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CURRICULUM VITAE

Mona Al-Gizawiy PhD

Assistant Professor
Department of Biophysics

OFFICE ADDRESS:

8701 Watertown Plank Road

Milwaukee, WI 53226

EDUCATION:

09/1993 - 08/1998 B.S.V.M, Jordan University of Science & Technology (JUST), Irbid, Jordan
01/2000 - 08/2003 M.S., University of Minnesota, St. Paul, MN
08/2003 - 12/2009 Ph.D., University of Minnesota, St. Paul, MN

FACULTY APPOINTMENTS:

07/01/2022 - Present Assistant Professor, Biophysics, Medical College of Wisconsin

CENTER/INSTITUTE AFFILIATIONS:

03/18/2025 - Present Member, Neuroscience Research Center, Medical College of Wisconsin, Milwaukee, WI

AWARDS AND HONORS:

1993 - 1998 Academic Scholarship, Jordan University of Science & Technology
1993 - 1998 Dean's List, Jordan University of Science & Technology
1998 Graduated valedictorian with B.S. in Veterinary Medicine, Jordan University of Science & Technology
2000 - 2006 Academic Scholarship to support graduate studies at the University of Minnesota, provided by Jordan University of Science & Technology
10/2002 VMED Travel Award, College of Veterinary Medicine, University of Minnesota
2003 - 2005 Academic Fellowship, College of Veterinary Medicine, University of Minnesota
2007 - 2009 Graduate Assistantship, College of Veterinary Medicine, University of Minnesota
10/2009 VMED Travel Award, College of Veterinary Medicine, University of Minnesota
2009 First Place research poster award, 2009 Points of Pride Research Day , University of Minnesota
02/2013 The Society for In Vitro Biology Certificate of Outstanding Achievement for Ability and Creativity in In Vitro Biology. (to mentored student), Capital Science & Engineering Fair, Madison, WI
03/2013 Featured in BrainStem, newsletter of the MCW Clinical Cancer Brain and Spine Tumor Program, Medical College of Wisconsin
03/2013 Second Place poster award, Biochemistry/ Medicine/ Health Category (to mentored student), Waukesha County Science & Engineering Fair, WaCSEF, Waukesha, WI
02/2014 First research staff member to be featured in the MCW Cancer Center "Spotlight, Medical College of Wisconsin
10/2018 Poster judge, Medical Student Summer Research Program Poster Contest, Medical College of Wisconsin
05/2019 Third place Research Award (poster), Sixth Annual Pediatric Cancer Symposium: Tumor Microenvironment, Children's Wisconsin
10/2024 First place Research Award (poster), Tenth Annual Pediatric Cancer Symposium: Exploring the past, present and future of novel therapies for pediatric cancer, Children's Wisconsin
12/2024 Featured in "IB News" newsletter, Imaging Biometrics, LLC.

MEMBERSHIPS IN HONORARY AND PROFESSIONAL SOCIETIES:

1998 - 2003 Jordan Veterinary Medical Association (member)
2003 - 2008 International Veterinary Academy of Pain Management (member)
2008 - 2015 Society for Neuroscience (member)
2015 - 2019 Society for Neuro-Oncology (member)

RESEARCH GRANTS/AWARDS/CONTRACTS/PROJECTS:

Active

Peer Review

Title:	Gallium maltolate for the treatment of difficult-to-treat high-grade pediatric brain tumors
Source:	NIH/NCI
Role & Effort:	Principal Investigator
Dates:	04/01/2026 - 03/31/2031

Non-Peer Review

Title:	Does the novel antineoplastic compound, gallium maltolate, cause neurologic dysfunction? – Multimodal assessment
Source:	MCW Neuroscience Research Center
Role & Effort:	Principal Investigator
Dates:	07/01/2025 - 06/30/2027

Pending

Peer Review

Title:	Targeting Iron Metabolism in Breast Cancer with a Novel Oral Iron-Mimetic Metallocompound - A Priori Characterization of Response to Gallium Maltolate
Source:	NIH/NCI
Role & Effort:	MPI
Dates:	07/01/2026 - 06/30/2028

Prior

Peer Review

Title:	New Treatment Monitoring Biomarkers for Brain Tumors Using Multiparametric MRI with Machine Learning
Source:	NIH/NCI
Role & Effort:	Study Staff
PI:	Kathleen Schmainda
Dates:	04/15/2021 - 03/31/2026

COMMITTEE SERVICE:

Medical College of Wisconsin

01/2011 - 05/2011 consultant, MCW Tissue Bank Executive Committee, Medical College of Wisconsin
09/2022 - Present member, Institutional Animal Care and Use Committee, Medical College of Wisconsin

MCW TEACHING ACTIVITIES:

Graduate Student Education

10/2022 - Present Annual lecture on translational applications for PHARM 676: Advanced Drug Delivery

Systems, School of Pharmacy, Medical College of Wisconsin

EXTRAMURAL TEACHING:

Graduate Student Education

10/1998 - 12/1999 Teaching Assistant, animal husbandry, livestock production, veterinary

2002 - 2003 Tutor, biology and physiology, anatomy (Academic Counseling and

2002 - 2006 Co-lecturer, CVM 6321: Surgery, Anesthesiology, Critical Care, College of Veterinary Medicine, University of Minnesota

2004 - Present Guest lecturer, "Blood flow and the control of blood pressure", "The

PROGRAMMATIC DEVELOPMENTS:

Educational Programs

Student

11/2003 Co-facilitator, Workshop on Local Anesthetic Techniques, College of Veterinary Medicine, University of Minnesota

Clinical Programs

10/1998 - 01/2000 Co-facilitator, Animal husbandry and livestock production skills lab,

10/1998 - 01/2000 Co-facilitator, Animal husbandry and livestock production skills lab; Dept. Veterinary Clinical Sciences, Jordan University of Science & Technology

COMMUNITY SERVICE ACTIVITIES:

1993 - 2009 Tutor (English as a second language)

1997 - 2009 Tutor (Biology, anatomy and physiology - high school through college level)

2002 - 2004 Speaker, International Classroom Connection program, Minnesota International

2004 - 2008 Instructor, (Beginner and Intermediate German), St. Paul Public Schools

BIBLIOGRAPHY

Refereed Journal Publications/Original Papers

1. Al-Gizawiy M, Ijaz A, Khamas W. “A comparison of two castration methods in tomcats and dogs.” Pakistan Vet J. 2004; 24:134-138
2. Al-Gizawiy MM, P Rudé E. Comparison of preoperative carprofen and postoperative butorphanol as postsurgical analgesics in cats undergoing ovariohysterectomy. Vet Anaesth Analg. 2004 Jul;31(3):164-74.
3. Smeester BA, Al-Gizawiy M, Beitz AJ. Effects of different electroacupuncture scheduling regimens on murine bone tumor-induced hyperalgesia: sex differences and role of inflammation. Evid Based Complement Alternat Med. 2012;2012:671386. PMCID: PMC3541553
4. Smeester BA, Al-Gizawiy M, O'Brien EE, Ericson ME, Triemstra JL, Beitz AJ. The effect of electroacupuncture on osteosarcoma tumor growth and metastasis: analysis of different treatment regimens. Evid Based Complement Alternat Med. 2013;2013:387169. PMCID: PMC3818845
5. Heroux MS, Chesnik MA, Halligan BD, Al-Gizawiy M, Connelly JM, Mueller WM, Rand SD, Cochran EJ, LaViolette PS, Malkin MG, Schmainda KM, Mirza SP. Comprehensive characterization of glioblastoma tumor tissues for biomarker identification using mass spectrometry-based label-free quantitative proteomics. Physiol Genomics. 2014 Jul 01;46(13):467-81. PMCID: PMC4587597
6. Doan NB, Nguyen HS, Montoure A, Al-Gizawiy MM, Mueller WM, Kurpad S, Rand SD, Connelly JM, Chitambar CR, Schmainda KM, Mirza SP. Acid ceramidase is a novel drug target for pediatric brain tumors. Oncotarget. 2017 Apr 11;8(15):24753-24761. PMCID: PMC5421885
7. Flister MJ, Tsaih SW, Stoddard A, Plasterer C, Jagtap J, Parchur AK, Sharma G, Prisco AR, Lemke A, Murphy D, Al-Gizawiy M, Straza M, Ran S, Geurts AM, Dwinell MR, Greene AS, Bergom C, LaViolette PS, Joshi A. Host genetic modifiers of nonproductive angiogenesis inhibit breast cancer.

Breast Cancer Res Treat. 2017 Aug;165(1):53-64. PMCID: PMC6404538
8. Doan NB, Nguyen HS, Al-Gizawiy MM, Mueller WM, Sabbadini RA, Rand SD, Connelly JM, Chitambar CR, Schmainda KM, Mirza SP. Acid ceramidase confers radioresistance to glioblastoma cells. Oncol Rep. 2017 Oct;38(4):1932-1940. PMCID: PMC5652937
9. Prah MA, Al-Gizawiy MM, Mueller WM, Cochran EJ, Hoffmann RG, Connelly JM, Schmainda KM. Spatial discrimination of glioblastoma and treatment effect with histologically-validated perfusion and diffusion magnetic resonance imaging metrics. J Neurooncol. 2018 Jan;136(1):13-21. PMCID: PMC5756123
10. Doan NB, Alhajala H, Al-Gizawiy MM, Mueller WM, Rand SD, Connelly JM, Cochran EJ, Chitambar CR, Clark P, Kuo J, Schmainda KM, Mirza SP. Acid ceramidase and its inhibitors: a de novo drug target and a new class of drugs for killing glioblastoma cancer stem cells with high efficiency. Oncotarget. 2017 Dec 22;8(68):112662-112674. PMCID: PMC5762539
11. Chitambar CR, Al-Gizawiy MM, Alhajala HS, Pechman KR, Wereley JP, Wujek R, Clark PA, Kuo JS, Antholine WE, Schmainda KM. Gallium Maltolate Disrupts Tumor Iron Metabolism and Retards the Growth of Glioblastoma by Inhibiting Mitochondrial Function and Ribonucleotide Reductase. Mol Cancer Ther. 2018 Jun;17(6):1240-1250. PMCID: PMC5984712
12. Doan NB, Nguyen HS, Alhajala HS, Jaber B, Al-Gizawiy MM, Ahn EE, Mueller WM, Chitambar CR, Mirza SP, Schmainda KM. Identification of radiation responsive genes and transcriptome profiling via complete RNA sequencing in a stable radioresistant U87 glioblastoma model. Oncotarget. 2018 May 04;9(34):23532-23542. PMCID: PMC5955095
13. Alhajala HS, Nguyen HS, Shabani S, Best B, Kaushal M, Al-Gizawiy MM, Erin Ahn EY, Knipstein JA, Mirza S, Schmainda KM, Chitambar CR, Doan NB. Irradiation of pediatric glioblastoma cells promotes radioresistance and enhances glioma malignancy via genome-wide transcriptome changes. Oncotarget. 2018 Sep 25;9(75):34122-34131. PMCID: PMC6183347
14. Alhajala HS, Markley JL, Kim JH, Al-Gizawiy MM, Schmainda KM, Kuo JS, Chitambar CR. The cytotoxicity of gallium maltolate in glioblastoma cells is enhanced by metformin through combined action on mitochondrial complex 1. Oncotarget. 2020 Apr 28;11(17):1531-1544. PMCID: PMC7197450
15. Reith TP, Prah MA, Choi EJ, Lee J, Wujek R, Al-Gizawiy M, Chitambar CR, Connelly JM, Schmainda KM. Basal Ganglia Iron Content Increases with Glioma Severity Using Quantitative Susceptibility Mapping: A Potential Biomarker of Tumor Severity. Tomography. 2022 Mar 15;8(2):789-797. PMCID: PMC8938779
16. Al-Gizawiy MM, Wujek RT, Alhajala HS, Cobb JM, Prah MA, Doan NB, Connelly JM, Chitambar CR, Schmainda KM. Potent in vivo efficacy of oral gallium maltolate in treatment-resistant glioblastoma. Front Oncol. 2023;13:1278157. PMCID: PMC10822938
17. Connelly JM, Zoss CJ, Szabo A, Mirza SP, Adom F, Bernstein LR, Al-Gizawiy MM, Schmainda KM, Chitambar CR. A phase 1 trial of iron metabolism-targeting oral gallium maltolate in recurrent and refractory glioblastoma. Neurooncol Adv. 2026;8(1):vdag154. PMCID: PMC13283452
18. Chitambar CR, Zoss CJ, Al-Gizawiy MM, Schmainda KM, Connelly JM. Reharnessing the therapeutic potential of gallium-based compounds in oncology: From the laboratory to the clinic. Pharmacol Rev. 2026 Jul;78(4):100138.

Abstracts

1. Al-Gizawiy MM, Robinson EP. Comparison of carprofen and butorphanol as post-surgical analgesics in cats. Vet Anaesth Analg. 2003 Apr;30(2):110.

Non-Peer Reviewed Educational Products

1. Renu D, Aggarwal P, Cherukuri SC, Tata P, Bhat V, Livi CB, Rosenberg M, Al-Gizawiy M, Schmainda K, Mirza SP. “Molecular subtypes in glioblastoma multiforme: Integrated analysis using Agilent GeneSpring and Mass Profiler Professional Multi-Omics Software (Application Note).” 2015; www.agilent.com/chem 5991-5505EN