*Curriculum Vitae*

**Manal Ahmed Mohammed Othman**

(MBBCh-MS-PhD)

# Education:

* **MB-BCh**, 1993. Faculty of Medicine, Assiut University, Egypt.
* **MS**, 1997. Histology department, Faculty of Medicine, Assiut University, Egypt.
* **PhD**, 2005. Department of Anatomical Sciences and Neurobiology, School of Medicine, University of Louisville, Louisville, Kentucky, USA.

## Academic Positions (Teaching and Research):

* Instructor, Department of Histology, Faculty of Medicine, Assiut University, Egypt. 1995-1998.
* Assistant Lecturer, Department of Histology, Faculty of Medicine, Assiut University, Egypt. 1998-2000.
* Teaching and Research Assistant at the department of Anatomical sciences and neurobiology, University of Louisville, Louisville, Kentucky, USA. 2000-2005.
* Post-Doctoral Research Associate, 2005-2006. University of Louisville, Louisville, Kentucky, USA.
* Post-Doctoral Research Associate, 2010. University of Illinois at Urbana-Champaign, Illinois, USA.
* Assistant Professor, Department of Histology, Faculty of Medicine, Assiut University, Egypt. 2006- 2012
* Associate Professor, College of Medicine, AMA-International University of Bahrain. 2012-2013.
* Associate Professor, Department of Histology, Faculty of Medicine, Assiut University, Egypt. 2012-Present
* Assistant & Associate Professor, Department of Anatomy, College of Medicine and Medical Sciences, Arabian Gulf University, Bahrain. 2013-Present
* Acting chair, Pathology department, College of Medicine and Medical Sciences, Arabian Gulf University, Bahrain (2022-2023).

**Teaching Courses**

* Medical Histology to medical and pharmacy students, department of Histology, Faculty of Medicine, Assiut University, Egypt (1995-2000 and 2006-2009 and 2010-2011).
* Anatomical (Anatomy, Histology & Neuroscience) (as teaching assistant) to medical and dental students, department of Anatomical Sciences and Neurobiology, School of Medicine, University of Louisville, USA. (2000-2005).
* Anatomical Sciences (Anatomy, Histology & Neuroscience) to medical students, department of Anatomy, College of Medicine, AMA University, Bahrain (2011-2012). Additionally, being course coordinator for Anatomy courses.
* Anatomical Sciences (Anatomy, Histology & Neuroscience) to medical students, department of Anatomy, College of Medicine & Medical Sciences, Arabian Gulf University, Bahrain (2012-now). This is via Problem Based Learning system, which is applied by the university.
* Course coordinator (unit chair) for Central Nervous System course, College of Medicine & Medical Sciences, Arabian Gulf University, Bahrain (2019-now).

# Research Experiences:

* Research on the effect of melatonin on the rat adrenal gland during postnatal periods. Part of MS thesis.
* For preparation of PhD work, research experiments were performed using olfactory epithelial stem cells as a model of adult neural stem cells from mouse and human tissues. Their characterization and potential to treat neurodegenerative diseases have been studied.
* Exploring different research areas in the fields of developmental neurobiology and experimental biology.
* Research on reproductive biology, comparing the molecular and cellular mechanisms in male and female reproduction, which addressed the etiology of some congenital and hereditary diseases.
* Currently, I am working to study the degenerative changes occurring in the brain of diabetic rodents and other degenerative diseases. The use of some drugs and natural herbs to ameliorate these effects is also addressed. Additionally, experiments are underway to understand the molecular mechanisms and pathways in these models.
* Projects are underway to study the teratogenic effects of some antipsychotic drugs in rodents.
* I have extensive experiences in animal models of disease, neural stem cell research, histology and microscopy, including electron and confocal microscopy.

# Selected Publications

# Original Papers

1. **Othman MA**, Fadel R, Tayem Y, Jaradat A, Rashid A, Fatima A, Al-Mahameed AE, Nasr El-Din WA. Caffeine protects against hippocampal alterations in type 2 diabetic rats via modulation of gliosis, inflammation and apoptosis. Cell Tissue Res. 2023 May;392(2):443-466. Doi: 10.1007/s00441-022-03735-5.

2. Nasr El-Din WA, Fadel R, Rashid A, Al-Mahameed A, **Othman MA** (2023). Pomegranate (Punica granatum) peel alleviates lithium-induced alterations in the thyroid gland of rats by modulating apoptosis and oxidative stress. The Anatomical Record, [306(3](https://anatomypubs.onlinelibrary.wiley.com/toc/19328494/2023/306/3)): 537-551.

Doi: 10.1002/ar.25122.

3. **Othman MA**, Mubarak H, Sayed M (2022). Ameliorative role of alpha-lipoic acid in renal cortical structural damage, induced by limb ischemia-reperfusion injury in the rat. Ultrastructural Pathology, 66(1): 110-121. [Doi:10.1080/01913123.2022.2035875](https://doi.org/10.1080/01913123.2022.2035875)

4. Potu BK, Atwa H, Nasr El-Din WA, **Othman MA**, Sarwani NA, Fatima A, Deifalla A, Fadel RA (2022). Learning anatomy before and during COVID-19 pandemic: Students' perceptions and exam performance. Morphologie. 106(354):188-194. Doi: 10.1016/j.morpho.2021.07.003.

**5. Othman MA**, Ezzat HM, Rizk DEE, Kamal AH, Al-Mahameed AE, Marwani AM, Bindyna KM, Salvatore S (2021). Induction of bacterial cystitis in female rabbits by uropathogenic *Escherichia coli* and the differences between the bladder dome and trigone. Ultrastructural Pathology, 45(3):159-166. Doi:10.1080/01913123.2021.1920653.

**6. Othman MA**, Oseily AM, Ramadan EM (2020). Effects of nicotine administration on the structure of auditory cortex of adolescent male guinea Pigs, a histological and ultrastructural study. The Egyptian Journal of Histology, 43(3): 808-818. Doi: [10.21608/EJH.2019.16780.1165](https://dx.doi.org/10.21608/ejh.2019.16780.1165)

7. **Othman MA**, Sayed MM, Hassany SM and Jaradat AA (2020). Influence of prenatal administration of nicotine/thiocyanate on the morphology of exocrine pancreas of 1–month-old rat offspring. Bahrain Medical Bulletin. 42 (2): 120-124.

**8. Othman MA**, Rajab E, AlMubarak A, AlNaisar M, Bahzad N, Kamal A (2019). Erythropoietin protects against cognitive impairment and hippocampal neurodegeneration in diabetic mice. Behavioral Science (Basel); 9(1):4. Doi:10.3390/bs9010004.

9. Greish K, Taha S, Jasim A, Elghany SA, Sultan A, AlKhateeb A, **Othman MA**, Jun F, Taurin S, Bakhiet M (2017). Styrene maleic acid encapsulated raloxifene micelles for management of inflammatory bowel disease. Clinical Translational Medicine. 6(1):28. Doi:10.1186/s40169-017-0157-2.

10. Fadel R, **Othman MA,** Abu Hijleh M, Sequeira R. Salem, A (2016). Effects of topiramate administration on placenta of rat. Bahrain Medical Bulletin, 38(2): 90-93.

11. Elgayar SA, Eltony SA, **Othman MA** (2014). Morphology of non-sensory epithelium during post-natal development of the rabbit vomeronasal organ. Anatomia, Histologia Embryologia.; 43(4):282-93. Doi: 10.1111/ahe.12073.

12. Abdel-Hafez AM, **Othman MA** (2013). Effect of sildenafil citrate on structure of rat liver: a histological, histochemical and immunohistochemical study. The Egyptian Journal of Histology. 36(4): 991-1003. Doi:[10.1097/01.EHX.0000440847.85696.1c](http://dx.doi.org/10.1097/01.EHX.0000440847.85696.1c)

**13. Othman MA** (2012). Cardioprotective effects of *Nigella sativa* on topiramate-induced cardiotoxicity in rats. (2012). Assiut Medical Journal, 36(2): 181-200.

14. Liu C, Paczkowski M, **Othman MA**, Yao HH (2012). Investigating the origins of somatic cell populations in the perinatal mouse ovaries using genetic lineage tracing and immunohistochemistry. Methods Molecular Biology, 825:211-21. Doi: 10.1007/978-1-61779-436-0\_16.

15. Abdel-Hafez AM, **Othman MA**, Seleim, MA (2011). Effect of shark liver oil on renal cortical structure in hypercholesterolemic rats. The Egyptian Journal of Histology: 34(2): 391-402. Doi: 10.1097/01.EHX.0000398759.73261.e4

16. **Othman, MA** (2011). Postnatal development of the female rabbit vomerosensory epithelium: a light and electron microscopic study. The Egyptian Journal of Histology. 34(1): 69-79. Doi: 10.1097/01.EHX.0000394886.69777.b0

17. Eltony SA, **Othman MA**, Mohamed AA (2010). Histological study on the effect of low-level perinatal lead exposure on the cerebellar cortex of adult male albino rats. The Egyptian Journal of Histology. 33(4): 781-797.

**18. Othman MA**, Ali SS, Balto, KA (2010). Effect of low phosphate diet on the structure of the rat parathyroid and thyroid glands. The Egyptian Journal of Histology, 33(1): 81-91.

19. Farghaly AM, Abdehamid SY, Abdelrahim EA, **Othman MA,** Mohamed AA, Thabet HZ (2009). Diabetogenic effect of clozapine. Assiut Medical Journal, 33(1): 181-196.

20. [**Othman M**](https://www.proquest.com/indexinglinkhandler/sng/author/Othman,+Manal/$N?accountid=26303)**A** (2005). Studies on adult mouse and human olfactory derived neural progenitors. University of Louisville ProQuest Dissertations Publishing, 3190031.

**21. Othman MA,** Kluber K, Lu C, Winstead W, Roisen F (2005). Immunomagnetic separation of adult human olfactory neural progenitors. Biotechnic and Histochemistry, 80(5-6): 177-188.  [Doi: 10.1080/10520290500469769](https://doi.org/10.1080/10520290500469769)

**22. Othman MA,** Lu C, Kluber K, Winstead W, Roisen F (2005). Clonal analysis of adult human olfactory neurosphere forming cells. Biotechnic and Histochemistry, 80(5-6): 189-200. Doi: 10.1080/10520290500469777

**23. Othman MA,** Kluber K, Roisen F (2003). Identification and culture of olfactory neural progenitors from GFP mice. Biotechnic and Histochemistry 78(2): 57- 70. Doi.org/10.1080/10520290310001593801

**Abstracts**

**1. Othman M** (2019).[Effects of Nicotine Administration during Pregnancy on the Exocrine Pancreas of 1‐Month‐Old Rat Offspring: An Ultrastructural and Immunohistochemical Study](https://scholar.google.com/citations?view_op=view_citation&hl=en&user=w_p12TAAAAAJ&cstart=20&pagesize=80&citation_for_view=w_p12TAAAAAJ:MXK_kJrjxJIC).

The FASEB Journal, Volume 33 (S1), Page 610.1

**2. Othman M** (2018). [The Effects of Prenatal Exposure of Nicotine/Thiocyanate on the Pancreas of 1–Month‐Old Rat Offspring, a Histological Study](https://faseb.onlinelibrary.wiley.com/doi/abs/10.1096/fasebj.2018.32.1_supplement.509.2). The FASEB Journal, Volume 32, Page 509.2

[3. **Othman M** (2017). The Role of Aminoguanidine on the Epididymis of Diabetic Rats: A Histological Study](https://faseb.onlinelibrary.wiley.com/doi/abs/10.1096/fasebj.31.1_supplement.lb5). The FASEB Journal, Volume 31, Page lb5

4. Al Ansari A, Rajab E, **Othman M**, AlNaisar M, Almubarak A (2016).  [The protective role of erythropoietin on the cognitive power deficit of the brain and histological changes in the hippocampus of diabetic mice.](https://scholar.google.com/citations?view_op=view_citation&hl=en&user=w_p12TAAAAAJ&cstart=20&pagesize=80&citation_for_view=w_p12TAAAAAJ:UebtZRa9Y70C) International Journal of Neuropsychopharmacology, Volume 19, Page 294.

**5. Othman M** (2015).[The effects of green tea on the adrenal cortex of aged rats, a histological study](https://scholar.google.com/citations?view_op=view_citation&hl=en&user=w_p12TAAAAAJ&citation_for_view=w_p12TAAAAAJ:UeHWp8X0CEIC). The FASEB Journal Volume 29, Page 553.1

6. **Othman M**, Salem A, Sequeira R, Abu‐Hijleh M, Fadel R (2014). Effects of the Therapeutic Doses of Topiramate on the Placenta of Rats: A Histological and Morphometric Study. The FASEB Journal. Volume 28, Page LB62.

7. Roisen F, Klueber K, Lu C, Zhang X, Xiao M, Cai J, Guo Z, Marshall C, **Othman M**, Qui M, Winstead W (2005). Adult human olfactory epithelium: A source of autologous neural progenitors. Journal of Neurochemistry. Volume 94, Page 78.

8. **Othman M**, Klueber K, Lu C, Harding G, Guo Z and Roisen F (2004). Trk-positive population of adult human olfactory neural epithelial progenitors. Society for Neuroscience Conference, San Diego, CA, USA.

9. **Othman M,** Klueber K, Lu C, Hatcher L, Enzman G, Whittemore S, and Roisen F (2003). Isolation of neuronal and glial progenitors from adult olfactory neuroepithelium. Society for Neuroscience Conference, New Orleans, LA, USA.

10. **Othman M**, Klueber K, Lu C, Giammara, B, Hatcher L, Roisen F (2002). Isolation of olfactory neural progenitors from GFP transgenic mice. Society for Neuroscience Conference, Orlando, Fl, USA.

11. **Othman M**, Klueber K, Lu C, Giammara, B, Hatcher L, Roisen F (2002). Harvesting rhinoepithelial stem cells from GFP mice. The FASEB Journal, 16 (5), A736-A737

# Professional Associations:

* Member of the Society for Neuroscience.
* Member of the American Association of Anatomists.
* Member of the Egyptian Society of Histology and Cytology.
* Member of the Egyptian Society of Electron Microscopy.

**Recent Grants Awarded:**

* Teratogenicity of anti-epileptic drug topiramate.
* Effects of caffeine administration on diabetic rat brain.
* Possible ameliorative role of Punica granatum (pomegranate) peel on lithium induced alterations in thyroid gland in adult male albino rats.
* Protective effects of caffeine on the skin of diabetic rats, a histological and immunohistochemical study.
* Effect of formative assessment on human anatomy learning and summative exam performance: medical students’ perception.
* Teratogenicity of an atypical antipsychotic drug (aripiprazole) in rats.
* Neurobehavioral, electrophysiological, and biochemical assessment of the effects of ruxolitinib on experimental autoimmune encephalomyelitis; an animal model of multiple sclerosis.

**Selected Scientific Conferences attended:**

* Experimental Biology, Poster Presentation, New Orleans, Louisiana, USA, 2002.
* Society for Neuroscience. Poster Presentation, Orlando, Florida, USA, 2002.
* Society for Neuroscience, Poster Presentation, New Orleans, Louisiana, USA, 2003.
* Society for Neuroscience, Poster Presentation, San Diego, California, USA, 2004.
* Faculty of Medicine conference, Assiut University, Assiut, Egypt. 2005 and 2006, 2007, 2008, 2009.
* Egyptian Society of Histology and Cell Biology, Cairo, 2006-2007 and in Zagazig, Egypt, 2008.
* IUPS teaching conference, Manama, Bahrain, 2012.
* Ninth GCC Medical Education Conference “Needs, Challenges, Opportunities”. November 2013.
* Experimental Biology, Poster Presentation, San Diego, California, USA, 2014.
* Experimental Biology, Poster Presentation, Boston, Massachusetts, USA, 2015.
* Research Day, Oral Presentation, Arabian Gulf University, Manama, Bahrain. May 2015.
* Society for Neuroscience, Poster Presentation, Chicago, Illinois, USA, 2015.
* Research Day, Oral Presentation, Arabian Gulf University, Manama, Bahrain. May 2016.
* Experimental Biology, Poster Presentation, Chicago, Illinois, USA, 2017.
* Research Day, Oral Presentation, Arabian Gulf University, Manama, Bahrain. May 2017.
* Conference on Computational Biology & Medicine. Arabian Gulf University, Manama, Bahrain November 2017.
* Experimental Biology, Poster Presentation, San Diego, California, USA, 2018.
* Conference on Stem Cells Regulations. Royal College of Surgeons Ireland in Bahrain. May 2018.
* Conference on “Increasing Research Quality with Scopus & Science Direct”. Arabian Gulf University, Manama, Bahrain. February 2019.
* Experimental Biology, Poster Presentation, Orlando, Florida, USA, 2019.
* Webinar on “Enhance your Research with Elsevier: Making the Most out of Author Profiles on Scopus”. National Research Center Cairo Egypt. January 2021.
* Webinar on “Post-Pandemic Medical Education Using Learning Styles for Students Learning”. King Saud University, Riyadh, KSA. February 2021.
* Research Day, Oral Presentation Arabian Gulf University, Manama, Bahrain. April 2021.
* Second Arabian Gulf University Internal Medicine Conference Manama, Bahrain March 2022.
* Research Day, Oral Presentation, Arabian Gulf University, Manama, Bahrain. May 2022.
* Webinar on: “Behind the Scenes with Editors-in-Chief: A Live Interactive Session on Research Writing Journal Review and Handling Rejection”. By Enago Academy. September 2022.
* Egyptian Society of Electron Microscopy Conference. In collaboration with Theodore Bilharz Research Institute, Tanta University & Assiut University. Nanostructures: The Science of Today & Tomorrow. Virtual. October 2022.
* Second International Conference in Obstetrics & Gynecology, Oral presentation, Manama, Bahrain. November, 17-18-2022.
* Research Day, Oral Presentation, Arabian Gulf University, Manama, Bahrain. May 2023.