

Javad Ranjbari, PhD

Associate Professor

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Summary

- Innovative and results-driven R&D Scientist with expertise in biotechnology and regenerative medicine.
- Proven track record in project management, team leadership, and cutting-edge research, with over 10 successful research grants.
- Skilled in drug and gene delivery systems development, process optimization and scale-up, therapeutic peptide and protein production and tissue engineering.
- Passionate about translating research into practical applications to drive advancements in alternative proteins and sustainable food production.

Key Achievements

- Led 10+ funded research projects in biotechnology and regenerative medicine.
- Published 40+ peer-reviewed articles in high-impact journals.
- Secured funding for biopharmaceutical and regenerative medicine research.

Work Experience

Associate Professor - Shahid Beheshti University of Medical Sciences, Iran (2017 – Present)

Education

PhD, Pharmaceutical Biotechnology, Shahid Beheshti University of Medical Sciences (2009 – 2015)

MSc, Medical Biotechnology, Tabriz University of Medical Sciences (2007 – 2009)

BSc, Clinical Laboratory Sciences, Iran University of Medical Sciences (2005 – 2007)

Selected Publications

- **The effect of enhancers on the lentiviral transduction efficiency in the human RPE cells: Insights for advancing retinal gene therapies** - *Biochemistry and Biophysics Reports* – 2025.
Javad ranjbari et al.
- **The significance of chemical transfection/transduction enhancers in promoting the viral vectors-assisted gene delivery approaches: A focus on potentials for inherited retinal diseases** - *Electronic Journal of Biotechnology* – 2024
Javad ranjbari et al.
- **Design and Characterization of an Osmotic Pump System for Optimal Feeding and pH Control in E. coli Culture to Increase Biomass** - *Journal of Pharmaceutical Research* – 2024
S Abedin, J Ranjbari, A Haeri, H Vahidi, H Moghimilranian
- **Virtual screening and experimental analysis of caspase-7 inhibitors as candidates for extending the lifespan of CHO cells** - *Electronic Journal of Biotechnology* - 2024
S Kafi, S Najafi, K Mahnam, S Farivar, J Ranjbari
- **Docking study on caspase 3 inhibitors as potential drugs for traumatic brain cell apoptosis** - *Letters in Drug Design & Discovery* - 2024
S Najafi, A Alibakhshi, K Mahnam, J Ranjbari
- **Mesenchymal stem cell therapy using Pal-KTTKS-enriched carboxylated cellulose improves burn wound in rat model** - *Archives of Dermatological Research* – 2024
M Rasouli, L Shahghasempour, Z Shirbaghaee, S Hosseinzadeh, ...
- **Synergistic effect of cobalt ferrite-graphene oxide based hyperthermia and capsaicin to induce apoptosis and inhibit telomerase activity in breast cancer cells** - *Advances in Natural Sciences: Nanoscience and Nanotechnology* - 2024
- **7SK small nuclear RNA (Rn7SK) induces apoptosis through intrinsic and extrinsic pathways in human embryonic kidney cell line** - *Molecular Biology Reports* - 2024
M Abasi, J Ranjbari, H Ghanbarian
- **Bacterial cellulose as potential dressing and scaffold material: toward improving the antibacterial and cell adhesion properties** - *Journal of Polymers and the Environment* - 2023
M Rasouli, M Soleimani, S Hosseinzadeh, J Ranjbari

- **Overexpression of SIRT6 alleviates apoptosis and enhances cell viability and monoclonal antibody expression in CHO-K1 cells** - *Molecular Biology Reports* - 2023
N Hashemi, SH Tabatabaee, F Shams, A Rahimpour, B Kazemi, ...
- **Do carboxymethyl cellulose and pal-KTTKS make bacterial cellulose a superior wound dressing or skin scaffold?** - *Polymer-Plastics Technology and Materials* - 2023
M Rasouli, S Hosseinzadeh, SM Mortazavi, R Fattahi, J Ranjbari, ...
- **Osteogenic differentiation of pulp stem cells from human permanent teeth on an oxygen-releasing electrospun scaffold.** - *Polymer Bulletin* - 2022
R Samanipour, S Farzaneh, **J Ranjbari**, S Hashemi, A Khojasteh
- **Therapeutic and protective potential of mesenchymal stem cells, pharmaceutical agents and current vaccines against covid-19** - *Current Stem Cell Research & Therapy* - 2022
Mehdi Rasouli, Fatemeh Vakilian, **Javad Ranjbari***(corresponding author)
- **Acetate kinase A antisense delivery by PAMAM dendrimer for decrease acetate production and increase the production of recombinant Albumin in E. coli** – *Iranian Journal of biotechnology* - 2021
S Ahangarzadeh, H.R Moghimi, M Bandehpour, **Javad Ranjbari***
- **Repairing rat calvarial defects by adipose mesenchymal stem cells and novel freeze-dried three-dimensional nanofibrous scaffolds** – *BioImpacts* - 2021
MS Khoramgah, H Ghanbarian, **J Ranjbari**, N Ebrahimi, FS Tabatabaei
- **Fabrication and characterization of cobalt ferrite magnetic hydrogel combined with static magnetic field as a potential bio-composite for bone tissue engineering** – *Journal of Drug Delivery Science and Technology* - 2021
S Farzaneh, S Hosseinzadeh, Arash Khojasteh, **Javad Ranjbari***
- **Optimization of Topography and Surface Properties of Polyacrylonitrile-Based Electrospun Scaffolds via Nonoclay Concentrations and its Effect on Osteogenic Differentiation of Human Mesenchymal Stem Cells** – *Iranian Journal of Pharmaceutical Research* - 2021
Fatemeh Sadat Tabatabaei Mirakabad, Symzar Hosseinzadeh, Hojjat Allah Abbaszadeh, Vahideh Zeighamian, Maryam Sadat Khoramgah, Hossein Ghanbarian, **Javad Ranjbari**, Bahram Kazemi
- **Applications of bacterial cellulose as a natural polymer in tissue engineering** - *ASAIO Journal* - 2021

M Bouhlouli, M Pourhadi, F Karami, Z Talebi, **J Ranjbari***, A Khojasteh

- **Regenerative medicine under control of 3D scaffolds: Current state and progress of tissue scaffolds - *Current Stem Cell Research & Therapy* - 2021**

A Golchin, S Farzaneh, B Porjabbar, F Sadegian, M Estaji, P Ranjbarvan, Mohammad Kanafimahbob, **Javad Ranjbari**, Nasim Salehi-Nik, Simzar Hosseinzadeh

- **Freeze-dried multiscale porous nanofibrous three dimensional scaffolds for bone regenerations - *BioImpacts* - 2020**

M Khoramgah, **Javad Ranjbari**, H Abbaszadeh, F Tabatabaei, S Hatami, S Hosseinzadeh, H Ghanbarian

- **The comparison between the osteogenic differentiation potential of Clay-polyacrylonitrile nanocomposite scaffold and graphene-polyacrylonitrile scaffold in human mesenchymal stem cell - *Nano Biomedicin and engineering* - 2019**

F Tabatabaei, S Hosseinzadeh, H Abbaszadeh, M Khoramgah, H Ghanbarian, **Javad Ranjbari***, Bahram Kazemi

- **Monocyclic peptides: types, synthesis and applications - *Current Pharmaceutical Biotechnology*- 2021**

Yalda Khazaei-Poul, Shohreh Farhadi, Sepideh Ghani, Safar A Ahmadizad, **Javad Ranjbari***

- **Peptide dendrimers as valuable biomaterials in medical sciences - *Life Sciences* - 2019**

F Tabatabaei, M Khoramgah, K Keshavarz, M Tabarzadd, **Javad Ranjbari***

- **Bicyclic peptides: types, synthesis and applications - *Drug Discovery Today* - 2019**

S Ahangarzadeh, M Mahbob Kanafi, S Hosseinzadeh, M Barati, A Mokhtarzadeh, **Javad Ranjbari***, Lobat Tayebi

- **Aptamers as smart ligands for nano-carriers targeting - *TrAC- trends in analyticalchemistry***

A Mokhtarzadeh, M Tabarзад, **Javad Ranjbari**, Miguel de la Guardia, M Hejazi, M Ramezani

- **Optimization of key factors in serum free medium for production of human recombinant GM-CSF using response surface methodology** - *Iranian Journal of Pharmaceutical Research* - 2019
N Ghasemi, M Bandehpour, **Javad Ranjbari***
- **Engineered recombinant protein production systems originated from Escherichia coli** - *Trends in Peptide and Protein Sciences journal* – 2019
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- **Soluble form production of recombinant human Insulin-Like Growth Factor-1 by NusA fusion partner in E. coli** - *Trends in Peptides and Protein sciences* -2019
S Hemmatia, **Javad Ranjbari***
- **Targeted cancer therapy through antibody fragments-decorated Nano medicines** - *Journal of Controlled Release* - 2017
Alibakhshi A, Abarghooi F, Ahangarzadeh S, Yaghoobi H, Yarian F, Arezumand R, **Ranjbari Javad**, Mokhtarzadeh A, de la Guardia M
- **Nano-delivery system targeting to cancer stem cell cluster of differentiation Biomarkers** - *Journal of Controlled Release* - 2017
A Mokhtarzadeh, S Hassanpour, Z Vahid, M Hejazi, M Hashemi, **Javad Ranjbari**, M Tabarzad, Miguel de la Guardia
- **Nanobodies as novel agents for targeting angiogenesis in solid cancers** - *Frontiers in immunology* - 2017
Roghaye Arezumand, Abbas Alibakhshi, **Javad Ranjbari**, Ali Ramazani, Serge Muyldermans
- **Anti-cancer drug delivery using carbohydrate-based polymers** - *Current Pharmaceutical Design* - 2017
Javad ranjbari, A Mokhtarzadeh, A Alibakhshi, M Tabarzad, M Hejazi, M Ramezani

- **An update on phytochemicals substances in molecular target therapy of cancer: Potential inhibitory effect on telomerase activity** - *Current Medicinal Chemistry* - 2016
A Alibakhshi, **Javad Ranjbari**, Y Pilehvar-Soltanahmadi, M Nasiri, M Mollazade, N Zarghami
- **Effect of acyl homoserine lactone on recombinant production of human Insulin-like Growth Factor-1 in batch culture of *Escherichia coli*** - *Protein and peptide letters* - 2016
V Babaeipour, H Vahidi, S Alikhani, A alibakhshi, M Tabarzad, **Javad Ranjbari***
- **Direct immobilization of coagulation factor VIII on Au/Fe₃O₄ Shell/Core magnetic nanoparticles for analytical application** - *Trends in peptide and protein sciences* - 2016
Z Sharafi, **Javad Ranjbari**, J Javidi, N Nafissi-Varcheh, M Tabarzad
- **Enhanced production of Insulin-Like Growth Factor I protein in *Escherichia coli* by optimization of five key factors** - *Iranian Journal of Pharmaceutical Sciences* - 2015
Javad Ranjbari, V Babaeipour, H Vahidi, H Moghimi, M R Mofid, M Namvara, S Jafari
- **Effects of *Curcuma longa* extract on telomerase activity in lung and breast cancer cells** - *Zahedan Journal of Research in Medical Sciences* - 2014
Javad Ranjbari, A Alibakhshi, R Arezumand, M Pourhassan-Moghaddam, M Rahmati, N Zarghami, M Namvaran
- **The inhibitory effect of *Curcuma Longa* on telomerase activity in A549 cancer cell line** - *African journal of biotechnology* - 2010
Pourhassan M, Zarghami N, Rahmati M, Alibakhshi A and **Javad Ranjbari**

Books

- ***Scaffolds for Tissue Engineering: Biological design, Materials, and Fabrication*** (Translation, in Persian)
- ***Application of Recombinant DNA Technology in DNA Vaccine Synthesis*** (Compilation, in Persian)

- **Application of Bacteriophages in Biological Sciences (Compilation, in Persian)**

Skills

<i>Lipid and polymeric drug delivery systems design and characterization</i>	<i>DNA, RNA extraction</i>	<i>Animal experiments</i>
<i>Stem cell culture and characterization</i>	<i>Primer design</i>	<i>Histological staining</i>
<i>Stem cell isolation and differentiation</i>	<i>Real time PCR</i>	<i>Protein Docking</i>
<i>Scaffold synthesis and characterization</i>	<i>Protein purification techniques</i>	<i>Bioinformatics databases & software</i>
<i>Recombinant protein production</i>	<i>SDS-PAGE electrophoresis</i>	<i>SPSS</i>
<i>Peptide design, characterization and formulation</i>	<i>Western blotting</i>	<i>Minitab</i>
<i>Gene cloning</i>	<i>Immunohistochemistry</i>	<i>Response surface design</i>
<i>Fermentation (Bacterial and yeast)</i>	<i>Immunocytochemistry</i>	<i>Design of expert</i>
<i>Process optimization</i>	<i>ELISA</i>	<i>Box Behnken, Taguchi, Plackett Burman design</i>
	<i>MTT assay/Alamar blue assay</i>	