

Ali Dehghani

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[Scopus](#)

Education

M.Sc. in Human Genetics, Tarbiat Modares University

Sep 2019 - July 2022

Thesis Title: Expression of Hsa-Mir-195 in HPV Positive Pap Smear Specimens Ranging from Cytologically Normal or Mild Dysplasia through to Moderate or Severe Dysplasia in South-East Iranian Women during 2019-2021.

Supervised by: Dr. Masoud Garshasbi and Dr. Shahriar Dabiri

GPA: 3.9/1 (18.90/20 on the Iranian scale)

B.Sc. in Medical Laboratory Science (MLS), Kerman University of Medical Sciences

Sep 2015 - July 2019

GPA: 3.74/4 (17.78/20 on the Iranian scale)

Research Interests

- | | | |
|-----------------------------|----------|----------------------|
| ■ Gene Therapy | ■ Cancer | ■ Novel Therapeutics |
| ■ DNA Sequencing Technology | ■ Aging | ■ Medical Genetics |

Publications

57% Q1 - 28% Q2

1. Kahani, S.M., Saray, A.R., Kahaei, M.S., **Dehghani, A.**, *et al.* A novel deletion in the *BLOC1S6* Gene Associated with Hermansky-Pudlak syndrome type 9 (HPS-9). *BMC Genomics* **25**, 805 (2024).
2. **Dehghani A**, Khajepour F, Dehghani M, Razmara E, Zangouey M, Abadi MF, Nezhad RB, Dabiri S, Garshasbi M. Hsa-miR-194-5p and hsa-miR-195-5p are down-regulated expressed in high dysplasia HPV-positive Pap smear samples compared to normal cytology HPV-positive Pap smear samples. *BMC Infectious Diseases*. 2024 Feb 12;24(1):182.
3. **Dehghani A**, Pourjafari F, Koohkan F, Haghpah T, Pourjafari F, Sheibani V, Afarinesh MR. L-carnitine attenuates acoustic startle reflex dysfunction in adult male rats exposed to mancozeb. *Toxicology and Industrial Health*. 2023 Feb;39(2):115-26.
4. Mehdizadeh A, Soleimani M, Amjadi F, Sene AA, Sheikhha MH, **Dehghani A**, Ashourzadeh S, Aali BS, Dabiri S, Zandieh Z. Implication of novel BMP15 and GDF9 variants in unexpected poor ovarian response. *Reproductive Sciences*. 2024 Mar;31(3):840-50.
5. Mohammadi MF, **Dehghani A**, Zarabadi K, Kahani SM, Sayyad S, Ashrafi MR, Heidari M, Mohammadi P, Garshasbi M, Tavasoli AR. Persistent basal ganglia involvement in aminoacylase-1 deficiency: expanding imaging findings and review of literature. *Irish Journal of Medical Science* (1971-). 2024 Feb;193(1):449-56.
6. **Dehghani A**, Zokaei E, Kahani SM, Alavinejad E, Dehghani M, Meftahi GH, Afarinesh MR. The potential impact of Covid-19 on CNS and psychiatric sequels. *Asian Journal of Psychiatry*. 2022 Jun 1;72:103097.
7. Rad I, Salari M, **Dehghani A**, Golshan F, Afarinesh MR. Effect of chronic exposure to sertraline on social and cognitive behavior of adult male and female rats under social isolation stress. *Learning and Motivation*. 2022 May 1;78:101807.

Skills

Cellular and Molecular: RNA/DNA/protein Extraction, Electrophoresis, Conventional PCR, qPCR, Gap PCR, ARMS PCR, Nested PCR, MLPA, HRM, RFLP, Sanger Sequencing, Gene Cloning, Western Blotting, Cell culture (blood, bone marrow, MCF-7, and MCF-10), FISH, Karyotyping, IHC, H&E Staining

Animal Model: Oral Gavage, IP, IV, SC Injections, Rodent Surgery, Anesthesia, Rodent Cognitive, Social, and Physical Behavior Assessments

Bioinformatics: Linux (Ubuntu), Primer and Probe design for Multiplex PCR, Gene Cloning, STR Markers, Sanger Sequencing - Whole exome sequencing Analysis, UCSC, NCBI, ClinVar, IGV

Clinical Laboratory: Phlebotomy, Blood Typing (ABO & RH), Blood compatibility testing, Cross-matching, Direct and indirect Coombs tests, Bacterial Culture, IMViC tests, Antibiotic Susceptibility Testing (AST), Gram Staining, Blood Culture, Arterial Blood Gases (ABG) Test, Blood Differential Test, Urinalysis, Macroscopic and Microscopic Stool Analysis

Medical Genetics: Interpretation of Genetic Tests Results and Genetics Counseling, Pedigree

Research Experiences

Research Assistant – Part-Time

Aug 2022 - Feb 2024

Pathology and Stem Cell Research Center, Afzalipour Medical School, Kerman University of Medical Science, Kerman, Iran

Supervised by: Dr. Shahriar Dabiri

Main Project:

- Cloned and expressed Poly A Polymerase in E. coli BL21 strain utilizing the pET21 vector system (a first in Iran)

Volunteer Research Assistant

Dec 2019 - July 2022

Department of Medical Genetics, Tarbiat Modares University, Tehran, Iran

Supervised by: Dr. Masoud Garshasbi

Main projects:

- Investigated the role of miR-194 and miR-195 in cervical cancer progression
- Found and confirmed a novel BLOC1S6 gene deletion in Hermansky-Pudlak syndrome type 9 (HPS-9)
- Identified and described an amino acylase 1 deficiency patient using NGS who manifested

some novel clinical features

Volunteer Research Assistant

Mar 2020 - May 2021

Rodent Cognitive Lab, Cognitive Neuroscience Research Center, Kerman Neuroscience Research Center, Kerman, Iran

Supervised by: Dr. Mohammad Reza Afarinesh

Main Projects:

- Investigated the effects of mancozeb and its potential mitigation by acetyl L-carnitine in male rats
- Studied the effects of sertraline on social interaction deficits in a rat model of autism

Volunteer Research Assistant

Mar 2021 - May 2021

Department of Anatomical Science, Kerman University of Medical Science, Kerman, Iran

Supervised by: Dr. Fahimeh Pourjafari

Main projects:

- Assessed the impact of mancozeb on calcium uptake in rats
- Performed over 100 laparotomies, splenectomies, colectomies and femorectomies on rodent models

Working Experience

Senior Research Associate, Varagene Inc, Part-Time

Nov 2023 - present

- Oversee developing innovative virological and genetic diagnostic kits
- Developed and implemented a Realtime PCR high-risk HPV (15 probably high-risk HPV genotypes) detection kit
- Developed a novel MSI marker kit for colorectal cancer diagnosis, facilitating an increase in detection accuracy by evaluating NR-21, BAT-26, BAT-25, and NR-24 biomarkers

Research Associate – Full-Time

Apr 2023- May 2024

Dr. Dabiri Medical Genetics Laboratory, Kerman, Iran

Supervised by: Dr. Ahmad Anjomshoa and Dr. Shahriar Dabiri

Key Responsibilities and Achievements

- Implemented and optimized FISH and Sanger sequencing protocols for the first time in the laboratory, establishing standardized procedures that enhanced accuracy in genetic analysis for over 150 breast cancer patients.
- Analyzed FISH and sequencing data, reduced HER2 FISH analysis reporting time for breast cancer patients from 30 days to 7 days in Kerman, Iran
- Performed cell culture and karyotyping for 150+ patients
- Proficient in using ABI 3130xl Genetic Analyzer, ZEISS Fluorescence Microscope; GenASIs, GeneMarker, CodonCode Aligner, Databases (NCBI, Franklin, UCSC, UniProtKB, VarSome)

Trainee

Mar 2018 -Aug 2019

Kerman Blood Transfusion Organization, Kerman, Iran

- Full-time trainee

Supervised by: Dr. Roohollah Mirzaee Khalilabadi

Trainee

July 2016 - March 2018

Afzalipour Hospital, Kerman, Iran

- Rotated through hematology, microbiology, chemistry, and serology sections as a full-time trainee.

Supervised by: Dr. Ahmad Fatemi

Teaching Experience

Teaching Assistant

Tarbiat Modares University, Tehran, Iran

Oct 2019 - May 2020

Supervised by: Dr. Masoud Garshasbi

Course: Cytogenetics (code: DS-1399701)

- Led a 6-week workshop series on cytogenetic techniques for 35+ undergraduate students
- Facilitated weekly lesson plan meetings for the medical genetics department

Skills learned: Effective communication, Lesson planning

Award & Honors

- Tarbiat Modares University Human Genetics Scholarship (2019) – (covering 100% of tuition fees)
- **Ranked 7th** among 16,000+ participants in the National Graduate Entrance Exam for Human Genetics, Iran, July 2019
- **Ranked 1st** among 7 M.Sc. Students in Human Genetics, Tarbiat Modares University, Tehran, Iran, 2022 (highest GPA)
- **Ranked Top 1%** among 60+ B.Sc. Students of Medical Laboratory Science, Kerman University of Medical Science, Kerman, Iran, 2019 (highest GPA)
- **Ranked 1st**, Collegiate volleyball championship, Kerman, Iran, 2018
- **Ranked 1st**, Collegiate volleyball championship, Kerman, Iran, 2015
- Kerman University of Medical Science Medical Laboratory Scholarship (2015) – (covering 100% of tuition fees)
- **Ranked 3rd**, Jounior's Premier Volleyball League, Isfahan, Iran, 2012
- **Ranked 2nd**, Jounior's Premier Volleyball League, Tehran, Iran, 2011

Other Skills and Software

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|------------------|---------------------|-----------------|
| ■ GenASIs | ■ CodonCode Aligner | ■ GeneMarker |
| ■ Linux (Ubuntu) | ■ Gene Runner | ■ Clustal Omega |

Test Scores

TOEFL iBT	Reading	Listening	Speaking	Writing	Overall Score
	29	27	22	23	101

Test date: 10/12/2024

Leadership Experience

Vice President of Central Council of Medical Genetics, Scientific Student Society

Tarbiat Modares University, Tehran, Iran

Nov 2019 - Nov 2021

- Organized workshops for master and PhD students (Western Blot)

President of Central Council of Medical Laboratory, Scientific Student Society

Kerman University of Medical Science, Kerman, Iran

Jun 2017 - Jan 2019

- Executed a successful visit for 50+ undergraduates to Dr. Emami Meybodi's Anatomical Science Museum
- Led the planning committee for the graduation ceremony of 60+ Medical Laboratory students at Shazdeh garden.
- Coordinated a two-semester medical laboratory student internship program, placing 55+ students across 5 laboratories.