

Curriculum Vitae

Zaid Aburubaiha

PhD, Molecular Biomedicine-Hematology

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- 1972** Born in Theban-Jordan.
- 1977-1989** Basic education.
- 1989-1994** Studies at the University of Jordan.
BSc degree in Medical and Biological Analysis.
- 1995-2000** **Medical technologist** at the Genetic Laboratory, Faculty of Medicine, University of Jordan.
- 1998-2001** **MSc** thesis at the Genetic Lab.-University of Jordan in **Medical Laboratory Sciences**. Worked on the “Survey of Familial Mediterranean Fever Gene Mutations in Jordan”.
- 2001-2002** **Senior Molecular Geneticist** at the Specialty Center for Fertility and Genetics.
- 2002-2005** **Lab. Supervisor** of the Genetic Laboratory at the National Center for Diabetes, Endocrine and Genetics.
- 2005-2010** **PhD in Molecular Biomedicine** from the University of Bonn. Worked on two projects: Functional studies on factor VIII variants containing different lengths of the B-domain AND The construction of a new helper vector for the production of helper-dependent Adenovectors.
- 2010-2013** **Post Doctoral Fellow** at the Institute of Experimental Hematology and Transfusion Medicine- University Clinic Bonn. Worked on the epitope mapping of anti-Factor VIII antibodies.
- 2013-2024** **Assistant Professor** at the Department of Medical Laboratories - Faculty of Health Sciences - American University of Madaba - Jordan.
- Since Feb., 2024** **Affiliated with the University of Jordan, School of Science, Department of Clinical Laboratory Sciences**

Positions and Professional Experience

Academic:

Assistant Professor since Oct. 2013. I am currently teaching the following courses: Molecular Genetics, Molecular Diagnostics, Clinical hematology, Basic hematology, Blood Banking, Laboratory Management and their related Laboratory Courses for the Medical Laboratories students at the American University of Madaba (AUM).

Administrative:

Vice-Dean: Faculty of Health Sciences, AUM, from Oct. 2017 to Sep. 2019.

Head of Department: Dept. of Medical Laboratories, Faculty of Health Sciences, AUM, March 2017 till Sept. 2021.

Member of the Academic Program Sub-Committee working toward AUM American Accreditation (NECHE).

Member of the Faculty Council/ Faculty of Health Sciences/ Academic Year 2021-2022

Member of the Examination Committee/ Faculty of Health Sciences/ Academic Year 2021-2022

Member of the Student's Discipline Committee/ Faculty of Health Sciences/ Academic Year 2021-2022

Licensure:

Laboratory Specialist, MOH, Jordan

Current professional/scientific interests, memberships, and activities:

Member of the ISTH

Research interests:

- *Molecular aspects of Hemorrhagic and Thrombotic Disorders.*
- *Gene Therapeutic approaches towards the treatment of single factor deficiencies.*
- *Recombinant Production of Coagulation Factors.*
- *Gene Correction Technologies.*

Detailed Research Experience

Molecular Biology Research Experience:

- **General Researcher Duties:**
 - Set up and conduct experiments, tests and other scientific procedures independently.
 - Data collection, analysis and presentation.
 - Grant applications.
- **DNA Cloning:**
- **Vector Construction:**
- **Transient and stable gene expression:**
- **Purification of expressed proteins from culture medium or cellular lysates using different small-scale affinity purification methods.**
- **Analysis of purified proteins by activity assays, ELISA and Immunoblotting.**
- **Generation, amplification and plaque purification of recombinant baculoviruses in insect cells (Sf9).**
- **Expression of recombinant proteins in insect cells (Sf9 and High Five cells).**
- **Development of a binding assay for the localization of anti-FVIII antibody epitopes on different FVIII domains. Also, Epitope mapping of anti factor VIII antibodies using Phage Display Libraries.**

Clinical Genetics Experience:

Administrative experience working as a **Supervisor of the Genetic Laboratory** at the National Center for Diabetes Endocrine and Genetics. Responsibilities included:

- Management of Genetic Lab personnel and Lab resources.
- Direct responsibility on the Molecular Genetics section including the Prenatal Diagnosis for different disorders and the implementation of new tests.
- The organization and optimization of the genetic research work required for the School of Medicine and assigned through the Genetic Lab Director.
- Training Lab personnel from other institutions on Cytogenetics and Molecular Techniques, so they can initiate such service in their own Labs.
- Training of graduate students on molecular methodologies and helping them to optimize their molecular biology work.
- Arranging performing genetic tests that are not available in Jordan by contacting several institutions abroad.

Diagnostic Molecular Genetics Experience:

- ***The application of the following basic procedures:*** DNA/RNA extraction from various tissues, quantifying and storage. Optimization of polymerase chain reaction (PCR) for various applications. Separation, detection and analysis of PCR products.
- ***Screening for Different Mutations by Applying Various Molecular Biology Techniques***
- ***Performing Prenatal Diagnosis for β -Thalassemia families***
- ***Screening for the most common β -Thalassemia mutations by ARMS-PCR.***
- ***Optimized and Introduced Molecular testing for Familial Mediterranean Fever Mutations (10 mutations, five of them are the most common in different ethnic groups) which was my research work for the Masters degree in Medical Lab Sciences.***
- ***Optimized and introduced the detection of Factor V Leiden (R508Q), Factor II Prothrombin (G20210A) and Methylene Tetrahydrofolate reductase (MTHFR) Variants.***
- ***Cystic Fibrosis mutation screening by reverse hybridization blotting using Inno-Genetics CF Amplification and typing Kit, thirty mutations. Also, CFTR gene sequencing.***
- ***Detection of the Y chromosome microdeletions using Promega Y chromosome Detection System and the detection of Sex Determining Region (SRY).***
- ***Human Leukocyte Antigen (HLA) typing by reverse dot blotting using Inno-Genetics and Dynal Biotech Kits. (HLA-A,B,C and HLA-DR, DQ α , DQ β).***
- ***Testing for Hereditary Hemochromatosis C282Y and H63D mutations.***
- ***Leukemia typing/subtyping using HemaVision screening kit from DNA Technology A/S.***
- ***Detection of BCR/ABL (Philadelphia chromosome) mRNAs using Amplimedical Spa- Bioline division kits.***

Cytogenetics Experience:

- ***Performing Cell Culture for different tissue types***
- ***Performing different Banding and Staining techniques***
- ***Chromosomal Analysis and Karyotyping.***
- ***Prenatal chromosomal analysis from Amniotic fluid and CVS.***

Molecular Cytogenetics:

The Application of Fluorescent In Situ Hybridization (FISH) using different Probes to detect chromosomal trisomies, micro deletions syndromes, translocations and X-Y chromosomes.

Recent Scientific Activities:

- Attended “**The 2nd Laboratorian’s Day**” organized by AJMLS held on 9th June, 2023.
- Attended the **ISTH Virtual Congress** held on 12th-14th July, 2020.
- Attended the **CONNECTING THROUGH RESEARCH KHCC-AUBMC-MDACC Conference** in March 2019.
- Organized and moderated the Laboratory Medicine session of the **3rd Scientific Day** for the Islamic Hospital Laboratory, Nov., 2018.
- Attended the **XXVIth Congress of the ISTH**. Held in Berlin, Germany, from July 8-13, 2017.

Presentations and Publications:

Gammoh O., **Aburubaiha Z.**, Mayyas A., Alkatib W., Masarweh R., Elhajji F., Alqudah A. (2023). Valerian and Hops Combination Versus Escitalopram in Models of Depression and Anxiety: A Cross-talk with Oxidative Stress. *Jordan Journal of Pharmaceutical Sciences*. (16): 124-136.

Wajdy J. Al-Awaida, Malek A. Zihlif, Hamzeh J. Al-Ameer, Ahmad Sharab, Muhanad Akash, **Zaid A. Aburubaiha**, Isam A. Fattash, Amer Imraish, Khedhir H. Ali. The effect of green tea consumption on the expression of antioxidant - and inflammation - related genes induced by nicotine. *Journal of Food Biochemistry*. 30th April, 2019.

Wajdy Al-Awaida, Baker Jawabrah Al-Hourani, Muhanad Akash, Wamidh H Talib, Sima Zein, Rabah Rashad Falah, **Zaid Aburubaiha**. *In vitro* anticancer, anti-inflammatory, and antioxidant potentials of *Ephedra aphylla*. *Journal of Cancer Research and Therapeutics*. 2018; 14(6): 1350-1354.

Al-Awaida W, Akash M, **Aburubaiha Z**, Talib WH, Shehadeh H. Chinese green tea consumption reduces oxidative stress, inflammation and tissues damage in smoke exposed rats. *Iran J Basic Med Sci*. 2014 Oct; 17(10): 740–746.

Aburubaiha Z, Albert T., Horneff S., Ivaskevicius V., Biswas A., Schwaab M, Oldenburg J. Development of a binding assay for the localization of anti-FVIII antibody epitopes on different FVIII domains. 57. Jahrestagung der Gesellschaft für Thrombose und Hämostaseforschung (GTH): Munich, Germany, 20-23.02.2013. (Poster presentation).

Z Aburubaiha, M Srour, J Oldenburg, R Schwaab. Addition of short fragments of the B-domain eliminates the discrepancy of factor VIII activity of B-domain deleted factor VIII between clotting and chromogenic assays. *Haemophilia* 18 (2012, suppl. 3), 107

Aburubaiha Z, Srour M, Oldenburg J, Schwaab R. The inclusion of short lengths of the factor VIII B-domain into the BDD-rFVIII eliminates the assay discrepancy and improves the overall expression and functionality of the BDD-rFVIII. World Federation of Haemophilia- 2012 World Congress: Paris, France, 08-12.07.2012. (Poster presentation).

S Pahl, R Schwaab, J Oldenburg, U Herbiniaux, **Z Aburubaiha**. Characterisation of natural FVIII variants of the B-domain regarding their biological activity. *Haemophilia* **2010**. 16, 95

Aburubaiha Z, Srour M, Schwaab M, Oldenburg J. Functional studies on factor VIII protein variants containing different lengths of the B-domain. 54. Jahrestagung der Gesellschaft für Thrombose und Hämostasieforschung (GTH): Nürnberg, Germany, 24-27.02.2010. (Oral presentation).

ZA Aburubaiha, M Srour, H Fenchner, J Oldenburg, R Schwaab. Construction of a new helper vector for the production of helper-dependent adenovectors for the use in hemophilia a gene therapy. *Journal of Thrombosis and Haemostasis* **2009**. 7, 1167-1168

Aburubaiha Z, Srour M, Fechner H, Oldenburg J, Schwaab R. Construction of a new helper vector for the production of helper-dependent adenovectors for the use in hemophilia gene therapy. XXII Congress of the International Society on Thrombosis and Hemostasis (ISTH): Boston, USA, 11-16.07.2009. (Poster presentation).

Srour MA, Grupp J, **Aburubaiha Z**, Albert T, Brondke H, Oldenburg J, Schwaab R. Modified Expression of Coagulation Factor VIII by addition of a glycosylation site at the N-terminus of the protein. *Ann. Hematology* **2008** Feb;87(2): 107-12.

J Oldenburg, T Albert, J Schroder, **Z Aburubaiha**, C Muller-reiblef, R Schwaab. Classification of factor VIII gene mutations according to risk of inhibitor formation. *Haemophilia* **2008**. 14, 58

Majeed HA, El-khateeb M, El-shanti H, **Rabaiha ZA**, Tayeh M. The Spectrum of Familial Mediterranean fever Gene Mutations in Arabs; Report of a Large Series. *Semin Arthritis Rheum* **2005** Jun;34(6): 813-8.

Al-Alami JR, Tayeh MK, Najib DA, **Abu-Rubaiha ZA**, Majeed HA, Al-Khateeb MS, El-Shanti HI. Familial Mediterranean fever Mutation Frequencies and Carriers Among a Mixed Arabic Population. *Saudi Med J* **2003** Oct 24: 1055-9.

Majeed HA, El-Shanti H, Al-Khateeb MS, **Rabaiha ZA**. Genotype/Phenotype Correlations in Arab patients with Familial Mediterranean Fever. *Semin Arthritis Rheum* **2002** June;31(6):371-376.

References:

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