Dr. Jiyan Ali Haji
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PROFESSIONAL SUMMARY

Molecular biologist and lecturer with a Ph.D. in Genetics from the University of Duhok, specializing in cancer genetics and tumor microenvironment analysis. Experienced in molecular diagnostics, histology, and immunohistochemistry with a strong research focus on Colorectal Cancer. Skilled in molecular techniques including Real-Time PCR, DNA analysis, and immunohistochemical biomarker evaluation. Passionate about advancing translational cancer research and contributing to collaborative international research projects.

Research Interests

- Cancer Genetics
- Tumor Microenvironment
- Molecular Pathology
- Cancer Biomarkers
- Personalized Cancer Therapy
- Translational Oncology
- Translational cancer research and personalized medicine
- Next-Generation Sequencing for disease gene discovery

Education

Ph.D. in Genetics

Department of Biology, College of Science
University of Duhok
2020 – 2024

Thesis Title:
Molecular Analysis of Predictive Genes of Colorectal Cancer in Tumor and Adjacent Tissue of Three- and Five-Year Survivor Patients

Supervisor:
Dr. Mayada Ilias Yalda

Relevant coursework:

- Cancer Biology
- DNA Markers
- Advanced Pathology
- Genetic Diseases
- Biostatistics

M.Sc. in Genetics
Department of Biology, College of Science
University of Duhok
2012 – 2014

Thesis Title:
Synergistic Effects of Bleomycin and *Hypericum triquetrifolium* Extract on Bone Marrow and Germ Cells of Albino Mice.

Focus areas:

- Chromosomal analysis
- Cytogenetic staining techniques
- Analysis of reproductive cell aberrations induced by cancer therapeutics

B.Sc. in Biology
Department of Biology
University of Duhok
2003 – 2007

RESEARCH EXPERIENCE

Graduate Research Assistant

College of Health Sciences, **University of Duhok**
College of Health Science(Medical laboratory, Radiology)department, college of Pharmacy, College of Nursing, **Cihan University**
2015 – 2026

Responsibilities:

- Delivered lectures in General Biology, Histology, Molecular Biology, Anatomy, and Molecular & Cellular Pathogenesis.
- Contributed to curriculum development approved by the departmental science board.
- Supervised undergraduate research projects and laboratory training.
- Collaborated with academic staff to support departmental research strategies.
- Integrated laboratory research activities into undergraduate teaching.
- Organized examinations and assessed student performance.

Teaching Experience

Lecturer

Sports Institute
University of Duhok, University of Cihan/Duhok
2015 – 2023

Courses taught:

- Human Physiology
- Anatomy
- Sports Medicine
- Biomechanics
- General Biology
- Histology
- Molecular Biology
- Molecular and Cellular Pathogenesis
- General Pathlogy

Additional responsibilities:

- Supervised laboratory training for students in the Medical Laboratory Department.
- Mentored students on research methodology and scientific presentation skills.
- Developed interactive learning materials and laboratory exercises.

Laboratory Experience

Molecular Biology Techniques

- Real-Time PCR for nucleic acid quantification
- DNA purification, qualification, and quantification
- Chromosome extraction and cytogenetic staining
- Micronucleus assay
- Mitotic index assay
- Sperm morphology analysis

Histology and Immunohistochemistry

- Manual and automated Immunohistochemistry staining
- Preparation and staining of histological tissue sections
- Microscopic analysis of tumor samples
- Evaluation of tumor characteristics including:
    - tumor grade
    - tumor stage
    - necrosis
    - lymph node involvement
    - tumor deposits

Public Health Laboratory Work

- Processing and analysis of COVID-19 diagnostic samples
- Collaboration with multidisciplinary laboratory teams during the pandemic

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Research Summary

My doctoral research investigated molecular and genetic factors influencing the prognosis of Colorectal Cancer patients in Duhok, Kurdistan Region.The study focused on tumor biology and the tumor microenvironment using immunohistochemical markers including:

- ERG
- α-SMA

- FLI-1

In addition, I analyzed mutations in key oncogenes and signaling pathway genes including:

- KRAS
- NRAS
- BRAF
- PIK3CA
- AKT

The results revealed correlations between microvascular density, tumor differentiation, and genetic mutations, contributing to improved understanding of prognostic biomarkers and potential personalized therapeutic strategies.

Publications

1. Ali Haji, J.
   Mesenchymal and Vascular Dissemination Markers: ERG and α-SMA in Colorectal Cancer and Adjacent Tissue—Pericytes or Microvascular Density.
   Indexed in PubMed
2. Ali Haji, J.
   Using Multinomial Logistic Regression to Identify Factors Affecting Platelet Count.
3. Ali Haji, J.
   Synergistic Effects of Bleomycin and *Hypericum triquetrifolium* Extract on Bone Marrow and Germ Cells of Albino Mice.
4. Ali Haji, J.
   Association Between Cycle Threshold Values of Real-Time PCR and Platelet Count in COVID-19 Patients.

Technical Skills

Laboratory Techniques

- Molecular genetics

- DNA extraction and purification
- PCR and Real-Time PCR
- Immunohistochemistry
- Histology
- Cytogenetic analysis

Statistical Analysis

- SPSS

Reference Management

- Mendeley
- Zotero
- EndNote

Computer Skills

- Microsoft Word
- Microsoft Excel

Languages

- Kurdish – Native
- Arabic – Fluent
- English – Fluent (IELTS and TOEFL Certified)

Professional Development

Teaching Methods and Academic Development Training
University of Duhok
2019