

Mohammed Kotb

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Research Experience

Scientific Conference Presentation | 01/10/2026 - 09/11/2026

Research Title: Metabolic Aspects of Posttraumatic Stress Disorder (PTSD) in a CD1 Mouse Model

Conference: PTE ÁOK Students' Scientific Conference (TDK), University of Pécs, Hungary

MSc Researcher | 01/09/2025 - 01/01/2027

University of Pécs, Faculty of Health Sciences, Hungary

Sep 2025 – Present

Research Topic: Metabolic Aspects of Posttraumatic Stress Disorder (PTSD) in a CD1 Mouse Model

Conducted experimental research using a CD1 mouse model of PTSD-like behavior through Pavlovian fear conditioning, with behavioral assessment and analysis using ANY-maze software. Monitored metabolic and physiological parameters, including body weight, blood glucose, organ weights, and stress biomarkers.

Performed molecular biology workflows, including RNA extraction, cDNA synthesis, and RT-qPCR using Applied Biosystems QuantStudio systems. Analyzed the expression of metabolic genes (GLUT1, GLUT2, GLUT3, COXIV, and glucokinase) in specific brain regions and assessed nucleic acid quality and concentration using NanoDrop spectrophotometry.

Integrated behavioral and molecular data using GraphPad Prism and Microsoft Excel, applying Principal Component Analysis (PCA) and correlation analyses. Reviewed scientific literature, interpreted experimental findings, and contributed to scientific writing and research documentation for the MSc thesis.

Education & Training

MSc in Clinical Laboratory Sciences (In Progress) | University of Pécs | 01/09/2025 - Current | Pécs, Hungary

Final grade: (GPA 4.93/5) | **Level in EQF:** 7

Pre-Master's Programme in Clinical Pathology | Assiut University | 01/04/2024 - 30/06/2025 | Egypt

Field(s) of study: Clinical Pathology | **Final grade:** Excellent with Honors

Bachelor of Veterinary Medicine | Assiut University | 01/09/2018 - 30/06/2023 | Egypt

The medium of instruction and examination for (B.V.Sc) undergraduate degree was in English.

Final grade: Honors (GPA 3.77/4, ranked 2nd in class)

High School Diploma | Al-Horreya French Official Language School | 01/09/2005 - 30/06/2018 | Assiut, Egypt

Work experience

Teaching Assistant | Faculty of Veterinary Medicine, Assiut University | 30/11/2023 - Current | Assiut , Egypt

Currently on study leave while pursuing an MSc in Clinical Laboratory Sciences at the University of Pécs, Hungary, under the Stipendium Hungaricum Scholarship.

Main Activities and Responsibilities

Delivered practical teaching sessions and theoretical demonstrations in Clinical Pathology and Clinical Laboratory Diagnostics for undergraduate veterinary students. Prepared and supervised laboratory practicals, supported student learning during clinical summer training programs, and assessed students' practical performance through examinations and constructive feedback. Contributed to curriculum development and supported routine diagnostic laboratory operations at the Veterinary Teaching Hospital.

Veterinary Intern | Assiut University Veterinary Teaching Hospital | 01/07/2020 - 01/07/2023 | Assiut, Egypt

Gained hands-on clinical experience in patient assessment, physical examination, sample collection and processing, and routine laboratory diagnostics, including hematology, clinical chemistry, and cytology. Assisted with diagnostic imaging, surgical procedures, anesthesia monitoring, and perioperative patient care.

Honours and Awards

Stipendium Hungaricum Scholarship | Tempus Public Foundation | 01/09/2025

Awarded by the Hungarian Government to pursue an MSc in Clinical Laboratory Sciences at the University of Pécs, Hungary (2025–2027).

Ranked 2nd – Bachelor of Veterinary Medicine class (GPA 3.77/4) | Assiut University, Egypt | 30/06/2023

Excellent with Honors – Pre-Master's Programme in Clinical Pathology | Assiut University | 01/06/2025

Presidential Honour for Top Graduates at Egyptian Universities Excellence Day – Presidency of the Arab Republic of Egypt | 12/10/2023

Dean’s Award for Academic Excellence – Awarded for achieving 2nd place in the five-year Bachelor of Veterinary Medicine programme, Assiut University, 2023.

Outstanding Students Incubation Program Scholarship – Ministry of Social Solidarity and Assiut University, 2022. Awarded twice in recognition of outstanding academic ranking (USD 200).

Volunteering

SCOVE Member – IVSA Assiut | International Veterinary Students’ Association (IVSA), Assiut, Egypt| 2020–2023

Participated in student-led initiatives promoting public health, well-being, and educational awareness among school and university students. Contributed to organizing awareness sessions and activities related to health and veterinary student development.

Volunteer Veterinarian – Veterinary Convoy | Faculty of Veterinary Medicine, Assiut University, Egypt| 2022

Participated in veterinary outreach campaigns across villages in Assiut, contributing to animal health care, community-based veterinary services, and the care and feeding of stray animals. Supported veterinary care initiatives for rescued animals.

Technical Skills

Technical Skills & Laboratory Expertise

Molecular Biology & Genetic Techniques: DNA/RNA extraction, cDNA synthesis, reverse transcription, conventional PCR, quantitative real-time PCR (RT-qPCR), primer handling and optimization, agarose gel electrophoresis, nucleic acid visualization, and DNA/RNA quality and concentration assessment using NanoDrop spectrophotometry.

Immunology & Cellular Analysis: Enzyme-Linked Immunosorbent Assay (ELISA), flow cytometry, monoclonal antibody-based assays, hybridoma technology, and Magnetic-Activated Cell Sorting (MACS).

Protein Biochemistry & Molecular Diagnostics: SDS-PAGE, Western blotting, protein extraction and quantification, Bicinchoninic Acid (BCA) assay, protein diagnostics, biomarker-related assays, immunohistochemistry (IHC), and immunofluorescence (IF).

Clinical Laboratory Diagnostics: Hematology, hemostasis and coagulation testing, erythrocyte sedimentation rate (ESR), clinical chemistry (liver and kidney function tests, glucose, proteins, electrolytes, minerals, vitamins, and hormones), urinalysis, and parasitological examination.

Laboratory Instruments & Data Analysis: Applied Biosystems QuantStudio real-time PCR systems, flow cytometers, fluorescence and light microscopes, NanoDrop spectrophotometers, spectrophotometers, electrophoresis systems, microplate readers, and centrifugation systems.

Training Courses & Advanced Laboratory Workshops

Advanced Laboratory and Biomedical Research Training

Modern Methods of Molecular Genetics and Genomics (Practical Training): Hands-on training in molecular genetics techniques, nucleic acid analysis, PCR-based methods, and genomic approaches.

Immunological Methods in Clinical Research (Practical Training): Practical training in immunological assays, immune-based diagnostics, and laboratory methods applied in clinical research.

Modern Methods of Protein Research (Practical Training): Hands-on training in protein analysis techniques, including protein separation, detection, and characterization methods.

Clinical Research Methodology: Training in clinical study design, research methodology, clinical case evaluation, and interpretation of scientific data.

Scientific Literature Review and Biomedical Databases: Training in scientific searching strategies, literature analysis, and utilization of biomedical research databases.

Academic Publications and Journal Peer Review: Training in scientific writing, manuscript preparation, publication processes, and principles of peer review.

Code of Ethics Course | 08/2024

The training program of code of Ethics - FLDC - Assuit university

Preparing a proposal for a Competitive Research Project | 08/2024

The training program of Preparing a proposal for a Competitive Research Project - FLDC - Assuit university

Language Skills

Mother tongue: Arabic

Other language(s): English: Fluent (C1) - Excellent reading, writing, and spoken production. , French: Intermediate (B1). , Hungarian: Beginner (A2 – Basic communication).