Chemical Engineering** (Fall2023)
- Ranked **1** among more than 20,000 participants in Iran's International Master's university entrance exam. (2022)
- Ranked Top 10% in B.Sc degree in chemical engineering at Isfahan University of Technology. (2021)
- Ranked top 1% among more than 200,000 participants in Iran's National University Entrance Exam. (2017)
- Collaboration in an **international** effort for the design and development of 3D-printed scaffolds for the treatment of Osteoporosis.

Language

- Persian: Native
- English: Professional (TOEF iBT will be taken on November 2024)

skills

- Strong problem-solving and critical thinking skills
- Excellent written and verbal communication skills
- Proficient in using software tools for data analysis, such as Microsoft Office, Aspen HYSYS, OriginPro, Graphpad prism and MATLAB
- Proficient in Teaching Mimics software
- Proficient in using slicer software such as Repetier-host, Slic3r, simplify3D, Cura
- Proficient in using AutoCAD and SolidWorks

References

- **Dr.Shohre Mashayekhan**
Associate Professor, Sharif University of Technology
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- **Dr.soheila Yaghmaei**
Full Professor, Sharif University of Technology
Email: yaghmaei@sharif.edu

- **Dr.Hossein Askaripour**
Associate Professor, Sharif University of Technology
Email: h_askaripour@sharif.edu

- **Dr.Hamid Zilouei**
Associate Professor, Isfahan University of Technology
Email: hzilouei@iut.ac.ir

- **Dr.Mohamadreza Baghaban Eslaminejad**
Full Professor, Anatomy and Stem Cells, Royan Institute