

# SAMUEL O. ADEOSUN RPh., PhD.

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## EDUCATION

PhD. (Neuroscience). University of Mississippi Medical Center (UMMC), Jackson MS.	<b>2013.</b>
B. Pharm. with Distinction (Pharmacy). Obafemi Awolowo University, Ile-Ife, Nigeria.	<b>2005.</b>

## CURRENT POSITION

<b>Assistant professor</b> High Point University, Fred Wilson School of Pharmacy, Department of Clinical Sciences.	<b>Aug 2020 to date.</b>
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## EXPERIENCE

<b>Pharmacist</b> Walgreens Pharmacy. St. Dominic's Hospital, Jackson MS. HealthPlus Pharmacy and Wellness, Pearl MS.	<b>Mar 2020 – July 2020.</b> <b>Jul 2019 – Mar 2020.</b> <b>Nov 2018 – Jun 2019.</b>
<ul style="list-style-type: none"> <li>Clinical pharmacy rotations in Cardiology, Neurology, Nutrition support, Adult medicine, etc.</li> <li>Managed pharmacotherapy of ICU and floor patients in anticoagulation, glucose management, hypertension, pharmacokinetics, antimicrobial stewardship, renal dose adjustments and other interventions.</li> <li>Accurate and quick processing and verification of prescriptions through all points of the pharmacy workflow using PioneerRx®, Walgreens proprietary software programs, Cerner PowerChart® and Meds Manager®.</li> <li>Counseling and answering patients' questions about their prescriptions and OTC medications.</li> </ul>	
<b>Postdoc research fellow</b> University of Mississippi Medical Center, Jackson MS. Baylor College of Medicine, Houston TX.	<b>Feb 2015 – May 2020.</b> <b>Oct 2013 – Feb 2015.</b>
<ul style="list-style-type: none"> <li>Conducted basic/pre-clinical research on Alzheimer's disease, Parkinson's disease, Alcohol-induced neuronal injury, Non-alcoholic fatty liver disease, chronic kidney disease (CKD) and diabetes.</li> <li>Designed and executed experiments for key data towards a \$222,813 grant funded by the NIH for the lab.</li> </ul>	
<b>Pharmacy intern</b> Central Pharmacy, University of Mississippi Medical Center, Jackson MS.	<b>Jun 2015 - Oct 2016.</b>
<ul style="list-style-type: none"> <li>Read and assembled pharmacist-verified scripts and labels of first doses and cart-fills accurately and efficiently; compounded medications and prepackaged medications as needed.</li> <li>Developed and used a more efficient process for monthly inventory taking and out-of-date drugs check.</li> </ul>	
<b>Intern Pharmacist.</b> Department of Pharmacology, Obafemi Awolowo University, Ile-Ife, Nigeria.	<b>Jan 2006 – Dec 2006.</b>
<ul style="list-style-type: none"> <li>Conducted a questionnaire-based study of how study habits and self-reported sleep quality affect academic performance among Pharmacy students and published 2 papers.</li> <li>Served as laboratory instructor in several Pharmacology courses for 2<sup>nd</sup> to 4<sup>th</sup> year Pharmacy students.</li> </ul>	

**TEACHING EXPERIENCES**

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- **Introduction to Psychology; (Learning and Memory).** Summer 2013.  
Second year Psychology students at Millsaps College, Jackson MS.
- **Behavioral Neuroscience; (Animal models: Alzheimer's and Parkinson's diseases).** Spring 2013.  
Third year Psychology students at Millsaps College, Jackson MS.
- Brain Awareness Week presenter; to pupils of Brown Elementary School, Jackson MS. March 2012.
- **CNS Pharmacology; (Endocannabinoids).** Second year Neuroscience graduate students. Fall 2012.
- **Introduction to Psychology; (Learning and Memory).** Fall 2012.  
First year Psychology students at Millsaps College, Jackson MS.
- **Introduction to Neuroscience; (Animal models of Neurodegenerative diseases).** Summer 2011.  
Summer Undergraduate Research Experience (SURE) students at UMMC.
- **Cellular & Molecular Neuroscience; (Apoptosis),** 1st yr. Neuroscience Grad. Students. Fall 2009.
- **Introduction to Neuroscience; (Consciousness).** SURE students at UMMC. Summer 2009.
- **Pharmacology lab (Introductory Anatomy and Physiology I).** Fall 2006.  
Second year Pharmacy students at Obafemi Awolowo University (OAU), Nigeria.
- **Pharmacology lab (General Pharmacology I).** Third year Pharmacy students at OAU, Nigeria. Spring 2006.
- **Pharmacology lab (CNS Pharmacology I).** Fourth year Pharmacy students at OAU, Nigeria. Spring 2006.
- **Pharmacology lab (Introductory Anatomy & Physiology II).** Second year Pharmacy students. Fall 2006.
- **Pharmacology lab (General Pharmacology I).** Third year Pharmacy students at OAU, Nigeria. Fall 2006.

**MENTORING**

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Medical Students (summer) Research Program (**MSRP**) at University of Mississippi Medical Center.

- Walker Robinson. 2018.
- Andrew Palmer. 2015.

Summer Undergraduate Research Experience (**SURE**) at University of Mississippi Medical Center.

- Mary-Frances Weeks. 2017.
- Alex Griggs. 2016.
- Alex Zhu. 2013.
- Andrew Palmer. 2012.
- Oliver Liu. 2011.

**INVITED TALKS AND PRESENTATIONS**

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- **Puffed up by complement: Hereditary angioedema.** Feb 2020.  
Therapeutic Pearls at University of Mississippi Medical Center (UMMC).
- **Flowing pains: Sickle cell disease and novel therapeutic options.** Jan 2020.  
Case presentation, Pharmacy Department St. Dominic's Hospital, Jackson MS.
- **Hit or miss: Management of heparin-induced thrombocytopenia and thrombosis.** Nov 2019.  
Therapeutic Pearls at University of Mississippi Medical Center (UMMC).
- **Open question-and-answer session.** Nov 2019.  
Better Breathers Club (a COPD patients' support group) at St. Dominic's Hospital Jackson MS.
- **Sugar or Salt: Hyperosmolar treatment for increased intracranial pressure.** Sept 2019.  
Case presentation, Pharmacy Department St. Dominic's Hospital, Jackson MS.
- **Protective mechanisms of biliverdin reductase A (BVRA) in renal lipotoxicity.** Nov 2017.  
U-talk Series; to Postdoctoral fellows at University of Mississippi Medical Center (UMMC).
- **Using CRISPR-Cas9 to investigate role of biliverdin reductase-A in renal lipotoxicity** Aug 2017.  
Physiology seminar with scientists, clinicians and graduate students in attendance.
- **Apolipoprotein E4 in alzheimer's disease pathology: Structure, function or both?** Apr 2013.  
A research group at the Huffington Center on Aging, Baylor College of Medicine, Houston, TX.  
Department of Psychiatry Grand Rounds, University of Mississippi Medical Center (UMMC). Mar 2013.

## PUBLICATIONS

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1. **Adeosun SO** and Haines ST. Residency projects belong in journals not filing cabinets. *Journal of American College of Clinical Pharmacy*. (2020); 3:717–720. <https://doi.org/10.1002/jac5.1248>
2. Gordon DM, Neifer KL, ..., **Adeosun SO**, *et al.* Bilirubin remodels murine white adipose tissue by reshaping mitochondrial activity and the coregulator profile of peroxisome proliferator-activated receptor  $\alpha$ . *J Biol Chem*. (2020) May 13; jbc.RA120.013700. doi: 10.1074/jbc.RA120.013700.
3. Gordon DM, **Adeosun SO**, Ngwudike SI, *et al.* CRISPR Cas9-mediated deletion of biliverdin reductase A (BVRA) in mouse liver cells induces oxidative stress and lipid accumulation. *Arch Biochem Biophys*. (2019) Aug 15;672:108072.
4. **Adeosun SO**, Hou X, Shi L., *et al.* Female mice with apolipoprotein E4 domain interaction demonstrated impairments in spatial learning and memory performance and disruption of hippocampal cyto-architecture. *Neurobiology of Learning and Memory* (2019) May; 161:106-114. doi: 10.1016/j.nlm.2019.03.012. Epub 2019 Apr 4 doi: 10.1016/j.nlm.2019.03.012
5. Hou X, **Adeosun SO**, Zhao X., *et al.* ER $\beta$  agonist alters RNA splicing factor expression and has a longer window of antidepressant effectiveness than estradiol after long-term ovariectomy. *J. Psychiatry Neurosci*. (2018) Aug 14;43(5):170199. doi: 10.1503/jpn.170199.
6. **Adeosun SO**, Gordon D., Weeks, M.F., *et al.* Loss of biliverdin reductase-A (BVRA) promotes lipid accumulation and lipotoxicity in mouse proximal tubule cells. *AJP Renal*. (2018) doi: 10.1152/ajprenal.00495.2017.
7. **Adeosun SO**, Moore, K.H., Lang, D.M., *et al.* Novel Fluorescence-Based Assay for the Measurement of Biliverdin Reductase Activity. *Reactive Oxygen Species* (2018); 5 (13):35-45. doi: 10.20455/ros.2018.809.
8. **Adeosun SO**, Hou, X., Melrose, H. L., *et al.* Human LRRK2 G2019S mutation represses post-synaptic protein PSD95 and causes cognitive impairment in transgenic mice. *Neurobiology of Learning and Memory* (2017) (142) 182-189. doi: 10.1016/j.nlm.2017.05.001.
9. **Adeosun SO** and David E. Stec (2017). Bilirubin protects the aging heart. *Acta Physiologica*.
10. Hinds, T. D. Jr., **Adeosun, SO**, Alamodi, A. A., and Stec, D. E. Does bilirubin prevent hepatic steatosis through activation of the PPAR $\alpha$  nuclear receptor? *Med Hypotheses*. (2016) Oct; 95:54-57.
11. Hou X., **Adeosun SO**. Zhang, Q., *et al.* Differential contributions of ApoE4 and female sex to BACE1 activity and expression mediate A $\beta$  deposition and learning and memory in mouse models of Alzheimer's disease. *Front. Aging Neurosci*. (2015) 207. doi:10.3389/fnagi.2015.00207.
12. **Adeosun SO**, Hou X, Zheng B, *et al.* Cognitive deficits and disruption of neurogenesis in a mouse model of apolipoprotein e4 domain interaction. *J Biol Chem*. (2013) 289(5):2946-59.
13. **Adeosun SO**, Hou X, Jiao Y, *et al.* Allopregnanolone Reinstates Tyrosine Hydroxylase Immunoreactive Neurons and Motor Performance in an MPTP-Lesioned Mouse Model of Parkinson's Disease. *PLoS One*. (2012); 7(11):e50040. doi: 10.1371/journal.pone. 0050040.
14. **Adeosun SO**, Albert PR, Austin MC *et al.* 17 $\beta$ -estradiol-induced regulation of the novel 5-HT1A-related transcription factors NUDR and Freud-1 in SH SY5Y cells. *Cell Mol Neurobiol*. (2012). 32(4):517-21.
15. Wang JM, Hou X, **Adeosun SO**, *et al.* A dominant negative ER $\beta$  splice variant determines the effectiveness of early or late estrogen therapy after ovariectomy in rats. *PLoS One*. (2012);7(3):e33493.
16. **Adeosun SO**, Asa SO, Babalola OO *et al.* Effects of night-reading on Daytime sleepiness, Sleep quality and Academic performance of undergraduate pharmacy students in Nigeria. *Sleep & Biol. Rhythms* (2008) 6 (2) 91-94.
17. Akanmu MA, **Adeosun SO** and Ilesanmi OR. Neuropharmacological effects of Oleamide in Male and Female Mice. *Behav Brain Res*. (2007). 182 (1) 88-94.

## ABSTRACTS

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1. **Adeosun SO** and Schipper K. Characteristics of post-operative discharge opioids for opioid-naïve bariatric surgery patients and comparison to a best-practice recommendation. ASHP Mid-year Clinical Meeting 2019
2. **Adeosun SO**, Gordon DM, Weeks MF, Moore KH, Hall JE, Hinds TD, Stec DE. Loss of biliverdin reductase-A (BVRA) promotes lipid accumulation and lipotoxicity in mouse proximal tubule cells. Poster presented at Experimental Biology meeting (EB), 2018.
3. **Adeosun SO**, and Stec DE. Loss of Biliverdin reductase-a (BVRA) promotes steatosis and lipotoxicity in cultured mouse proximal tubule cells (UMMC School of Graduate Studies in the Health Sciences Research Day. October 27, 2017).

4. **Adeosun SO**, Nwaneri AC, Hinds TD and Stec DE. CRISPR Cas9-mediated deletion of biliverdin reductase A (BVRA) in mouse liver cells induce a broad spectrum of steatosis phenotype. Poster presented at the Experimental Biology meeting (EB), 2017.
5. **Adeosun SO**, Hou X, Palmer A, Zheng B, Raffai RL, Weisgraber KH and Wang JM. Apolipoprotein Eε4 Domain interaction Impacts Amyloid-β Levels and Hippocampal Architecture in Female Mice. Poster presented at the Society for Neuroscience (SfN) 2015.
6. Hou X, **Adeosun SO**, Hill R, Zheng B, Wang JM. Impact of alternative RNA splicing of ERβ on ovarian hormone deficiency-induced depression and estrogen therapy effectiveness in female rats. Poster presented at the Society for Neuroscience (SfN) 2015.
7. **Adeosun SO**, Hou X, Zhao X, Stockmeier C, Mosley T, Zheng B, Raffai R, Zhang Q, Weisgraber KH, Wang JM. Apolipoprotein ε4 domain interaction in size of hippocampal subregions, density of newborn neurons, and cognitive behaviors. *J. Alz. Disease* June 2015. DOI: 10.1016/j.jalz.2015.06.564.
8. Hou X, **Adeosun SO**, Zhao X, Barlow B, Zheng B, Brents M, Zhang Q, Wang JM. ApoE4 and ApoE4 domain interaction induce gender vulnerability on progression of Alzheimer's disease in mouse models. Poster presented at the Society for Neuroscience (SfN) 2014.
9. Wang JM, Hou X, **Adeosun SO**, Zhang Q, Zheng B. (2014) Allopregnanolone rescues rotenone induced cognitive impairment in mice with apoe4 domain interaction. Poster presented at the Society for Neuroscience (SfN) 2014.
10. **Adeosun SO**, Hou X, Zheng B, Zhu A and Wang JM. Human LRRK2 G2019S mutation causes learning and memory impairment in mice. Poster presented at the Society for Neuroscience (SfN) 2013.
11. Hou X, **Adeosun SO**, Zheng B, Zhao X, Wang JM. ApoE4 modulate cognitive functions and amyloid beta oligomer deposition in a gender-specific manner in a mouse model for Alzheimer's disease. Poster presented at the Society for Neuroscience (SfN) 2013.
12. **Adeosun SO**, X Hou, B Zheng, K Weisgraber and JM Wang. High Glycogen Synthase Kinase 3-beta (GSK3β) gene expression and Impaired Cognitive Performance in a Mouse Model of ApoE4 domain Interaction. Poster presented at the Society for Neuroscience (SfN) 2012.
13. Hou X, **Adeosun SO**, Zheng B, Gomez-Sanchez E, Wang JM. Age-dependent contribution of Alzheimer's disease genetic risk factors to learning and memory. Society for Neuroscience (SfN) 2012.
14. **Adeosun S**, X Hou, Y Jiao, B Zheng, P Kyle, I Paul, J Farley, C Stockmeier, S Bigler, RJ Smeyne, J Wang. 3.243 increasing endogenous neurogenesis using neurosteroids: a novel therapeutic strategy to treat Parkinson's disease. *Parkinsonism & Related Disorders* 18, S214 2012.
15. Wang JM, **Adeosun SO**, Hou X, Zheng B, Stockmeier C, Paul I, Ou X, Bigler S, Smeyne R, Brinton R, Melrose H, Lewin J. Development of allopregnanolone as a therapeutic for Parkinson's disease in neurotoxin symptomatic and idiopathic mouse models. Poster presented at the Society for Neuroscience (SfN) 2012.
16. **Adeosun SO**, Hou X, Zheng B, Paul IA and Wang JM. Age and apolipoprotein E (ApoE) domain interaction modulate neurogenic and learning and memory effects of estradiol in arg-61 mice. Poster presented at the Society for Neuroscience (SfN) 2011.
17. J Wang, **S Adeosun**, Y Jiao, B Zheng, S Henry, X Hou, C Sun, A Pani, P Kyle, J Farley, I Paul, S Bigler, C Stockmeier, R Brinton, R Smeyne. The impact of a neurogenic agent, allopregnanolone, in rodent models of Alzheimer's and Parkinson's disease *Alzheimer's and Dementia* 7 (4), S667-S667 2011.
18. **S Adeosun**, X Hou, B Zheng, I Paul, R Irwin, R Brinton, J Wang. Motor deficits in mouse models of Alzheimer's disease *Alzheimer's & Dementia* 8 (4), P670-P671 2012.
19. Hou X, **Adeosun SO**, Hill R, Zheng B, Ou X, Fratkin J, Bigler J, Stockmeier C, Elise Gomez-Sanchez E, and Wang JM. The Antidepressant Effects of Estradiol Is Observed in Short Term, But Not in Long Term OVX Rats and Is Associated with TPH2 mRNA Expression in Rat Raphe Nucleus. Poster Presented at the Society for Neuroscience (SfN) 2011.
20. Wang JM, **Adeosun SO**, Jiao Y, Henry S, Hill R, Zheng B, Hou X, Pani A, Kyle P, Bigler S, Farley J, Stockmeier C, Paul I, Brinton R, Smeyne R. Increasing endogenous neurogenesis using neurosteroids: A novel therapeutic strategy to treat Parkinson's disease. Poster Presented at the Society for Neuroscience (SfN) 2011.
21. Wang JM, Hill R, Henry S, **Adeosun S**, Hou X, Ou X, Bigler S, Stockmeier C, Gomez-Sanchez E. The effective window for estradiol treatment in ovariectomized female rats. Poster Presented at the Society for Neuroscience (SfN) 2010.
22. **Adeosun SO**, Albert PR, Austin MC, Iyo AH. 17β Estradiol regulates the novel 5-HT1a transcription factors –NUDR and Freud-1 in SH-SY5Y neuroblastoma cells. Society for Neuroscience (SfN) 2009.
23. **Adeosun SO**, Ilesanmi ORS, Akanmu MA. Neuropharmacological Profile of Oleamide in Male and Female Mice. Nigerian Association of Academic Pharmacists 7<sup>th</sup> Annual conference (July 2006).

## AWARDS AND HONORS

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- **Caroline tum Suden/Frances Hellebrandt Professional Opportunity Award** Apr 2018.  
American Physiological Society (APS).
- **Poster of Distinction.** Apr 2017.  
Programming Committee of the Gastrointestinal & Liver Section of the American Physiological Society for poster presented at Experimental Biology (EB).
- **Randall-Trustmark Graduate Research Award** May 2014.  
for outstanding research accomplishment of a graduating PhD student at the University of Mississippi Medical Center. Jackson MS.

## LICENSES AND CERTIFICATIONS

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- Mississippi Pharmacist License (**E-15816**). Valid through 12/2020.
- Controlled Substance License (**CS-15816**). Valid through 12/2020.
- American Heart Assoc. (AHA) Basic Life Support (BLS) Certification (**185507071405**). Valid through 09/2021.
- AHA Advanced Cardiovascular Life Support (ACLS) Certification (**196507733541**). Valid through 09/2021.
- APhA's Pharmacy-Based Immunization Delivery certificate training program. Oct 2018 to date.

## PROFESSIONAL MEMBERSHIPS

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- American Society of Hospital Pharmacists (ASHP). Jul 2019 to date.
- American College of Clinical Pharmacy (ACCP). Jul 2019 to date.
- American Physiological Society (APS). 2016 to date.
- Society for Neuroscience (SfN). 2011 to date.

## SCIENTIFIC CONFERENCES ATTENDED

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- Experimental Biology. 2017 and 2018.
- Society for Neuroscience. 2011, 2012, 2013 and 2015.
- Graduate school research day, University of Mississippi Medical Center. 2011, 2012, 2013, 2015, 2016 and 2017.
- University of Mississippi Medical Center (UMMC) Neuroscience day. 2011, 2012 and 2015.
- Mississippi Chapter of Alzheimer's Association meeting. 2011.

## NON-DEGREE COURSES

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- Design and Interpretation of Clinical Trials (Johns Hopkins University on Coursera.org). 2020.
- Introduction to Systematic Review and Meta-Analysis (Johns Hopkins University. on Coursera.org). 2020.
- Fundamentals of Clinical and Translational Research (online on Harvard Catalyst). 2018.
- **CERTaIN**: Pragmatic Clinical Trials and Healthcare Delivery Evaluations (online on EdX). 2018.
- Teaching in Higher Education (ID 715) at University of Mississippi Medical Center, Jackson MS. 2016.

## SERVICE AND LEADERSHIP

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- President, African Christian Fellowship USA Inc., Jackson MS Chapter. Jul 2016 – Jul 2020.
- Member, First Baptist Sanctuary Choir, Jackson MS. Apr 2009 – Sept 2013, then Feb 2015 – Jul 2020.
- Judge: David S. Bruce Excellence in Undergraduate Research award (Experimental Biology). 2017 & 2018.
- Student Member of Steering Committee, Graduate Program in Neuroscience, UMMC. 2012 - 2013.
- Board Member, International Students Committee, UMMC Graduate School. 2010 – 2013.

## HOBBIES

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Song writing, poetry, singing, playing soccer, table tennis, badminton and lawn tennis; photography, video recording and editing.