Fatemeh Soleimanifar

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Address: Karaj, Alborz Province, Iran

Education

- **Doctoral degree** in Medical Biotechnology, Zanjan University of Medical Sciences**,** Zanjan, Iran
  Thesis title: Investigating the differentiation and proliferation of stem cells isolated from eye conjunctival tissue into corneal epithelial cells on nanofibrous scaffolds prepared from polyurethane and silk polymers.
  Supervisor: Dr.Masoud Soleimani & Dr.Yousef Mortazavi
  GPA: ١٩,٩٢/٢٠
  Mar.٢٠١٢-Jan.٢٠١٨

- **Masters degree** in Molecular Microbiology, Azad university (Tehran North Branch), Tehran, Iran
  Thesis title: Evaluation of HSP٧٠ gene in Microsporeoum Canis as a dermatophyte fungi
  Supervisor: Dr.Sassan Rezaie
  GPA: ١٦,٦٨
  Sep.٢٠٠٢-Feb.٢٠٠٥

- **Bachelors degree** in Microbiology, Azad university (Tehran North Branch), Tehran, Iran
  GPA: ١٤,٧٥
  Sep.١٩٩٧-Aug.٢٠٠١

Work Experience

- **Executive History**
  - **Head of Probiotics and Food Supplements Research Center**
    - Supervision of research projects and interaction with research and business companies of the province, ٢٠١٨-٢٠٢٠
  - **Director of the Medical Biotechnology Department.**
    - Teaching different courses, monitoring and implementing research projects and coordinating between group members, Karaj, Iran, Feb.٢٠٢٠-Present
  - **Head of the Interdisciplinary science committee in EDO**
    - Organizing interactive meetings between basic and clinical groups for interdisciplinary convergence, ٢٠٢١-٢٠٢٢
  - **Supervisor, Microbiology laboratory of Jam Hospital**
    - Examining patient samples and diagnosing the type of infections and recommending appropriate treatment to the attending physician, Tehran, Iran, ٢٠٠٢-٢٠٠٤
  - **Adjunct assistant professor of Farabi Translational Ophthalmology Research Center** ٢٠١٨-٢٠٢١

- **Teaching History**
  - **Member of Albors University of Medical Sciences,**
    - Teaching Drug biotechnology, Immunochemistry and analysis, Molecular biology, Research methodology, Nanobiotechnology, Biochemistry, and Cell culture, Karaj, Iran, ٢٠١٨-Present
  - **Islamic Azad University (Zahedan Branch) & Zabul University Lecturer** Teaching
    - Microbiology, Molecular Biology, and Lab test of biology, Sistan and Baluchistan province, Iran, ٢٠٠٥-٢٠٠٧

Research Interest

- Medical Biotechnology
- Regenerative medicine Tissue engineering
- Stem cell research

Publications

١- Mahmoudi, B., Soleimanifar, F., Shabani, S., (...), Parand, M., Mahboudi, H. High yield expression and purification of Aspergillus flavus uricase cloned in Pichia pink™ expression system. ٣Biotech, ٢٠٢٣ Sep: ١٦(١):e١٣٤٢٦٤.

٢- Abazari, M.F., Torabinejad, S., Karizi, S.Z., (...), Enderami, S.E., Soleimanifar, F. Biologically modified electrospun polycaprolactone nanofibrous scaffold promotes osteogenic differentiation. *Journal of Drug Delivery Science and Technology*, ٢٠٢٢ Jan; ٦٨:١٠٣٠٥٠.

٣- Kaffashi, A., Huang, J., Bairami, A., Soleimanifar, F (...), Moshiri, F., Mozhgani, S.-H. Complete genome sequencing and molecular characterization of SARS-COV-٢ from COVID-١٩ cases in Alborz province in Iran. *Heliyon*, ٢٠٢١ sep; ٧(٩),e٠٨٠٢٧

٤- Abazari, M.F., Zare Karizi, S., Hajati-Birgani, N., (...), Mansour, R.N., Enderami, S.E., S.E. Soleimanifar, F. PHBV nanofibers promotes insulin-producing cells differentiation of human induced pluripotent stem cells. *Gene*, ٢٠٢١ Feb; ٧٦٨: ١٤٥٣٣٣.

٥- Abazari, M.F., Nasiri, N., Nejati, F., (...), Rezaei-Tavirani, M., Mansouri, V, Soleimanifar, F. Acceleration of osteogenic differentiation by sustained release of BMP٢ in PLLA/graphene oxide nanofibrous scaffold. *Polymers for Advanced Technologies*, ٢٠٢١ Jan; ٣٢(١): ٢٧٢-٢٨١.

٦- Abazari, M.F., Zare Karizi, S., Kohandani, M., (...), Soleimanifar, F., Mansouri, V. MicroRNA-٢٨٦١ and nanofibrous scaffold synergistically promote human induced pluripotent stem cells osteogenic differentiation. *Polymers for Advanced Technologies*, ٢٠٢٠ Oct; ٣١(١٠): ٢٢٥٩-٢٢٦٩.

٧- Mehrabani Natanzi, M., Soleimanifard, F., Haddad Kashani, H., (...), Mirzaei, A., Khodaii, Z. The effect of calcium on the adhesion of Streptococcus mutans to Human Gingival Epithelial Cells in the presence of probiotic bacteria Lactobacillus plantarum and Lactobacillus salivarius. Gene Reports, ٢٠٢٠ sep; ٢٠:١٠٠٧١٠.

٨-Tahmasebi, A., Shapouri Moghadam, A., Enderami, S.E., (...), Soleimanifar, F., Mansouri, V. Aloe Vera- Derived Gel-Blended PHBV Nanofibrous Scaffold for Bone Tissue Engineering. Asaio Journal, ٢٠٢٠ Apr; ٦٦(٨): ٩٦٦-٩٧٣(٨).

٩- Hosseini, M., Dadashi-Noshahr, K., Islami, M., (...), Soleimanifar, F., Enderami, S.E. A novel silk/PES hybrid nanofibrous scaffold promotes the in vitro proliferation and differentiation of adipose-derived mesenchymal stem cells into insulin producing cells. Polymers for Advanced Technologies, ٢٠٢٠ Mar; ٣١(٨), ٣١(٨): ١٨٥٧-١٨٦٤.

١٠- Abazari, M.F., Nasiri, N., Nejati, F., (...), Enderami, S.E., Soleimanifar, F. Comparison of human-induced pluripotent stem cells and mesenchymal stem cell differentiation potential to insulin producing cells in ٢D and ٣D culture systems in vitro. Journal of Cellular Physiology, ٢٠١٩ Oct; ٢٣٤(١٠): ١٧٨٥٤-١٧٨٦٢.

١١- Asgari, B., Kermanian, F., Hedayat Yaghoobi, M., (...), Soleimanifar, F., Yaslianifard, S. The Anti-Helicobacter pylori Effects of Lactobacillus acidophilus, L. plantarum, and L. rhamnosus in Stomach Tissue of C٥٧BL/٦ Mice. Visceral Medicine, ٢٠٢٠ Apr; ٣٦(٢):١٣٧-١٤٣.

١٢- Abazari, M.F., Soleimanifar, F., Amini Faskhodi, M., (...), Khani, M.M., Zare Karizi, S. Improved osteogenic differentiation of human induced pluripotent stem cells cultured on polyvinylidene fluoride/collagen/platelet-rich plasma composite nanofibers. *Journal of cellular physiology*, ٢٠٢٠ Feb; ٢٣٥(٢): ١١٥٥-١١٦٤.

١٣- Tahmasebi, A., Enderami, S.E., Saburi, E., (...), Soleimanifar, F., Moghadam, A.S. Micro-RNA- incorporated electrospun nanofibers improve osteogenic differentiation of human-induced pluripotent stem cells. *Journal of Biomedical Materials Research Part A,* ٢٠٢٠ Feb; ١٠٨(٢):٣٧٧-٣٨٦.

١٤- Abazari, M.F., Soleimanifar, F., Enderami, S.E., (...), Ghoraeian, P., Kehtari, M. Decellularized amniotic membrane Scaffolds improve differentiation of iPSCs to functional hepatocyte-like cells. *Journal of cellular biochemistry*, ٢٠٢٠ Feb; ١٢١(٢): ١١٦٩-١١٨١.

١٥- Sabouri, E., Rajabzadeh, A., Enderami, S.E., Soleimanifar, F (...), Khamisipour, G., Enderami, S.E. The role of micrornas in the induction of pancreatic differentiation. *Current Stem Cell Research and Therapy*, ٢٠٢٠ jun; ١٦(٢):١٤٥-١٥٤.

١٦- Islami, M., Soleimanifar, F. A review of evaluating hematopoietic stem cells derived from umbilical cord blood's expansion and homing. *Current Stem Cell Research and Therapy*, ٢٠٢٠ Jul; ١٥(٣):٢٥٠-٢٦٢.

١٧- Mirzaei, A., Saburi, E., Enderami, S.E., (...), Mansouri, V., Soleimanifar, F. Synergistic effects of polyaniline and pulsed electromagnetic field to stem cells osteogenic differentiation on polyvinylidene fluoride scaffold. *Artificial Cells, Nanomedicine and Biotechnology*, ٢٠١٩ Des; ٤٧(١):٣٠٥٨-٣٠٦٦.

١٨- Hosseini, F.S., Soleimanifar, F., Ardeshirylajimi, A., (...), Khojasteh, A., Zare Karizi, S. In vitro osteogenic differentiation of stem cells with different sources on composite scaffold containing natural bioceramic and polycaprolactone. *Artificial cells, nanomedicine, and biotechnology*, ٢٠١٩ Dec; ٤٧(١): ٣٠٠-٣٠٧.

١٩- Islami, M., Payandeh, Z., Dalir Abdolahinia, E., Soleimanifar, F., (...), Nadri, S., Darvish, M. Fucosylated umbilical cord blood hematopoietic stem cell expansion on selectin-coated scaffolds. Journal of Cellular Physiology, ٢٠١٩ Dec; ٢٣٤(١٢):٢٢٥٩٣-٢٢٦٠٣.

٢٠- Saleh, N.T., Sohi, A.N., Esmaeili, E., (...), Soleimanifar, F., Nasoohi, N. Immobilized Laminin- derived Peptide Can Enhance Expression of Stemness Markers in Mesenchymal Stem Cells. Biotechnology and Bioprocess Engineering. ٢٠١٩ Dec; ٢٤(٦), pp. ٨٧٦-٨٨٤

٢١- Mirzaei, A., Moghadam, A.S., Abazari, M.F., (...), Soleimanifar, F., Saburi, E. Comparison of osteogenic differentiation potential of induced pluripotent stem cells on ٢D and ٣D polyvinylidene fluoride scaffolds. Journal of Cellular Physiology; ٢٠١٩ Aug; ٢٣٤(١٠):١٧٨٥٤-١٧٨٦٢.

٢٢- Abazari, M.F., Soleimanifar, F., Enderami, S.E., (...), Khani, M.M., Ghoraeian, P. Incorporated-bFGF polycaprolactone/polyvinylidene fluoride nanocomposite scaffold promotes human induced pluripotent stem cells osteogenic differentiation. Journal of Cellular Biochemistry; ٢٠١٩ Oct; ١٢٠(١٠):١٦٧٥٠-١٦٧٥٩.

٢٣- Hosseini, F.S., Enderami, S.E., Hadian, A., (...), Soleimanifar, F., Nazemisalman, B. Efficient osteogenic differentiation of the dental pulp stem cells on beta-glycerophosphate loaded polycaprolactone/polyethylene oxide blend nanofibers. *Journal of Cellular Physiology*; ٢٠١٩ Aug; ٢٣٤(٨):١٣٩٥١-١٣٩٥٨.

٢٤- Darvish, M., Payandeh, Z., Soleimanifar, F., (...), Soleimani, M., Islami, M. Umbilical cord blood mesenchymal stem cells application in hematopoietic stem cells expansion on nanofiber three- dimensional scaffold. *Journal of Cellular Biochemistry*, ٢٠١٩ Jul; ١٢٠(٧):١٢٠١٨-١٢٠٢٦.

٢٥- Hosseini, F.S., Soleimanifar, F., Aidun, A., (...), Khojasteh, A., Ardeshirylajimi, A. Poly (٣- hydroxybutyrate-co-٣-hydroxyvalerate) improved osteogenic differentiation of the human induced pluripotent stem cells while considered as an artificial extracellular matrix. *Journal of Cellular Physiology*, ٢٠١٩ Jul; ٢٣٤(٧):١١٥٣٧-١١٥٤٤.

٢٦-Soleimanifar, F., Hosseini, F.S., Atabati, H., (...), Ardeshirylajimi, A., Saburi, E. Adipose-derived stem cells-conditioned medium improved osteogenic differentiation of induced pluripotent stem cells when grown on polycaprolactone nanofibers. *Journal of cellular physiology*, ٢٠١٩ Jul; ٢٣٤(٧): ١٠٣١٥-١٠٣٢٣.

٢٧- Hosseini, F.S., Saburi, E., Enderami, S.E., (...), Ghoraeian, P., Soleimanifar, F. Improved chondrogenic response of mesenchymal stem cells to a polyethersulfone/polyaniline blended nanofibrous scaffold. *Journal of Cellular Biochemistry*, ٢٠١٩ Jul; ١٢٠(٧):١١٣٥٨-١١٣٦٥.

٢٨- Ojaghi, M., Soleimanifar, F., Kazemi, A., (...), Nasoohi, N., Enderami, S.E. Electrospun poly-l- lactic acid/polyvinyl alcohol nanofibers improved insulin-producing cell differentiation potential of human adipose-derived mesenchymal stem cells. Journal of Cellular Biochemistry, ٢٠١٩ Jun; ١٢٠(٦):٩٩١٧-٩٩٢٦.

٢٩- Geravand, M., Fallah, P., Yaghoobi, M.H., (...), Zinatizadeh, N., Yaslianifard, S, Soleimanifar, F. Investigation of enterococcus faecalis population in patients with polyp and colorectal cancer in comparison of healthy individuals. *Arquivos de Gastroenterologia*, ٢٠١٩ Apr; ٥٦ (٠٢).

٣٠- Nazari, B., Soleimanifar, F., Kazemi, M., (...), Ebrahimi-Barough, S., Ai, J. Derivation of preoligodendrocytes from human-induced pluripotent stem cells through overexpression of microRNA ٣٣٨. Journal of Cellular Biochemistry, ٢٠١٨ Dec; ٦٠.

٣١- Kehtari, M., Beiki, B., Zeynali, B., (...), Soleimanifar, F, Kabiri, M., Mahboudi, H. Decellularized Wharton's jelly extracellular matrix as a promising scaffold for promoting hepatic differentiation of human induced pluripotent stem cells.Journal of Cellular Biochemistry, ٢٠١٩ Apr; ١٢٠(٤):٦٦٨٣-٦٦٩٧.

٣٢-Hosseini, F.S., Soleimanifar, F., Khojasteh, A., Ardeshirylajimi, A. Promoting osteogenic differentiation of human-induced pluripotent stem cells by releasing Wnt/beta-catenin signaling activator from the nanofibers. Journal of Cellular Biochemistry, ٢٠١٩ Apr; ١٢٠(٤):٦٣٣٩-٦٣٤٦.

٣٣- Najaran, H., Rashtbari, H., Mohammadi, A., (...), Soleimanifar, F. Haddad Kashani, H. Hassani Bafrani, H. The protective effect of coenzyme Q١٠ and berberine on sperm parameters, with and without varicocelectomy in rats with surgically induced varicoceles. *Comparative Clinical Pathology*. ٢٠١٨ Nov; ٢٨(٢): ٤٧٩-٤٨٥.

٣٤- Golchin, A., Farahany, T.Z., Khojasteh, A., Soleimanifar, F., Ardeshirylajimi, A. The clinical trials of mesenchymal stem cell therapy in skin diseases: An update and concise review. *Current Stem Cell Research and Therapy*. ٢٠١٩ Dec; ١٤(١):٢٢-٣٣.

٣٥- Mansour, R.N., Soleimanifar, F., Abazari, M.F., (...), Hassannia, H., Enderami, S.E. Collagen coated electrospun polyethersulfon nanofibers improved insulin producing cells differentiation potential of human induced pluripotent stem cells. *Artificial Cells, Nanomedicine and Biotechnology*. ٢٠١٨ Oct; ٤٦(sup٣):S٧٣٤-S٧٣٩.

٣٦- Enderami, S.E., Kehtari, M., Abazari, M.F., Soleimanifar, F., (...), Mostafavi, H., Askari, H. Generation of insulin-producing cells from human induced pluripotent stem cells on PLLA/PVA nanofiber scaffold. *Artificial Cells, Nanomedicine and Biotechnology*. ٢٠١٨ Sep: ٤٦(sup١), ١٠٦٢-١٠٦٩.

٣٧- Abazari, M.F., Soleimanifar, F., Nouri Aleagha, M., (...), Hashemi, J., Kehtari, M. PCL/PVA nanofibrous scaffold improve insulin-producing cells generation from human induced pluripotent stem cells. *Gene*. ٢٠١٨ Sep; ٦٧١: ٥٠-٥٧.

٣٨- Soleimanifar, F., Mortazavi, Y., Nadri, S., Islami, M., Vakilian, S. Coculture of conjunctiva derived mesenchymal stem cells (CJMSCs) and corneal epithelial cells to reconstruct the corneal epithelium. *Biologicals*. ٢٠١٨ Jul; ٥٤: ٣٩-٤٣.

٣٩- Islami, M., Mortazavi, Y., Soleimani, M., (...), Hosseinzadeh, S., Soleimanifar, F., Darvish, M. Ex vivo expansion of umbilical cord blood hematopoietic stem cells on collagen-fibronectin coated electrospun nano scaffold. *Journal of Zanjan University of Medical Sciences and Health Services*. ٢٠١٨ Sep; ٢٦(١١٧): ٣٢-٤٣.

٤٠- Soleimanifar, F., Mortazavi, Y., Nadri, S., Soleimani, M. Conjunctiva derived mesenchymal stem cell (CJMSCs) as a potential platform for differentiation into corneal epithelial cells on bioengineered electrospun scaffolds. *Journal of Biomedical Materials Research Part A*, ٢٠١٧ Oct; ١٠٥(١٠): ٢٧٠٣-٢٧١١.

Research Proposals & Approved Theses

١- The effect of bevacizumab monoclonal antibody on inhibition of proliferation and induction of apoptosis in CASKI cell line of cervical cancer.
Ethics Cert: IR.ABZUMS.REC.١٤٠١,٢٥٥. (Under Supervision).

٢- The evaluation of the effect of alpha-lipoic acid on apoptosis in the human ovarian cancer cell line, A٢٧٨٠-CP. Ethics Cert: IR.ABZUMS.REC.١٤٠١,١٤٨. (Under Supervision).

٣- Optimization of culture, cell lysis and purification of uricase enzyme, cloned in Pichia Pink. Ethics Cert: IR.ABZUMS.REC.١٤٠١,٠٩٨. (Under Supervision).

٤- Simultaneous evaluation of the active substance proscillaridin and curcumin in inducing apoptosis and cell cycle changes in non-small cell lung cancer (NSCLC) Ethics Cert: IR.ABZUMS.REC.١٤٠٠,١٦٣. (Finished).

٥- Evaluation of interferones (Interferon-alpha and Interferone-beta, Interferon-gamma and Interferone-λ) expression along with cytokines (IL-١ ، IL-٦ ، IL-١٠ ، TNF-a و FOXP٣) in COVID ٢٠١٩ patients in comparison with controls. Ethics Cert: IR.ABZUMS.REC.١٣٩٨,٢٦٢. (Finished).

٦- Production of herbal drug for controlling anxiety and nervous enhancer. Ethics Cert: IR.ABZUMS.REC.١٣٩٨,١٣٥. (Finished).

٧- Corneal Endothelial Cell Culture and Expansion. Ethics Cert: IR.ABZUMS.REC.١٣٩٨,٠٦٨. (Finished).
٨- Evaluation of TGF- beta and TNF-alpha receptors′s SiRNA silencing effect on Umbilical cord blood CD١٣٣+ hematopoietic stem cells expanded on ٣D scaffold. Ethics Cert: IR.ABZUMS.REC.١٣٩٧,٠٨٧. (Finished).

٩- Investigation of anti-cancerous effects of L.casei and L.ramnosus on apoptosis and cell cycle of B- CPAP thyroid cancer cell line in comparison to fibroblast cell line. Ethics Cert: IR.ABZUMS.REC.١٣٩٧,٠٧٨. (Finished).

Books

- **Published Books**
  - **Soleimanifar, F**., Mohammadizadeh, N., Rezaie, M., Karimi, S., Mahboudi, H., Enderami, SE., Darabi, K., Hooshmand, A., Kehtari, M. **The principals of Real-Time PCR in biotechnology.**
    - Publication of Shahid Beheshtu University of Medical Sciences, ٢٠١٨ Oct
    - **ISBN:** ٩٧٨-٦٢٢-٦١٢١-١١-٨
  - **Soleimanifar, F**., Barati, GH., Sboori, EH., Nejati, K., Esmaili, A., Bohlul, E., Teimoori, M.: **A new approach to molecular biology.**
    - **Heidari Publication**, ٢٠١٨ Oct.
    - **ISBN:** ٩٧٨-٦٠٠-٤٨٩-٣٢٥-١

- **Published Translated Book**
  - Kurnaz, Isil Aksan**, Technics in Genetic Engineering** Translator:
    - **Soleimanifar, F**.,Eslami, M .,Shahryari, Sh Khosravi
    - publication, ٢٠١٧ May
    - **ISBN:** ٩٧٨-٦٠٠-٢٠٩-٢٤١-٠

Professional Skills:

- Immunofluorescent staining, Immunoassay, flow cytometry
- Human Primary Cell Isolation and Culture
  ٢D and ٣D cell culture

  Induced Pluripotent Stem cells, Embryonic stem cells, Mesenchymal stem cell (Isolation from Bone marrow and Adipose tissue of Human and animals), Differentiation process t
- Viability verification of cell
- Scaffold fabrication by Electrospinning and casting
- Microscopy: Invert,Confocal and Standard fluorescence microscopy
- DNA and RNA Extraction
- Conventional and Real Time PCR ICC
- and IHC
- ELISA
- Vertical/horizontal electrophoresis

Speech at International Congress

- Soleimanifar, F., Mortazavi, Y., Nadri, S., Soleimani, M. Conjunctiva derived mesenchymal stem cell (CJMSCs) as a potential platform for differentiation into corneal epithelial cells on bioengineered electrospun scaffolds. Second National Festival and International Congress of Regenerative Medicine Stem Cell Sciences and Technologies.٢٠١٨.Tehran

Honors & Awards

- Dominant researcher of Alborz university of medical sciences in ٢٠٢٠
- Received a young assistant professor grant from National Institute of Medical Sciences Research Development of Iran (Nimad)

Membership

- **Scientific member of the Iranian Society of Biotechnology**
  - Tehran, Iran, ٢٠١٨-Present
- **University Research Council.**
  - Karaj, Iran, ٢٠١٨-٢٠٢١
- **Faculty Research Council**
  - Karaj, Iran, ٢٠٢٠-٢٠٢٢
- **University Growth Center Council**
  - Karaj, Iran, ٢٠١٩-Present

Language

- **Persian**: Native
- **English**: Proficient