

# **CURRICULUM VITAE**

## **Ayman S. Amer**



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10 Publications in Web of Science, H-Index: 6

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Citations: 197 h-index: 6, i10-index: 6

### **EDUCATION:**

M.B.B.CH. (MD) with Honour, from Assiut University, Faculty of Medicine, Assiut, Egypt, 1987

M.Sc. in Internal Medicine, from Assiut University, Faculty of Medicine, Assiut, Egypt, 1992

M.Sc. in Anatomy, from Assiut University, Faculty of Medicine, Assiut, Egypt, 1997

Ph.D. in Biomedical Sciences with emphasis in Anatomy, Cell and Neurobiology, from Marshall University, Joan C. Edwards School of Medicine, Huntington, WV, USA, 2004

***CV summary is available at the end of the text in this document.***

### **ACADEMIC APPOINTMENTS AND PROFESSIONAL EXPERIENCE**

More than 31 years of experience in teaching and medical research in the field of Human Anatomy, Neuroscience, and Embryology

2022- Full Professor, Department of Human Anatomy and Embryology, Faculty of Medicine, Assiut University, Assiut, Egypt

2016-2021 Associate Professor, Department of Human Anatomy and Embryology, Faculty of Medicine, Assiut University, Assiut, Egypt

2014-2015 Senior Lecturer, Department of Human Anatomy and Embryology, Faculty of Medicine, Assiut University, Assiut, Egypt

2006-2013 Associate Professor and Course Director of Medical Neurobiology & Anatomy, Department of Anatomy & Neurobiology, Oman Medical College, Sohar, Oman

2005-2006 Visiting Associate Professor, Department of Basic Medical Science, School of Medicine, University of Missouri - Kansas City, MO, USA

2004-2005 Postdoctoral Research Associate, Department of Anatomy, Cell and Neurobiology, Joan C. Edwards School of Medicine, Marshall University, Huntington, WV, USA

1999-2004 Graduate Research Assistant and Adjunct Instructor in Human Gross Anatomy, Embryology, Anatomy of the Nervous System & Neuroscience, Department of Anatomy, Cell and Neurobiology, Joan C. Edwards School of Medicine, Marshall University, Huntington, WV, USA

1997-1999 Assistant Lecturer, Department of Anatomy and Embryology, Faculty of Medicine, Assiut University, Assiut, Egypt

- 1992-1997 Instructor, Department of Anatomy and Embryology, Faculty of Medicine, Assiut University, Assiut, Egypt
- 1992-1999 Internal Medicine Specialist at Assiut Western District Islamic Polyclinic, Abu Teeg Hospital of Islamic Medical Organization and Manfalout Hospital of Islamic Medical Organization, Assiut, Egypt
- 1989-1992 Internal Medicine Resident Physician, Department of General Medicine, Faculty of Medicine, Assiut University, Assiut, Egypt
- 1988-1989 General Practitioner Physician (Intern) at Assiut University Hospitals and Ministry of Health Hospitals, Egypt

### **AWARDS AND HONORS**

Co-Chair Liaison Psychiatry Symposium CME2, International Medical Student Conference at Oman Medical College, Sohar, Sultanate of Oman, 2008

Nominated by the Advisory Committee of Young Anatomists (ACYA) as a Graduate Student Poster Award finalist for the American Association of Anatomists Students Awards – Experimental Biology Meeting, San Diego, CA, USA, 2005

Recipient of the American Association of Anatomists - Experimental Biology 2004 Graduate Student Travel Award, 2004

Nominated for the American Association of Anatomists - Experimental Biology 2004 Graduate Student Poster Award, 2004

The Chancellor's List® of Biography, USA, 2004 - 2005

Recipient of the American Association of Anatomists - Experimental Biology 2003 Graduate Student Travel Award, 2003

Recipient of the Marshall University – Biomedical Sciences Program Scholarship to continue studying in the USA for the Ph.D. degree in the Biomedical Sciences with area of emphasis in Anatomy, 2003 - 2004

Who's Who in America for Leadership in Teaching and Professional Achievement, 2002 - 2003

Recipient of the Marshall University, Joan C. Edwards School of Medicine Teaching Award for Exemplary Service, 2001

Recipient of the Egyptian Government Scholarship to study Medicine and Surgery at Faculty of Medicine, Assiut University, Assiut, Egypt, 1981 - 1987

Recipient of the Egyptian Government Academic Achievement Scholarship as a Foreign Exchange College Student, Munich, Germany, 1984

## **PROFESSIONAL SOCIETIES**

American Association of Anatomists  
Federation of American Societies for Experimental Biology  
Society for Neuroscience  
International Brain Research Organization  
American Association for the Advancement of Science  
The Research Council of Oman  
Egyptian Anatomical Society  
Egyptian Medical Syndicate

## **CERTIFICATIONS**

Certificate of Recognition from the Radiation Safety Office at Marshall University, Joan C. Edwards School of Medicine, Huntington, WV, USA, 2000

Certificate of Internal Medicine Specialist Physician from the Egyptian Medical Syndicate, Cairo, Egypt, 1992

Certificate of General Practitioner Physician from the Ministry of Health, Cairo, Egypt, 1989

## **TEACHING**

### **Courses Taught**

Human Structure (Dissection-based Gross Anatomy, Embryology & Histology) for Medical Students  
Medical Neurobiology/Neuroscience (Neuroanatomy, and Neurophysiology)  
Problem Based Learning (PBL) for Medical Students  
Radiological Anatomy, Clinical Anatomy, & Sectional Anatomy of the whole human body  
Human Biology  
Human Anatomy for Pharmacy Students (at Assiut University, and Nahda University, Beni Suef)  
Human Anatomy for Dental Students (Malaysians and Egyptians at Assiut University)  
Human Anatomy for Students of Technical Institute of Nursing  
Human Anatomy for Students of Institute of Health Technologies  
Human Anatomy for Students of Faculty of Nursing  
Human Anatomy for Clinical Pharmacy Students – Second Year Class  
Human Anatomy for Students of Faculty of Exercise Science and Physical Education  
Human Anatomy and Embryology for Postgraduate Students of Faculty of Medicine and Nursing

### **Assiut University – Faculty of Medicine, Assiut, Egypt**

Professor in the Department of Human Anatomy and Embryology, 2022 – present

Associate Professor in the Department of Human Anatomy and Embryology, 2016 – 2021

Senior Lecturer in the Department of Human Anatomy and Embryology, 2014 – 2015

Assistant Lecturer in the Department of Human Anatomy and Embryology, 1997 – 1999

Instructor in the Department of Anatomy and Embryology, 1992 – 1997

All jobs included teaching Dissection-based Human Anatomy, Human Neuroanatomy, Anthropology, and Human Growth and Development Courses (Lectures and Laboratories) for First, Second and Third Years Medical Students, and undergraduate students in the Faculties of Nursing, Dental, Pharmacy, Clinical Pharmacy, Exercise Science and Education, and the Institute of Health Technologies: teaching Lectures & Laboratory instruction and setting-up exams, proctoring and evaluating the students' performance in the exams

## **Oman Medical College - Sohar Campus, Sohar, Oman**

Associate Professor teaching the following classes:

Course Director of Medical Neurobiology (CCMD 475) [Neuroanatomy, and Neurophysiology] for graduate, and fourth year medical students: teaching Lectures & Dissection-based Laboratory instruction and setting-up exams, grading and evaluating the students' performance in the exams, 2008 – 2013

Course Co-Coordinator of Medical Neurobiology (CCMD 475) for graduate, and fourth year medical students: teaching Lectures & Dissection-based Laboratory instruction and setting-up exams, grading and evaluating the students' performance in the exams, 2007

Human Structure (NBAN 403) [Anatomy, Embryology, and Histology] for graduate, and fourth year medical students: teaching Lectures & Dissection-based Laboratory instruction and setting-up exams, grading and evaluating the students' performance in the exams, 2006, 2007 and 2008 – 2013

Problem Based Learning (PBL 401) for graduate, and fourth year medical students: teaching and facilitating small group discussions, setting-up exams, grading and evaluating the students' performance in the exams, 2009 – 2012

Physical Diagnosis and Clinical Investigations (PDCI 2) for graduate, and fifth year medical students: teaching and facilitating small group discussions, setting-up clinical exams, grading and evaluating the students' performance in the exams, 2009 – 2012

## **University of Missouri–Kansas City, Schools of Medicine and Dentistry, Kansas City, MO, USA**

Visiting Associate Professor teaching the following classes:

Course Co-Coordinator of Medical Neuroscience (BMS 407) for graduate, and third year medical students: teaching Lectures & Laboratory instruction and setting-up exams, grading and evaluating the students' performance in the exams, 2005

Course Director of Dissection-based Dental Human Gross Anatomy II (BMS 301) for graduate, and first year dental students: teaching Lectures & Laboratory instruction and setting-up exams, grading and evaluating the students' performance in the exams, 2006

Course Director of Dissection-based Regional Anatomy of the Head and Neck (BMS 3304) for postgraduate resident physicians specializing in Head & Neck Surgery: teaching Lectures & Laboratory instruction and setting-up exams, grading and evaluating the students' performance in the exams, 2006

## **Marshall University – Joan C. Edwards School of Medicine, Huntington, WV, USA**

Adjunct Instructor teaching undergraduate, graduate, and first year medical students the Dissection-based Human Gross Anatomy and Embryology (ACB 620, ACB 720) Laboratory course instruction, setting-up their laboratory practical exams, grading and evaluating the students' performance in the exams, 2003 – 2004

Adjunct Instructor teaching undergraduate, graduate, and first year medical students the Anatomy of the Nervous System (ACB 628), and Neuroscience (BMS 630, IDM 777) Laboratory courses instruction, setting-up their laboratory practical exams, grading and evaluating the students' performance in the exams, 2000 – 2001 and 2004

Adjunct Instructor teaching undergraduate, graduate, and first year medical students the Human Gross Anatomy and Embryology (ACB 620, ACB 720) Laboratory course instruction, setting-up their laboratory practical exams, proctoring and evaluating the students' performance in the exams, 1999 – 2001

## **MY THESES AND DISSERTATION:**

### **Ph.D. Dissertation (Biomedical Sciences with emphasis in Anatomy)**

Cytoanalysis of Pancreatic  $\beta$ -Cells: Using an Avian Model, Mammalian Tissue Culture and Implications of Antisense Oligonucleotides Transfection, Marshall University – Joan C. Edwards School of Medicine, Department of Anatomy, Cell and Neurobiology, Huntington, WV, USA, 2004.

### **M.Sc. Thesis (Anatomy)**

Foot Measurements and Their Relation to Body Weight and Height. Assiut University, Faculty of Medicine, Department of Anatomy, Assiut, Egypt, 1997.

### **M.Sc. Thesis (Internal Medicine)**

Alpha-1-Antitrypsin, Pepsinogen-1, and Helicobacter Pylori in Patients with Duodenal Ulcer. Assiut University, Faculty of Medicine, Department of General Medicine, Assiut, Egypt, 1992.

## ***My Graduate Medical Education at Assiut University, Faculty of Medicine, Egypt***

I supervised 3 doctoral theses and 4 Master's theses in Anatomy, Neuroanatomy and Embryology:

MASTER'S THESIS: Nahla M. A. Shahaat, M.Sc., Anatomy and Embryology Dept, 2020

MASTER'S THESIS: Doaa H.A. Hamed, M.Sc., Anatomy and Embryology Dept, 2018

MASTER'S THESIS: Mariam Fidal, M.Sc., Anatomy and Embryology Dept, 2017

MASTER'S THESIS: Walaa Farag, M.Sc., Anatomy and Embryology Dept, 2016

DOCTORAL THESIS: Martha Emil, Ph.D., Anatomy and Embryology Dept, 2022

DOCTORAL THESIS: Omnia I.M. Ismail, Ph.D., Anatomy and Embryology Dept, 2015

DOCTORAL THESIS: Rasha I.M. Anwar, Ph.D., Anatomy and Embryology Dept, 2006

Coordinator and Supervisor, Human Anatomy Museum, Department of Human Anatomy and Embryology, 2014

## **PRESENTATIONS**

**Amer AS.** Effects of *Ginkgo Biloba* Leaf Extract on the Neurogenesis of the Hippocampal Dentate Gyrus. Sultan Qaboos University, College of Medicine and Health Science, Muscat, Sultanate of Oman, March 2020.

**Amer AS.** Teaching Medical Neuroscience Course at Oman Medical College. Retreat for Curriculum Review Conference, Al Sawadi Beach Resort, Sultanate of Oman, February 2013.

Invited speaker, Tripoli University, College of Medicine, Tripoli, Libya, December 2012.

Invited speaker, Taibah University, College of Medicine, Al-Madinah Al-Munawarah, Saudi Arabia, April 2011.

Invited speaker, Oman Medical College, Sohar, Sultanate of Oman, December 2006.

Invited speaker, Marshall University - Joan C. Edwards School of Medicine, Huntington, WV, USA, August 2006.

Invited speaker, Cleveland Chiropractic College, Department of Basic Sciences, Kansas City, MO, USA, June 2005.

Invited speaker, West Virginia School of Osteopathic Medicine, Division of Structural Biology, Lewisburg, WV, USA, April 2005.

Invited speaker, University of Missouri – Kansas City, School of Medicine, Department of Basic Medical Science, Kansas City, MO, USA, March 2005.

**Amer AS.** Calbindin-D<sub>28k</sub> and Pancreatic  $\beta$ -Cells. Research Seminar, Marshall University - Joan C. Edwards School of Medicine, Huntington, WV, USA, January 2004.

**Amer AS.** Pancreas. Biomedical Sciences Lecture, Marshall University - Joan C. Edwards School of Medicine, Huntington, WV, USA, February 2003.

**Amer AS.** Voyage on Hidden Islands of Langerhans. Lay Talk Seminar, Marshall University, College of Liberal Arts, Department of Communication Studies, Huntington, WV, USA, November 2002.

**Amer AS.** Cytoanalysis of Cultured Pancreatic Islets and Beta Cell Lines. Endocrinology, Anatomy, Biochemistry Research Conference, Veterans Affairs Medical Center (VAMC), Huntington, WV, USA, November 2000.

**Amer AS.** Glucokinase and Diabetes Mellitus. Biomedical Sciences Lecture, Marshall University - Joan C. Edwards School of Medicine, Huntington, WV, USA, April 2000.

### **Poster Presentations**

Annual International Conference of Human Anatomy & Embryology in collaboration with Egyptian Anatomical Society. Convention Center, Faculty of Medicine, Alexandria, Egypt. September 14-15, 2017.

Society for Neuroscience (SfN) 37<sup>th</sup> Annual Meeting. San Diego, CA, USA. November 3- 7, 2007.

Marshall University – Joan C. Edwards School of Medicine, 19<sup>th</sup> Annual Research Day. Huntington, WV, USA. March 21, 2006.

Society for Neuroscience (SfN) 35<sup>th</sup> Annual Meeting. Washington, DC, USA. November 12-16, 2005.

Experimental Biology Annual Meeting. San Diego, CA, USA. April 4, 2005.

Experimental Biology Annual Meeting. Washington, DC, USA. April 21, 2004.

Experimental Biology Annual Meeting. San Diego, CA, USA. April 14, 2003.

Marshall University – Joan C. Edwards School of Medicine, 16<sup>th</sup> Annual Research Day. Huntington, WV, USA. March 18, 2003.

Beta Cell Biology in the 21<sup>st</sup> Century Conference. Bethesda, MD, USA. Nov. 27, 2001.

Experimental Biology Annual Meeting. Orlando, FL, USA. April 3, 2001.

Marshall University – Joan C. Edwards School of Medicine, 14<sup>th</sup> Annual Research Conference. Huntington, WV, USA. March 13, 2001.

## **PUBLICATIONS**

### **Books:**

Notes on General Embryology for Medical Students. Authors: Ayman Amer, Ahmed Galal & Manal El- Meligy. Assiut University Press, 2018.

M.C.Q. Review of Anatomy for First Year Medical Students. Authors: Ayman Amer, Rasha Anwar & Mohamed El-Badry. Assiut University Press, 2016.

Anatomy of Lower Limb for Medical Students. Authors: Ayman Amer & Manal El- Meligy. Assiut University Press, 2014.

Principles of General Embryology for Medical Students. Authors: Ayman Amer, Manal El-Meligy & Refaat Shehata. Assiut University Press, 2014.

Brain Research & Education (Arabic). Authors: Ayman Amer & AbdelLatif Abu-Bakr. Sohar U, 2012

Genetic Engineering and Molecular Studies of Insulin Secreting Cells: Basics, Concepts, and Methods to Improve Insulin Secretion. Author: Ayman Amer. ISBN 978-3-639-15881-6. Issued May 14, 2009. Publisher: VDM Publishing House Ltd. [www.vdm-publishing-house.com](http://www.vdm-publishing-house.com)

### **Manuscripts in Peer-reviewed Journals**

Kotob MH, Abd-Elkareem M, Aufy M, Hussein AM, Mustafic M, Baresova V, AbdelMaksoud M, Ashry M, Lubec J, **Amer AS**, Studenik CR. Age-Related Lung Changes Linked to Altered Lysosomal Protease Profile, Histology, and Ultrastructure. Accepted for publication in PLOS ONE on Oct. 10, 2024. **[Q1 Web Of Science]**

Bastwrous AE, Mohamed RS, **Amer AS**, Adly ME. Effects of Maternal Diabetes on Prenatal Development of the Vertebral Column in the Albino Rat and Possible Protective Role of Arachidonic Acid. Egy Acad J Biolog Sci. (D. Histol Histochem) 16(1):155-177, 2024.

Abd-Elkareem M, Aljazzar A, **Amer AS**, Abd El-Rahman MAM. Cytoprotective effects of Nigella sativa seeds on monosodium glutamate induced seminal vesicle damages: Histological and immunohistochemical studies. J Adv Vet Res. 13(8):1543-1550, 2023. **[Q3 Scopus]**

**Amer AS**, Mohamed RS, Bastwrous AE, Adly ME. Maternal alloxan exposure induces damage in rat offspring lumbar vertebrae and protective role of arachidonic acid. Rom J Morphol Embryol. 63(1):83-97, 2022. **[Q3 Web Of Science]**

**Amer AS**, Zaghloul DAM. Effects of Nicotine and Its Withdrawal on The Postnatal Development of Rat Mitral Cells. Egy Acad J Biolog Sci. (D. Histol Histochem) 13(2):135-150, 2021.

**Amer AS**, Saleh MNM, El-Badry M, Ismail OI. Degenerative changes in the putamen of growing rats induced by maternal excess iron exposure. Egy Acad J Biolog Sci.(D.Histol Histochem)13(2):119-133, 2021

Abd-Elkareem M, Abd El-Rahman MAM, Abou Khalil NS, **Amer AS**. Antioxidant and cytoprotective effects of Nigella sativa L. seeds on the testis of monosodium glutamate challenged rats. Scientific Reports, 11:13519, 2021. [www.nature.com/scientificreports](http://www.nature.com/scientificreports). **[Q1 Web Of Science]**

Abdallah NSI, Zaghloul DAM, Mubarak WAE, **Amer AS**. Potential protective effect of vitamin D on the aortic tissue of Streptozotocin-induced diabetic vascular damage in adult male rats. SVU-IJMS., 4(2):185-195, 2021.

**Amer AS**, Mahmoud FY, Abd El-Hakem AH, Fedal MW. Can L-carnitine prevent Cadmium-Induced Damage of the Developing Hippocampus? Egy J Histol., 43(1):16-35, 2020. **[Q4 Scopus]**



Mahmoud FY, Abd El-Hakim AH, **Amer AS**, Fidal MW. Effect of exposure to cadmium on the hippocampus in adult albino rat and the possible role of L-carnitine. J Curr Med Res Pract., 4(3):240-250, 2019. [\[Q4 Scopus\]](#)

Saleh MNM, **Amer AS**, El-Meligy MMS, Hamed DHA. Variations versus Similarities in the Cerebellar Structure of Different Animals: A Comparative Anatomical Study. Egy J Anat., 42(2):75-91, 2019.

Saleh MNM, Mohamed ME, **Amer AS**, Ismail OI. A Histological and an Immunohistochemical Study on the Effects of Iron Overdose on the Basal Ganglia of the Adult Albino Rat. Egy J Histol., 41(4):473-486, 2018. [\[Q4 Scopus\]](#)

Osman NMS, **Amer AS**, Abdelwahab S. Effects of *Ginko Biloba* Leaf Extract on the Neurogenesis of the Hippocampal Dentate Gyrus in the Elderly Mice. Anat Sci Int., 91(3):280- 289, 2016. [\[Q2 Web Of Science\]](#)

**Amer AS**, Osman NMS. Doxorubicin-Induced Nephrotoxicity of Adult Albino Rats and the Possible Ameliorative Effect of Vitamin E: A Light and Electron Microscopic Study. Ain Shams Med J., 66(7-9):525-544, 2015.

**Amer AS**, Zaghloul DA. Immunohistochemical Study of the Effect of Lead Toxicity on Postnatal Development of Lumbar Spinal Cord of the Rabbit. Ain Shams Med J., 66(4-6):489-503, 2015.

**Amer AS**, El-Meligy MMS, Mohamed RS, Farag WG. A Histological and Morphometric Study on the Postnatal Development of the Masseter and Gastrocnemius Muscle Spindles in the Albino Rat. Egypt J Med Sci., 36(2):585-606, 2015.

**Amer AS**, Mahmoud GS. Effect of Vitamin E on the Exhaustive Exercise-Induced Damage in the Skeletal Muscle of Adult Male Albino Rat: A Functional, Histological and Ultrastructural Study. Med J Cairo Univ., 83(2):123-135, 2015.

**Amer AS**, Mahmoud GS. Coexpression of Intracellular  $\beta$  Amyloid,  $\beta$  Actin with Partners of N-Methyl-D-Aspartate Receptors and NSE in Differentiated Rat Hippocampal H 19/7 Cells. Bull Egypt Soc Physiol Sci., 34(2):419-434, 2014.

Mahmoud GS, **Amer AS**, Gamal D. Functional and Structural Study on the Effect of Curcumin on Folic Acid-Induced Acute Kidney Injury in Albino Rats. Bull Egypt Soc Physiol Sci., 34(2):265-276, 2014.

Mahmoud GS, **Amer AS**. Co-Application of Corticosterone and Growth Hormone Upregulates NR2B Protein and Increases the NR2B:NR2A Ratio and Synaptic Transmission in the Hippocampus. Sultan Qaboos University Med J., 14(4):457-465, 2014. [\[Q3 Scopus\]](#)

Mahmoud GS, **Amer AS**. Protective Effects of Vitamin C against Nicotine-Induced Oxidative Damage of Rat Liver and Kidney. IOSR J Environ Sci Toxicol Food Techn (IOSR-JESTFT), 8(12):50-63, 2014.

**Amer AS**, Farghaly HS, Mahmoud GS, Hamed EA. Effects of tramadol on gastric mucosa in rat model of acetic acid-induced nociception: a structural, immunohistochemical and hormonal study. Assiut Med J., 37(3):187-214, 2013.

Mahmoud GS, **Amer AS**. Effect of natural extract of hydroxycitric acid on lipid profile, liver and testes of adult male rats. AAMJ 11(1):161-182, 2013.

Mahmoud GS, **Amer AS**. In Vitro study on the effect of corticosterone on synaptic transmission of hippocampal slices. AAMJ 10(2):321-339, 2012.

**Amer AS**. Neuroscience clinical problems. Almanac of Oman Medical College 5:56-57, 2011. Published online: 31 March 2012.



Keller BR, Duke ER, **Amer AS**, Zill SN. Tuning posture to body load: decreases in load produce discrete sensory signals in the legs of freely standing cockroaches. J Comp Physiol – A. Neuroethol Sens Neural Behav Physiol. 193(8):881-891, 2007. [\[Q1 Web Of Science\]](#)

Quimby LA, **Amer AS**, Zill SN. Common motor mechanisms support body load in serially homologous legs of cockroaches in posture and walking. J Comp Physiol – A. Neuroethol Sens Neural Behav Physiol. 192(3):247-266, 2006. [\[Q1 Web Of Science\]](#)

Parkash J, Chaudhry MA, **Amer AS**, Christakos S, Rhoten WB. Intracellular Calcium Ion Response to Glucose in  $\beta$ -Cells of Calbindin-D28k Nullmutant Mice and in  $\beta$ HC13 Cells Overexpressing Calbindin-D28k. Endocrine 18(3):221-229, 2002. [\[Q2 Web Of Science\]](#)

Saleh MNM, Ahmed ATG, Hassan SAS, **Amer AS**. Foot Measurements and Their Relationship to Body Weight and Height in Assiuti Children. Assiut Med J., 20(4):37-53, 1996.

### **Published Abstracts**

Keller BR, Neff D, Duke ER, **Amer AS**, Zill SN. Detecting load in pedal extremities: structure and responses of sense organs that encode forces in the tarsi of cockroaches. Society for Neuroscience Abstracts 33, Program # 78.2, (Society for Neuroscience (SfN) 37<sup>th</sup> Annual Meeting, Abstract # 78.2/II1), 2007.

Quimby LA, **Amer AS**, Zill SN. Effects of increased body load in cockroach walking and running. Society for Neuroscience Abstracts 31, Program # 54.18, (Society for Neuroscience (SfN) 35<sup>th</sup> Annual Meeting, Abstract # 54.18), 2005.

**Amer AS**, Rhoten WB. Genomic and nongenomic effects of CaBP<sub>28k</sub>-ablation in cultured RIN cells. FASEB J. 19(5):A4906, (Experimental Biology Annual Meeting, Abstract # 492.8), 2005.

**Amer AS**, Rhoten WB. Effects of Modulation of Calbindin-D<sub>28k</sub> Gene Expression in Cultured Rat Insulinoma Cell Line using Antisense Oligonucleotide Transfection. FASEB J. 18(5):A1190, (Experimental Biology Annual Meeting, Abstract # 787.31), 2004.

**Amer AS**, Green TL, Rhoten WB. Expression of Calcium Regulating Proteins in the Chicken Pancreas. FASEB J. 17(5), (Experimental Biology Annual Meeting, Abstract # 723.16), 2003.

**Amer AS**, Green TL, Rhoten WB. Expression of Calcium Regulating Proteins in the Chicken Pancreas. Marshall University – Joan C. Edwards School of Medicine, 16<sup>th</sup> Annual Research Day. 16:18, 2003.

Parkash J, Chaudhry MA, **Amer AS**, Christakos S, Rhoten WB. Calbindin-D<sub>28k</sub> Regulates Intracellular Calcium Ion Concentration ( $[Ca^{2+}]_i$ ). Beta Cell Biology in the 21<sup>st</sup> Century: Engineering a Pathway to Greater Understanding, p 54, (NIH Conference, Abstract # Signaling 1.12), 2001.

Parkash J, **Amer AS**, Chaudhry MA, Christakos S, Rhoten WB. Increased Intracellular Calcium Response to Glucose in  $\beta$ -Cells of Calbindin-D<sub>28k</sub> Nullmutant Mice. FASEB J. 15(4):A381, (Experimental Biology Annual Meeting, Abstract # 289.4), 2001.

**Amer AS**, Parkash J, Chaudhry MA, Christakos S, Rhoten WB. Calbindin-D28k Modulates Glucose Induced Changes in  $[Ca^{2+}]_i$  in  $\beta$ -Cells: Studies on Calbindin-D28k Knockout Mice Islets and  $\beta$ HC-13 Cells Overexpressing Calbindin-D28k. Marshall University – Joan C. Edwards School of Medicine, 14<sup>th</sup> Annual Research Conference. 14:76, 2001.

### **TRAINING AND WORKSHOPS**

Participant, Harnessing artificial intelligence tools in academic research. Training by deanship of development and quality assurance, King Faisal University, Al Hofuf, Saudi Arabia, May 21-22, 2024.

Participant, Do we have correct understanding of study designs? Hands on Workshop, Scientific Research Unit, College of Medicine, King Faisal University, Al Hofuf, Saudi Arabia, October 24, 2023.

Participant, New Faculty Orientation Program, Medical Education Department, College of Medicine, King Faisal University, Al Hofuf, Saudi Arabia, October 5, 2023.

Participant, How to Prepare a Manuscript for International Publication Workshop, South Egypt Diabetes and Endocrinology Association in Collaboration with Diabetes and Endocrinology Unit Internal Medicine Department, Assiut University Hospital, Assiut, Egypt, March 7, 2019.

Participant, Clinical Key Academy and Egyptian Knowledge Bank Workshop, Quality Assurance Unit, Faculty of Medicine, Assiut University, Assiut, Egypt, February 17, 2019.

Participant, Student Assessment Workshop, Quality Assurance Unit, Faculty of Medicine, Assiut University, Assiut, Egypt, October 28-30, 2018.

Participant, CellPress Journals Awareness Workshop, Faculty of Science, Assiut University, Assiut, Egypt, October 10, 2018.

Participant, Teaching & Learning in New Curriculum Workshop, Quality Assurance Unit, Faculty of Medicine, Assiut University, Assiut, Egypt, September 9-13, 2018.

Participant, Student Assessment in Medical Education Workshop, Quality Assurance Unit, Faculty of Medicine, Assiut University, Assiut, Egypt, September 21-22, 2016.

Participant, Teaching Methods in Medical Education Workshop, Quality Assurance Unit, Faculty of Medicine, Assiut University, Assiut, Egypt, September 18-19, 2016.

Participant, Training program of E-learning (Advanced), Faculty and Leadership Development Center, Administrative Building, Assiut University, Assiut, Egypt, May 3-4, 2016.

Participant, Training Course in Electron Microscopy (Techniques and Interpretation), Electron Microscopy Unit, Assiut University, Assiut, Egypt, March 21 - 25, 2015.

Participant, Time and Conference Management Training Program, Faculty and Leadership Development Center, Administrative Building, Assiut University, Assiut, Egypt, January 18 - 20, 2014.

Participant, Advanced Theoretical and Practical Topics in Molecular Biology Field (PCR Types & DNA Sequencing), Molecular Biology Research Unit of Assiut University, Assiut, Egypt, December 16-18, 2013.

Participant, Effective Presentation Training Program, Faculty and Leadership Development Center, Administrative Building, Assiut University, Assiut, Egypt, December 14 - 15, 2013.

Participant, International Publishing of Research Training Program, Faculty and Leadership Development Center, Administrative Building, Assiut University, Assiut, Egypt, December 10 - 11, 2013.

Participant, How to Compete For A Research Fund Training Program, Faculty and Leadership Development Center, Administrative Building, Assiut University, Assiut, Egypt, November 23 - 25, 2013.

Participant, Credit Hour System Training Program, Faculty and Leadership Development Center, Administrative Building, Assiut University, Assiut, Egypt, November 9 - 11, 2013.

Participant, Research Team Management Training Program, Faculty and Leadership Development Center, Administrative Building, Assiut University, Assiut, Egypt, November 2 - 4, 2013.

Participant, Medical Education Workshop on Essential Skills for Designing Electronic Courses Online using e-learning website, Faculty of Medicine, Assiut University, Assiut, Egypt, March 25, 2013.

Participant, Enhancing Research Capabilities among Health Care Professionals Symposium, Ministry of Health - Directorate General of Education and Training, Sohar Nursing Institute – Sohar Hospital Auditorium, Sohar, Sultanate of Oman, February 13, 2013.

Participant, Medical Education Workshop for Course Directors on Improving Student Performance: Oman Medical College, Sohar, Sultanate of Oman, May 10, 2012.

Participant, Physiotherapy Workshop (Foot & Ankle) [3 CME credits]: Sohar Hospital, North Batinah Region, Ministry of Health, Sultanate of Oman, December 14, 2011.

Participant, Research Workshop on Proposal Writing and Submission: The Dubai Harvard Foundation for Medical Research, Dubai, United Arab Emirates. December 7, 2011.

Participant, Research in Medicine – Questions to Outcome, Workshop at Oman Medical College, Sohar, Sultanate of Oman. December 15, 2010.

Participant, Medical Education Program: The Medical Education Workshop on Student Assessment, Oman Medical College, Sohar, Sultanate of Oman. May 6- 7, 2009.

Marshall University Professional and Institutional Enhancement Seminar (PIES): Making your Search easier in the Reference World, Byrd Clinical Center, Huntington, WV, USA, November 30, 2007.

Career Planning and Advancement Workshop: Marshall University Association of Young Scientists, together with the Cell Differentiation and Development Center, Byrd Biotechnology Science Center, Huntington, WV, USA, November, 2007.

Marshall University Professional and Institutional Enhancement Seminar (PIES): How to get an IRB Approval?. Byrd Clinical Center, Huntington, WV, USA, October 26, 2007.

Academic training under supervision of Prof. Sasha N. Zill, training as a postdoctoral research assistant, Department of Anatomy, Cell and Neurobiology, Joan C. Edwards School of Medicine, Marshall University, Huntington, WV, USA, December 2004-2005.

Infection Control Training, Veterans Affairs Medical Center, Huntington, WV, USA, August 2003.

Federal Funding Opportunities and Grantsmanship Seminars, Marshall University Research Corporation – Memorial Student Center, Marshall University, Huntington, WV, USA, March 2003.

Marshall University Institutional Biosafety Workshop: NIH Guidelines for rDNA Research and Infectious Waste Management, Veterans Affairs Medical Center, Huntington, WV, USA, February 2003.

Write Winning Grants Workshops: How to write award winning NIH & NSF Grants, Marshall University Medical Center – Harless Auditorium, Huntington, WV, USA, November 2002.

Introduction to Acquisition, Processing and Analysis for Quantitative Digital Microscopy Course, Universal Imaging Institute, Downingtown, PA, USA, January 2002.

Participant, Signal Transduction Workshops, Marshall University – School of Medicine, Huntington, WV, USA. 1999-2002.

Radiation Safety and Health Physics Training Seminar, Marshall University - Joan C. Edwards School of Medicine, Huntington, WV, USA, March 2000.

Pediatric clinical training at Royal Hospital for Sick Children, Glasgow, United Kingdom, August - September 1984.

## **SCIENTIFIC CONFERENCES AND MEETINGS**

Participant, 2<sup>nd</sup> International Conference on Food and Environmental Sustainability, King Faisal University, Al-Hofuf, Saudi Arabia. November 5-7, 2023.

Participant, 13<sup>th</sup> Annual Conference of South Egypt Diabetes and Endocrinology Association: From Guidelines to Clinical Practice, Assiut University, Assiut, Egypt. September 30 - October 1, 2020.

Participant, 2<sup>nd</sup> Scientific Day for Critical Care Unit Internal Medicine Department; Care of Critically ill Patient: A Multidisciplinary Approach, Faculty of Medicine, Assiut University Administrative Building, Assiut University, Assiut, Egypt. March 2, 2020.

Participant, 9<sup>th</sup> Annual International Conference of The Human Anatomy & Embryology Department FOMSCU, In Collaboration with the Egyptian Society of Anatomy. June 20, 2019.

Participant, 32<sup>nd</sup> Annual International Conference of Faculty of Medicine, Assiut University, Administrative Building, Assiut, Egypt. March 23-25, 2019.

Participant, 12<sup>th</sup> Annual Conference of Diabetes and Endocrinology Unit Internal Medicine Department, Faculty of Medicine, Assiut University in Collaboration with South Egypt Diabetes and Endocrinology Association, Administrative Building, Assiut University, Assiut, Egypt. March 13-14, 2019.

Participant, 1<sup>st</sup> Scientific Conference of Medical Physiology Department, Faculty of Medicine, Assiut University, Assiut, Egypt. November 21, 2018.

Participant, 9<sup>th</sup> Annual International Conference of the Clinical Oncology Department, Faculty of Medicine, Assiut University, Assiut, Egypt. February 19-23, 2018.

Participant, 11<sup>th</sup> Annual Conference of Diabetes and Endocrinology unit in collaboration with Internal Medicine Department, Faculty of Medicine, Assiut University, Assiut, Egypt. February 14-15, 2018.

Participant, 31<sup>st</sup> Annual Scientific International Conference of the Faculty of Medicine, Assiut University, Assiut, Egypt. April 8-11, 2017.

Participant, 1<sup>st</sup> Regional Arab Scientific Conference of Metabolic and Genetic Disorders Unit, Tissue Culture and Molecular Biology Center, and The Epidemiology of Neurological Diseases Unit, Assiut University, Assiut, Egypt. March 29-30, 2017.

Participant, 10<sup>th</sup> Annual Scientific Conference of Diabetes and Endocrinology Unit in Collaboration with Internal Medicine Department, Faculty of Medicine, Assiut University, Assiut, Egypt. March 15-16, 2017.

Participant, 1<sup>st</sup> International Conference for Deraya University, Faculty of Physical Therapy, Conrad Cairo Hotel, Cairo, Egypt. February 23, 2017.

Participant, 8<sup>th</sup> International Scientific Conference of South Egypt Cancer Institute, Assiut University, Assiut, Egypt. October 4-5, 2016.

Participant, Advances in Adiposity and Neurocognition Conference, Main Conference Hall, Faculty of Medicine – Alexandria University, Azarita, Alexandria, Egypt. March 19, 2015.

Participant, Annual International Conference of the Egyptian Anatomical Society, Department of Anatomy, Faculty of Medicine, Ain Shams University, Cairo, Egypt. January 22, 2015.

Participant, 30<sup>th</sup> Annual Conference, Faculty of Medicine – Assiut University, Assiut, Egypt. April 26-29, 2014.

Participant, 2<sup>nd</sup> Annual Conference of Integrated Medicine & Sleep Disorders Society, Faculty of Medicine – Assiut University, Assiut, Egypt. November 13-15, 2013.

Participant, Weekly Scientific Seminar Series, Oman Medical College, Sohar, Sultanate of Oman. 2006 - 2013.

Participant, 1<sup>st</sup> International Medical Student Conference, and Co-Chair of Symposium: Liaison Psychiatry, Oman Medical College, Sohar, Sultanate of Oman. March 26-28, 2008.

Participant, West Virginia State Anatomical Board Meeting, Byrd Clinical Building (Fairfield), Huntington, WV, USA. November 14, 2007.

Participant, Society for Neuroscience 37<sup>th</sup> Annual Meeting, San Diego, CA, USA. November 3-7, 2007.

Invited Participant, Student Interest Group of Neurology (SIGN) 2<sup>nd</sup> Annual Meeting, Research Project "Agenesis of the Corpus Callosum", funded by Woodman of the World Foundation, Marshall University Fairfield Building, Huntington, WV, USA. October 27, 2007.

Participant, 24<sup>th</sup> Annual Scientific Conference, Faculty of Medicine – Assiut University, Assiut, Egypt. April 2-5, 2006.

Participant, Marshall University Chapter – Sigma Xi, The Scientific Research Society, 15<sup>th</sup> Annual Research Day, College of Science, Huntington, WV, USA. April 22, 2005.

Participant, Marshall University – Joan C. Edwards School of Medicine, 18<sup>th</sup> Annual Research Day. Huntington, WV, USA. March 29, 2005.

Participant, Endocrinology, Anatomy and Biochemistry Research Conferences, Veterans Affairs Medical Center (VAMC), Huntington, WV, USA. 1999-2001.

Participant, Marshall University – School of Medicine, 13<sup>th</sup> Annual Research Conference. Huntington, WV, USA. March 28, 2000.

Participant, 16<sup>th</sup> Annual Scientific Conference, Faculty of Medicine – Assiut University, Assiut, Egypt. March 9-12, 1998.

Participant, 14<sup>th</sup> Annual Scientific Conference, Faculty of Medicine – Assiut University, Assiut, Egypt. March 11-14, 1996.

### **RESEARCH INTERESTS**

- Study and analyze the genomic and non-genomic mechanisms of action of vitamins in the cells *in Vitro* and *in Vivo*, and analyzing their receptor expression, and the importance of their role in those cells as well as in different biological systems
- Applying antisense oligonucleotides transfection technology to inhibit the expression of the calcium-binding protein calbindin-D28k in tumoral  $\beta$ -cell line (RIN1046-38 cells) and studying the genomic and nongenomic effects of calbindin-D28k -ablation as well as exploring the role of intracellular calcium ion in these cultured cells

### **RESEARCH SKILLS AND EXPERIENCE**

Research experience using different experimental animals (rats, mice, chickens; including transgenics); and tissue culture of avian and murine pancreatic islets of Langerhans, culture of different  $\beta$ -cell lines and neuronal hippocampal cell line

Animal handling, diet care, surgery, tissue dissection, sample collection and preservation

Preparation of fixed tissues in Bouin's, Karnovsky's, paraformaldehyde, glutaraldehyde and formalin; and microtome sectioning including ultra-thin microtomes

Tissue embedding in plastic resin, and whole tissue mounting in Conray<sup>®</sup> for fluorescence microscopy

Dissection experience in human cadavers, and research experience in human anthropometry

## **Research Experience**

Participant in research projects funded by National Institutes of Health (NIH) Grant DK 54033, and National Science Foundation (NSF) Grant IBN 0235997. Department of Anatomy, Cell and Neurobiology, Joan C. Edwards School of Medicine, Marshall University, Huntington, WV, USA. 1999-2005.

17 years' experience in Immunohistochemistry and Immunofluorescence with good understanding of theory and practice of confocal microscopy as well as all other types of optical microscopy including fluorescence, phase contrast, and light microscopy in different biological systems (including avian and mammalian tissues, and cultured  $\beta$ -cell lines)

11 years' experience in preparing semithin and ultrathin sections with good understanding of theory and practice of Transmission Electron Microscopy

4 years' experience in mammalian tissue and cell culture using different  $\beta$ -cell lines (RIN1046-38, RINm5F,  $\beta$ HC-13, and  $\beta$ HC-CaBP40 cell lines)

4 years' experience in Western blotting, Enzyme-Linked Immunosorbent Assays (ELISA), insulin secretion and insulin content studies in chicken pancreas and cultured  $\beta$ -cell lines

8 months experience studying the Campaniform Sensilla, tibio-tarsal Resilin, and Coxa Apodemes of front, middle and hind legs of *Periplaneta americana* by using light, fluorescence, confocal, and electron microscopies

4 months experience in RNA isolation from cultured RIN1048-38 cells for microarray studies.

3 months experience in cell culture and analysis of expression of certain signaling proteins and receptors of rat hippocampal neuronal cell line (H19-7/IGF-I cells).

2 months experience using the Scanning Electron Microscope for studying morphological difference between cultured  $\beta$ HC-CaBP40 cells overexpressing calbindin- $D_{28k}$  and control  $\beta$ HC-13 cells.

## **ADDITIONAL EXPERIENCES**

Experience in using LMS, applying PBL, Flipped classroom, Microsoft teams, online teaching, and OSPE

Data acquisition, processing and analysis with good level of knowledge of statistical methods and the use of Sigma Stat 2.03 Network, Sigma Plot 2001, GraphPad Prism and Origin 5.0 statistical software, and Microsoft Office (Word, Excel, and PowerPoint)

Good skills in applying SPOT RT 3.2.4, Confocal Assistant 4.02 [Build 101], ImageJ 1.50d, Adobe Photoshop 7.0 & CS3, Adobe Illustrator 10, Corel Draw 9, Corel Photo-Paint 9, Corel Graphics Suite 6, and Image-Pro Plus 3.0 software programs for photo editing and layout of scientific research data

Experience in using MetaMorph software for scientific image acquisition, processing and analysis techniques, fluorescence and transmitted light imaging of fixed and live specimens, and colocalization analysis

## **OTHER**

Reviewer, Journal of Integrative Medicine, 2022-

Reviewer, ScholarOne Journals, 2022-



Reviewer, PLOS ONE Medicine Journal, 2022-

Reviewer, Journal of Applied Pharmaceutical Science, 2021-

Reviewer, Springer Nature Journals, 2020-

Reviewer, Brain Structure and Function Journal, 2020-

Reviewer, Digestive Diseases and Sciences Journal, 2018-

Member of Graduate Studies Committee at Faculty of Medicine, Assiut University, Assiut, Egypt, February 2018-

Postgraduate Examiner for Master's and Doctorate Degrees in Human Anatomy and Embryology, and Anatomy for other specialities including: Neurology, General Surgery, Anaesthesia, Ear/Nose & Throat, Obstetrics & Gynaecology, Orthopaedics and Nursing at Faculty of Medicine, Assiut University, Assiut, Egypt, March 2016-

Member of Community Services and Environmental Development Panel for Faculty of Medicine, Assiut University, Assiut, Egypt, November 2013-

Member of Medical Exams Controller Committee, Final MD Exams at Faculty of Medicine, Assiut University, Assiut, Egypt, July 2013-

Coordinator of e-learning for medical education, Department of Human Anatomy and Embryology, Faculty of Medicine, Assiut University, Assiut, Egypt, March 2013-

External examiner of Human Anatomy, Embryology and Neuroscience for students at Faculties of Medicine, Physical Therapy, Dentistry and Pharmacy of: Aswan University, Sohag University; Minia University; AlAzhar University - Assiut Branch; and South Valley University - Qena Branch, Egypt, 2012-

Supervisor, Neuroscience Student Group at Oman Medical College, 2012-2013.

Reviewer, Sultan Qaboos University Medical Journal, 2011-

Reviewer, Oman Medical Journal, 2009-

Reviewer, Final MD exams at Oman Medical College, Sohar, Sultanate of Oman, May 3, 2010.

Reviewer, The Research Council (TRC) of the Sultanate of Oman Grant Proposals, <http://www.trc.gov.om> September 2009-2013.

Member, Oman Medical College Recruitment Committee, Sohar, Sultanate of Oman, 2009 – 2013.

Member, Oman Medical College Curriculum Committee, Sohar, Sultanate of Oman, 2009 – 2013.

Nominated for membership of the American Chemical Society, Washington, DC, USA. October, 2007.

Invited Reviewer for The Journal of Neuroscience, Zill S.N.: Walking backward: sensory processing is put in reverse. April, 2007.

Invited Collaborator in research project funded by the State of Missouri, Department of Health and Human Services Grant PA-03-107. Deng, Hong-Wen (PI), Department of Orthopedic Surgery, School of Medicine, University of Missouri – Kansas City, Kansas City, MO, USA. 2006.

Invited Reviewer for das schlafmagazin ([www.dasschlafmagazin.de](http://www.dasschlafmagazin.de)), Palmer B. Snoring and sleep apnea: how it can be prevented in childhood. Issue # 3:22-23, August, 2005.

## **COMMUNITY ACTIVITIES**

Community Services and Environmental Development Executive Panel Active Membership at Faculty of Medicine, Assiut University, Assiut, Egypt, 2014-

Participant, RAG (Raise and Give) open day at Oman Medical College, Sohar, Sultanate of Oman, April 23, 2012

Participant, Annual Brain Awareness Campaign Event of Society for Neuroscience, Public Education: Brain Awareness and Beyond, San Diego Convention Center, San Diego, CA, USA, November 3, 2007

Marshall University Association of Young Scientists (MU-AYS), member since 2007

Society for Arab Neuroscientists, member since 2007

Invited speaker, Issues in Science and Education TV show. Al Manarah Science Channel of Nilesat Satellite, Cairo, Egypt, September, 2006

Contributions of Advances in Robotic Prosthetics to the general public:

Zill SN, **Amer AS**, Rhoten WB (2005) From Roaches to Robots. In: The Herald-Dispatch Newspaper, p. 8D. Taylor AL, Wolfe L (eds), Huntington, WV, USA, April 3, 2005

Association for Computing Machinery at Marshall University, member since 2005

Marshall University Alumni Association, member since 2004

Faculty Organization of Assiut University (University Faculty Club, UFC), member since 1992

## **SUMMARY**

*Dr. Ayman S. Amer is an anatomist with many years of teaching, and substantial clinical background as internal medicine specialist. Having a wide experience in diagnosing and reporting on tissue damage, diseases and normality affecting several organs, my work will bring strengths to your campus teaching anatomical and neurosciences blended with clinical applications, augmented with expertise in teaching widely diverse students at several US and international universities. My instruction applied integrated systems-based basic science courses in small and large group settings for dissection-based Human Gross Anatomy/Embryology & Sectional Anatomy of the whole human body, Anatomy of the Nervous System, Neuroscience-Medical Neurobiology and Histology courses in addition to my experience in writing medical exams in USMLE-style. I had the privilege to train and mentor many undergraduate, graduate and medical students, postdocs, residents and staff members helping them achieve their career goals. Various methods of education were used including PowerPoint presentations, use of e-learning systems, Case Based Learning sessions, Cross-over Teaching, Problem-Based Learning, teaching through Flipping Classrooms, small group learning, teaching through virtual reality, team-based active instruction, distance teaching using Microsoft teams, Zoom & Cisco webex, and computer-based interactive teaching programs. My research skills resulted in several international publications studying free radicals and oxidative stress in cells and systems using molecular biology methods, cell and tissue culture, immunofluorescence, confocal microscopy, use of cell transfection methods, protein expression techniques, live cell imaging, western blotting, ELISA, immunohistochemistry, cDNA microarray study, morphometry, and electron microscopy.*