

CV

First name: Sharif

Surname: Moradi

Affiliation: Royan Institute for Stem Cell Biology & Technology, Tehran

Research Group: Molecular Biomedicine

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Personal Information

Name: Sharif Moradi

Field of study: Molecular Biomedicine

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Employment

- Assistant professor, Royan Institute for Stem Cell Biology & Technology (2017-now)
- Stem cell researcher at Royan Institute for Stem Cell Biology and Technology (2010-2017)

Educational Background

(2010-2017)

PhD Student in Developmental Biology, Royan Institute for Stem Cell Biology and Technology, University of Science and Culture, Tehran, Iran

(2008-2010)

M.Sc. Degree of Science in Cell and Molecular Biology, School of Biology, University College of Science, University of Tehran, Tehran, Iran

(2004-2008)

Bachelor of Science in Plant Biology, Department of Biology, Faculty of Science, Tarbiat-Moallem University of Tehran, Karaj, Iran

Teaching Experiences

- Teacher of Molecular Biology course for MSc students at Royan Institute, Tehran, Iran, 1 semester (Sep. 2017-Jan. 2018)
- Teacher of "Biology of induced pluripotent stem (iPS) cells" course for PhD students at Royan Institute, Tehran, Iran, 1 session (2017)
- Teacher of "The epigenetics of pluripotency" course for Biotechnology MSc students at Royan Institute, Tehran, Iran, 1 session (2017)
- Teacher of "Biology of induced pluripotent stem (iPS) cells" course for Biotechnology MSc students at Royan Institute, Tehran, Iran, 1 session (2016)
- Teacher of "Ethical considerations in writing research articles" course for MSc students at Royan Institute, Tehran, Iran, 1 session (2017)
- Teacher of Molecular Biology course for MSc students at Royan Institute, Tehran, Iran, 1 semester (Sep. 2016-Jan. 2017)
- Teacher of "Biology of induced pluripotent stem (iPS) cells" course for PhD students at Royan Institute, Tehran, Iran, 1 session (2016)
- Teacher of "Ethical considerations in writing research articles" course for MSc students at Royan Institute, Tehran, Iran, 1 session (2016)

Scientific society mentorship

Royan Scientific Network: board member

Peer review

Cell Journal (Yakhteh), Iran, 2016-now

Executive activities

- Chairman of the 1st Royan Workshop on "MicroRNA Expression and Functional Analysis in Stem Cells" (November 29-30, 2017), Royan Institute, Tehran, Iran
 - Executive Secretary at the 1st Royan Workshop on "Generation and Maintenance of induced Pluripotent Stem (iPS) Cells" (August 21-22, 2013), Royan Institute, Tehran, Iran
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Workshop presentations

- "Experimental Design in MicroRNA Research" at the 2nd Royan Workshop on "MicroRNA Expression and Functional Analysis in Stem Cells" (July 11-12, 2018), Royan Institute, Tehran, Iran
- "MicroRNAs: Biology and Applications" at the 2nd Royan Workshop on "MicroRNA Expression and Functional Analysis in Stem Cells" (July 11-12, 2018), Royan Institute, Tehran, Iran
- "Experimental Design in MicroRNA Research" at the 1st Royan Workshop on "MicroRNA Expression and Functional Analysis in Stem Cells" (November 29-30, 2017), Royan Institute, Tehran, Iran
- "MicroRNAs: Biology and Applications" at the 1st Royan Workshop on "MicroRNA Expression and Functional Analysis in Stem Cells" (November 29-30, 2017), Royan Institute, Tehran, Iran
- "MicroRNAs in Cancer" at the workshop on "Epigenetics of cancer" (February 3-4, 2016), Royan Institute, Tehran, Iran
- "How to design primers for microRNA qRT-PCR" (April 17, 2014), Royan Institute, Tehran, Iran
- "Pluripotent Stem Cells" at the 2nd Royan Workshop on "Cultivation and Maintenance of Embryonic Stem Cells" (November 03, 2011), Royan Institute, Tehran, Iran
- "Induced Pluripotent Stem (iPS) Cells" at the 1st Royan Workshop on "Generation and Maintenance of induced Pluripotent Stem (iPS) Cells" (August 21-22, 2013), Royan Institute, Tehran, Iran
- "Induced Pluripotent Stem (iPS) Cells" at the Royan Workshop on "Generation and Maintenance of induced Pluripotent Stem (iPS) Cells" (December 16-17, 2016), Royan Institute, Tehran, Iran

Conferences and meetings:

Poster:

1. Moradi S, Mollamohammadi S, *et al.* **MicroRNAs associated with ground state pluripotency inhibit differentiation.** 12th Royan International Congress on Stem Cell Biology and Technology, September 2-4, 2016, Tehran, Iran
2. Kiani T, Taghizadeh Z, Moradi S *et al.* **Induction of naïve pluripotency in human pluripotent stem cells using small molecules.** 10th Royan International Congress on Stem Cell Biology and Technology, August 31-September 2, 2014, Tehran, Iran
3. Moradi S, Paylakhi SH, Yazdani S, Rezaei-Kanavi M, Elahi E. **Novel PITX2 isoform observed in trabecular meshwork cells.** 19th Congress of Iranian Society of Ophthalmology, 2009. Iran University of Medical Sciences, Tehran, Iran
4. Paylakhi SH, Yazdani S, Rezaei-Kanavi M, Soheili S, Heidari E, Moradi S, Elahi E. **Establishment of Human trabecular meshwork (TM) Cultures.** 19th Congress of Iranian Society of Ophthalmology, 2009. Iran University of Medical Sciences, Tehran, Iran

Oral presentations:

۱. **"Ground-state microRNAs promote pluripotency by inhibiting differentiation"** at 2nd Royan Scientific Contest, Royan Institute, Tehran, Iran, Jan. 13, 2017
۲. **"MicroRNAs: Biology and Applications"** at the 7th International Royan Summer School on "Interdisciplinary Sciences and Tomorrow's Medicine", Royan Institute, Tehran, Iran, July 23-28, 2016
۳. **"Pluripotent Stem Cells"** at the 3rd Royan International Summer School on "Stem Cells and Developmental Biology for Regenerative Medicine", Royan Institute, Tehran, Iran, July 14-19, 2012

Oral presentations (invited speaker):

۱. **"MicroRNAs in Gene Regulatory Circuitry of Ground-State Pluripotency"** at 3rd international and 15th Iranian Genetics congress, Iran International Conference Center, Tehran, Iran, May 13-15, 2018
۲. **"Different Types of Stem Cells"** at 3rd national symposium on Stem Cells & Regenerative Medicine in Ophthalmology, Shahid Beheshti University of Medical Sciences, Tehran, Iran, Feb. 22, 2018
۳. **"Small-RNA sequencing highlights major microRNAs promoting ground state pluripotency"** at 3rd national conference on new biological sciences and technologies, Malayer University, Hamedan province, Iran, May 11, 2017
۴. **"Induced Pluripotent Stem (iPS) Cells"** at 2nd national symposium on Stem Cells & Regenerative Medicine in Ophthalmology, Shahid Beheshti University of Medical Sciences, Tehran, Iran, Jan. 12, 2017
۵. **"Induced Pluripotent Stem (iPS) Cells: concepts and applications"** at 1st Stem Cell Applications seminar, Al-Zahra University, Tehran, Iran, Nov. 14, 2016

Training

- Scientific Writing, Communication Skills and Scientific Integrity, 16 Weeks, Royan Institute (2010-2011)
- Basics of Bioinformatics (R and Internet Software for data mining in Biology), 1 Semester, Royan Institute (2013-2014)
- Principles of gene cloning and recombinant DNA technology, Roan Institute (2012-2013)

Honors and Awards

۱. 4th rank of the top biology ideas competition at the 1st Young Scientists and Thinkers Festival, University of Tehran, Tehran, Iran, November 29, 2017
 ۲. Winner of the best scientific lecture, Royan Scientific Contest, Royan Institute, Tehran, Iran, 2016
 ۳. Winner of the best poster, Royan Twin Congress on Stem Cells and Reproductive Biomedicine, Tehran, Iran, 2015
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- ξ. One-year research scholarship at the Max-Planck Institute for Heart and Lung Research, Bad Nauheim (Studying microRNA profiling and functional analyses in pluripotent stem cells), Sep. 2014-Aug. 2015
- ο. Winner of the University of Science and Culture's Award for the Best Scientific Articles, 2014
- ϕ. Winner of the National Student Award for the translation of a Biology book (Solomon's Biology) into Persian at the 15th Annual National Book Festival, Tarbiat-Modares University, 2008

Publications

Articles

Articles in international peer-reviewed journals:

- ϑ. Taei A, Tahereh K, Taghizadeh Z, Moradi S*, *et al.*, **Modulation of TGF- β signaling by temporal activation of nuclear receptors induces functionally human naïve pluripotency.** *Cell Rep*, 2018. Under review.
* **second author**
 - ϒ. Shahriari, F, Satarian, L, Moradi S, *et al.*, **MicroRNA profiling reveals important functions of miR-125b and let-7a during human retinal pigment epithelial cell differentiation.** *Exp Eye Res*, 2018. Submitted.
 - ϓ. Soleimani S, Valizadeh Arshad Z, Moradi S, Ahmadi A, Davarpanah SJ, Azimzadeh-Jamalkandi S. **Small regulatory non-coding RNAs in *Drosophila melanogaster*: biogenesis and biological functions.** *J Cell Physiol*, 2018. Submitted
 - ξ. Hassani SN*, Moradi S*, Taleahmad S, Braun T, and Baharvand H. **Transition of inner cells mass to embryonic stem cells: facts, mechanisms, and hypotheses.** *Cell Mol Life Sci*, 2018.
<https://doi.org/10.1007/s00018-018-2965-y>
* **co-first authors**
 - ο. Moradi S, Braun T, Baharvand H. **miR-302b-3p promotes self-renewal properties in LIF-withdrawn embryonic stem cells.** *Cell J (Yakhteh)*, 2018. 20 (1), 61-72
 - ϕ. Khosravi Z, Nasiri Khalili MA, Moradi S, Hassansajedi R, Zeinoddini M. **The molecular chaperone Artemin blocks fibrillization of TAU proteins *in vitro*.** *Cell J (Yakhteh)*, 2018. 19 (4), 569-577
 - ϗ. Moradi S, Sharifi-Zarchi A, Mollamohammadi S, *et al.* **Small RNA sequencing reveals *Dlk1-Dio3* locus-embedded microRNAs as major drivers of ground state pluripotency.** *Stem Cell Rep*, 2017. 9 (6), 1–16
 - λ. Shahbazi E, Moradi S, Nemati S *et al.* **Conversion of Human Fibroblasts to Stably Self-Renewing Neural Stem Cells with a Single Zinc-Finger Transcription Factor.** *Stem Cell Rep*, 2016. 6 (4), 539-551
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٩. Moradi S, Asgari S, Baharvand H. **Harmonies Played by MicroRNAs in Cell Fate Reprogramming**. *Stem Cells*, 2014. 32 (1), 3-15
١٠. Hassani SN, Totonchi M, Sharifi-Zarchi A, Mollamohammadi S, Pakzad M, Moradi S, Samadian A, Masoudi N, Mirshahvaladi S, Farrokhi A *et al.* **Inhibition of TGF- β Signaling Promotes Ground State Pluripotency**. *Stem Cell Rev Rep*, 2014. 10 (1), 16-30

Articles in national peer-reviewed journals:

١. Moradi S and Baharvand H. **Induced Pluripotent Stem Cells, from Generation to Application: review article**. *Tehran Univ Med J*, 2014. 72 (8): 497-507 [Persian, with English abstract]

Books:

١. Chapter in Book [Persian]

- a. Moradi S. **Ethical Considerations in writing research articles**; Book title: How to write a research article. House of Biology Press, 2013
- b. Moradi S. **Induced Pluripotent Stem (iPS) Cells**; Book title: Pluripotent Stem Cells. House of Biology Press, In Press

٢. Book translation from English into Persian

- a. **Solomon's Biology**, Authors: Solomon X, *et al.* Translators: Moradi S, Pooyan M, Mirhabibi B, *et al.* House of Biology Press, 2010
- b. **Molecular Biology of the Cell**, Authors: Alberts B. *et al.* Translator: Moradi S. House of Biology Press, In Press
- c. **Levin's Essential Genes**, Translators: Moradi S, Pooyan P, *et al.* House of Biology Press, In Press
- d. **Inside the Cells**, Translators: Moradi S and Khosravi Z. House of Biology Press, In Press
- e. **New Genetics**, Translators: Moradi S and Khosravi Z. House of Biology Press, In Press

٣. Book editorship

- a. **Solomon's Biology**, Authors: Solomon X, *et al.* Editors: Moradi S, Pooyan M, *et al.* House of Biology Press, 2010

Projects

١. MicroRNA expression analysis during embryonic stem cell expansion and derivation from mouse blastocysts (**Finished**)
 ٢. Induction of naïve pluripotency in human pluripotent stem cells using small molecule chemicals (**Finished**)
 ٣. Characterization of naïve human stem cells generated through a specific small molecule cocktail (**Finished**)
 ٤. Elimination of pluripotent stem cells in culture using small molecule chemicals
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- . Inhibition of cancer cell growth by normal tissue-associated microRNAs
- ٦. Expression and functional analyses of microRNAs during human embryonic stem cell differentiation into retinal pigmented epithelium (RPE) cells
- ٧. Application of microRNAs in cardiovascular regeneration
- ٨. Expression and functional analyses of microRNAs during induction of naivety in human pluripotent stem cells
- ٩. Functional analysis of microRNAs during embryonic stem cell generation from mouse blastocysts
- ١٠. Functional analysis of the microRNAs highly abundant in embryonic stem cells

Research interests

Embryonic stem cell (ESC) derivation and maintenance

Pre-implantation embryogenesis

Cell fate reprogramming (iPS and transdifferentiation)

MicroRNAs in pluripotent stem cells

lncRNAs in pluripotent stem cells

Targeting the tumorigenic potential of pluripotent stem cells

MicroRNAs in cancer

Hobbies

Scientific blogging/writing

Martial arts

Football

Scientific blogging

Owner and blogger of a Persian scientific website entitled "Stem Cells & Cancer" (Address: www.pluricancer.ir)

Administrator of a Persian scientific channel in Telegram messaging App entitled "Stem Cells & Cancer" with around 10,000 members (Address: [telegram.me/stem_cells](https://t.me/stem_cells))

Referees

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