Dr. Amir Asri kojabad

دکتر امیر عصری کجاباد

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CURRENT POSITION

Assistant professor
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EDUCATION

Ph.D.	September 23, 2017 – 2023 Tehran, Iran Entrance exam rank: six	**Hematology and Blood banking**, Department of Hematology and Blood Banking, Faculty of Allied Medicine, Iran University of Medical Sciences, *GPA: 17:53* Topic: Quantitative detection of FLT3 ITD Mutations by droplet digital PCR; Supervisors; *Prof. M. Safa* and *Prof, M. Soleimani*
Master's degree	September 23, 2013 – February 4, 2016 Tehran, Iran Entrance exam rank: forty-two	**Hematology and Blood banking**, Department of Hematology, Faculty of Medicine, Tarbiat Modares University, *GPA: 19:13* Topic: Expansion of hematopoietic stem cells in 3D Acellularized Bone scaffold and dynamic culture system; Supervisors; *Prof, M. Soleimani*
Bachelor's degree	September 23, 2010– February 11, 2014 Yazd, Iran	Medical laboratory sciences, Faculty of Allied Medicine, Yazd University of Medical Sciences, *GPA: 18:11*
Associate degree	September 23, 2007– February 2, 2010 Tabriz, Iran	Medical laboratory sciences, Faculty of Allied Medicine, Tabriz University of Medical Sciences, *GPA: 17:58*

TEACHING EXPERIMENTS

2015-2016 Yazd, Iran	Yazd University of Medical Sciences Hematology, bachelor's degree
2016-2017 Yazd, Iran	Yazd University of Medical Sciences Hematology, bachelor's degree
2016-2017 Abarkouh, Yazd, Iran	Yazd University of Medical Sciences Hematology, bachelor's degree
2017- 2023 Tehran, Iran	Medical laboratory science Iran University of Medical Sciences, Advanced Hematology, master's degree.

2023- 2025
Kerman, Iran

Medical laboratory science; Kerman University of Medical Sciences, Advanced Hematology, Cell culture, Hematology in PhD. /Master's degree.

2023- present
Isfahan, Iran

Medical laboratory science Isfahan University of Medical Sciences

PUBLICATIONS

Books

Atlas of Hematology (the first Persian Atlas of Iran). ISBN: 1-71-7028-600-978, Artin Teb Publications. 2013

Peer-review articles

2016
"Homing in hematopoietic stem cells: focus on regulatory role of CXCR7 on SDF1a/CXCR4 axis." Asri, Amir et al. EXCLI journal vol. 15 134-43. 15 Feb. 2016, doi:10.17179/excli2014-585

2016
"Expression of hsa-MIR-204, RUNX2, PPARγ, and BCL2 in Bone Marrow-Derived Mesenchymal Stem Cells from Multiple Myeloma Patients and Normal Individuals." Mansurabadi, Raziyeh et al. Cell journal vol. 19, Suppl 1 (2017): 27-36. doi:10.22074/cellj.2017.4480

2019
"Study of anti-cancer effects of Curcumin; formulation of Curcumin-loaded nano carrier and its toxicity effect on MCF-7 Cell line". Zare shehneh M, kalantar S M, Sheikhha M H, asri kojabad A, Haghiralsadat B F JSSU. 2019; 27 (1) :1175-1186

2021
"Co-delivery of miRNA-15a and miRNA-16-1 using cationic PEGylated niosomes downregulates Bcl-2 and induces apoptosis in prostate cancer cells". Ghaffari, Maedeh et al. Biotechnology letters, 10.1007/s10529-021-03085-2. 30 Jan. 2021, doi:10.1007/s10529-021-03085-2

2021
"Droplet digital PCR of viral DNA/RNA, Current progress, challenges, and future perspectives." Kojabad, A.A., Farzanehpour, M., Galeh, H.E.G., Dorostkar, R., Jafarpour, A., Bolandian, M. and Nodooshan, M.M. J Med Virol.

2021
"Liquid Biopsy-Based Biosensors for MRD Detection and Treatment Monitoring in Non-Small Cell Lung Cancer (NSCLC)"
Biosensors; IF: 5.7

2022
"Combined Treatment of Dendrosomal-Curcumin and Daunorubicin Synergistically Inhibit Cell Proliferation, Migration and Induce Apoptosis in A549 Lung Cancer Cells"
Biotechnology and Applied Biochemistry

2022
"Use of antioxidant nanoparticles to reduce oxidative stress in blood storage."
Advanced Pharmaceutical Bulletin; IF: 0.6

2023
"Human Hematopoietic Stem Cells Co-cultured in 3D with Stromal Support to Optimize Lentiviral Vector-mediated Gene Transduction."

Indian Journal of Hematology and Blood Transfusion; IF: one

2023
"Reconstruction of bone marrow microenvironment for expansion of hematopoietic stem cells by a histone deacetylase inhibitor"
Cytotechnology
IF: 2.3

2023
"A straightforward microfluidic-based approach toward optimizing transduction efficiency of HIV-1-derived lentiviral vectors in BCP-ALL cells."
Biotechnology Reports
IF: 0.8

2023
"Ultrasensitive quantitation of FLT3-ITD mutation in patients with acute myeloid leukemia using ddPCR."
Molecular Biology Reports
IF: 2.7

2024
"Investigating T Cell Immune Dynamics and IL-6's Duality in a Microfluidic Lung Tumor Model."
ACS Applied Materials & Interfaces; IF: 8.4

2025
"Design and fabrication of novel microfluidic-based droplets for drug screening on a chronic myeloid leukemia cell line"
PloS one

RESEARCH GRANTS

2015- Finished
Mimicking of bone marrow on-chip (National Institute for Medical Research Development, 2015); Research assistance.

2015- Finished
Co-culture of hematopoietic stem cells and mesenchymal in bone scaffold (National Institute for Medical Research Development, 2015); Research assistance.

2015- Finished
Expansion of hematopoietic stem cells on a three-dimensional structure with dynamic conditions (National Institute for Medical Research Development, 2015); Research assistance.

2015- Finished
Expansion of umbilical cord hematopoietic stem cells on three-dimensional nanofiber structures in the microfluidic system (Taribiat Modares University of Tehran, 2015); Research assistance.

2015- Finished
The role of placental niche stromal cells in the expansion of hematopoietic cells in culture medium; Research assistance.

2019- Finished
Optimization of lentiviral transduction to acute lymphoblastic leukemia cells in microfluidic device (Iran University of Medical Sciences, 2019); Research assistance.

2019- Finished
Quantification of FLT3ITD mutations by Droplet Digital PCR method (Iran University of Medical Sciences. 2019); Research assistance.

2020-Finished

Application of microfluidic technology in the diagnosis of viral infections with emphasis on Droplet Digital PCR (ddPCR) technique (Baqiyatallah University of Medical Sciences, 2020), Research assistance.

2022 - Finished

Design and fabrication of microfluidic-based droplet chip to evaluate the effect of imatinib on chronic myeloid leukemia cell line (k562)

2024-

The investigation of the association between the thyroid-stimulating hormone receptor gene mutation (rs2288493) and the presence of antiphospholipid antibodies.

INVITED TALKS, POSTERS, CONFERENCES

Invited talks.

- New design method of dynamic bioreactor system based on microfluidic technique (2nd National Congress of Advances in Tissue Engineering and Regenerative Medicine, Tehran, November 2015).
- Creation of a 3D culture bioreactor over Stromal Cell to mimic HSCs niche, (Second Conference on Cellular and Molecular Innovations, Tehran, November 2015) - *Top Article and top Congress Speaker*
- *Keynote speaker* "Microfluidic technology workshop and its application in biological systems". Taribat Modares University, Tehran, March 2017
- Speaker: ddPCR (Droplet Digital PCR) is a Versatile Tool in the Diagnosis of Hematological Neoplasm Biomarkers, Tehran, 2025; f 16th international and 22nd national congress on Quality Improvement in Clinical Laboratories (QILC 2025)

Poster Presentations

- Expansion of Cord blood HSCs on DBM scaffolds in dynamic culture (2nd International Congress on Stem Cell and Cellular Therapies (ICSCCT), Antalya, TURKEY, October 2015)
- Mimicking of bone marrow microenvironment on a three-dimensional DBM scaffold without cells in static conditions (14th National Congress of Iranian Medical Oncology and Hematology Association, Mashhad, October 2015).
- Role of Interleukin -18 Polymorphism (-607 C / A: rs 1946518) in Susceptibility to chronic Hepatitis B Virus Infection
- Bone marrow niche simulation by three-dimensional co-culture of hematopoietic stem cells and mesenchymal stem cells in microfluidic chip (First National Conference on Microfluidics and its Applications in Medicine and Engineering, Tehran, March 2016)
- Bone marrow on chip; Creation of a 3D culture bioreactor over Stromal Cell to mimic HSCs niche (Abbasi Hotel, Isfahan, Hematology and Oncology Congress, November 2016)

EMPLOYMENT

2014-2015, Tehran	Medical Laboratory Supervisor
2018-2020, Tehran	Medical Laboratory Supervisor
2021-2025, Isfahan	QM director
2025-Present, Isfahan	Assistant professor

AWARDS AND HONOURS

- Member of Iran's National Elites Foundation (NOXBEGAN) (2021).
- Selected the best article in the second conference on cellular and molecular innovations, Tehran (2015).
- Selected for health blog Festival- www.lab-sciences.blogfa.com (Tehran, 2009)

- Member of Yazd University of Medical Sciences Organization for Development of Exceptional Talents (2013).
- Ranked first among Bachelors. Students of Medical laboratory sciences, Yazd Medical University (2011).

CERTIFICATION

- Software Proficiencies:
  - Reference Management: EndNote, Mendeley, Zotero
  - CAD & Engineering Design: SolidWorks, AutoCAD, Visio
  - Scientific Computing & Simulation: COMSOL Multiphysics
  - Data Analysis & Visualization: GraphPad Prism, Analyse-it, ImageJ, Flow Jo
  - Bioinformatics & Molecular Biology Tools: UniProt, UniGene, Primer3Plus
  - Image Editing: Adobe Photoshop
  - Web design: Adobe dream viewer, WordPress, Typo3
  - Operating Systems: MS-DOS, UBUNTO(Linux) and windows
  - General Office Suite: Microsoft Office Suite
- Iranian Ministry of Health Language Exam (MHLE) language test certificate

EXPERIMENTAL SKILLS

- **Molecular Biology Techniques:**
  - Expertise in upstream and downstream molecular techniques, including DNA/RNA/protein extraction, cDNA synthesis, cell enrichment, and sample preparation for qPCR, qualitative PCR, and sequencing.
  - Proficient in operating, troubleshooting, and analyzing data from digital PCR (dPCR) and digital Droplet PCR (ddPCR) systems.
  - Performed ddPCR assays, including interpretation.
- **Cellular & Immunological Assays:**
  - Skilled in interpreting flow cytometry data (e.g., apoptosis, CFSE, various markers) using FlowJo software.
  - Experienced in 2D and 3D cell culture under both dynamic and static conditions.
  - Proficient in performing colony-forming assays (CFA).
  - Competent in isolating Hematopoietic Stem Cells (HSCs) via immunomagnetic column separation.
- **Microfabrication & Microfluidics:**
  - Experienced in microfluidic device design, fabrication (including soft lithography techniques), and experimental application.
  - Proficient in the simulation of microfluidic systems and phenomena
- **Bioinformatics & Computational Biology:**
  - Proficient in bioinformatics tools and NCBI database utilization, including primer design for diverse applications (e.g., highly variable genes such as HLA).
  - Developed basic computer programs/scripts for implementing biological algorithms.
  - Proficient with scientific computing and simulation software such as COMSOL Multiphysics.
- **Clinical Pathology & Hematology:**
  - Proficient in the interpretation of clinical flow cytometry data, peripheral blood smears, and bone marrow aspirates/biopsies.
  - Strong understanding and interpretive skills for hematology and coagulation panel test results.
- **Laboratory Quality Management & Accreditation:**
  - Experience in Quality Control (QC) management within a medical laboratory setting.
  - Proficient in implementing and maintaining Total Quality Management (TQM) systems in a medical laboratory.
  - In-depth knowledge and practical application of ISO 15189 standards for medical laboratory quality and competence.

- Familiarity with related quality assurance practices and regulatory requirements in medical laboratories.

❖ **Language Proficiency:**

- Proficient in academic and professional English (reading, writing, and listening).

LANGUAGE

❖ Persian (Farsi) ❖ English ❖ Azari

REFERENCES

➢ **Prof. Masoud Soleimani**
Department of Hematology and Cell Therapy, Faculty of Medical Science, Tarbiat Modares University
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Tehran, Iran

➢ **Prof. Majid Safa**
Department of Hematology and Blood Banking, Faculty of Allied Medicine, Iran University of Medical Sciences
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Tehran, Iran

➢ **Dr. Amir Atashi**
Stem Cell and Tissue Engineering Research Center, Shahrud University of Medical Sciences
atashia@gmail.com
Shahrud, Semnan, Iran

➢ **Dr. Saeid Abroun**
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Tehran, Iran