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## CURRICULUM VITAE

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Professor (Tenured)

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## A. EDUCATION

### Graduate Education

Ph.D. (Molecular Pathology, Microbiology, and Molecular Genetics, The University of Texas Health Science Center, University of Texas MD Anderson Cancer Center UTHealth Graduate School of Biomedical Sciences, Houston, Texas, 2012, Primary advisor/mentor - Herbert L. DuPont, M.D.; Co-advisor – Heidi B. Kaplan, Ph.D.

Master of Science, Biotechnology, Stephen F. Austin State University, Nacogdoches, Texas, 2008.

Master of Science, Biology, University of Bremen, Bremen, Germany, 2001.

### Undergraduate Education

Bachelor of Science, Zoology/Biological Sciences (Honors), University of Ghana, Legon, Ghana, 1999.

## **Other Career Development Training**

- I. Mentoring Works, The University of Texas Health Science Center, University of Texas MD Anderson Cancer Center UTHealth Graduate School of Biomedical Sciences - A workshop designed by the Wisconsin Center for Education Research at The University of Wisconsin to enhance mentoring skills, 2016.
- II. How to Communicate with Tact and Professionalism - A Fred Pryor Career Track Seminar designed to improve communication and listening skills, September 15-16, 2015.

## **B. ACADEMIC APPOINTMENTS**

Professor (Tenured), The University of Texas Health Science Center, School of Public Health, Department of Epidemiology, Human Genetics and Environmental Sciences, Center for Infectious Diseases, Houston, Texas, 2024-present.

Associate Professor (Tenured), The University of Texas Health Science Center, School of Public Health, Department of Epidemiology, Human Genetics and Environmental Sciences, Center for Infectious Diseases, Houston, Texas, 2017-2024.

Regular Faculty Member, University of Texas MD Anderson Cancer Center UTHealth Graduate School of Biomedical Sciences, Microbiology and Infectious Diseases Program, 2015-present.

Assistant Professor (Tenure-Track), The University of Texas Health Science Center, School of Public Health, Department of Epidemiology, Human Genetics and Environmental Sciences, Center for Infectious Diseases, Houston, Texas, 2012-2017.

Graduate Research Assistant, The University of Texas Health Science Center, School of Public Health, Center for Infectious Diseases, Houston, Texas, 2008-2012.

Graduate Research Assistant, Stephen F. Austin State University, Nacogdoches, Texas, 2006-2008.

## **C. RESEARCH**

### **(I) Patents Issued/Pending**

1. DuPont, H. L., Z. D. Jiang, E. Brown, and **Charles Darkoh**. Application No. 11745200.3-2103, PCT/US2011025170. Filed February 17, 2011, entitled Methods of treating infection.
2. **Darkoh, Charles**, L. M. Lichtenberger, E. J. Dial, and H. L. DuPont. U.S. Publication 20120196887 (Application No. 13/364,589 filed February 2, 2011), entitled Methods and compositions for improved rifamycin therapies.

3. **Darkoh, Charles**, H. B. Kaplan, and H. L. DuPont. U.S. Application No. 61/491,726 filed May 31, 2011, entitled Methods and Compositions for the Detection of Functional *Clostridium difficile* toxins.
4. **Darkoh, Charles**, H. L. DuPont, and Heidi B. Kaplan. U. S. Application No. 61/673961. Filed July 20, 2012, entitled “Methods and compositions to enhance the detection of *Clostridium difficile* toxins.”
5. **Darkoh, Charles**, U.S. Provisional Patent Application No. 62/247,570, Filed October 28, 2015, entitled Methods and compositions to inhibit *Clostridium* toxins.
6. **Darkoh, Charles**, U.S. Provisional Patent Application No. 62/473,675, Filed March 20, 2017, entitled “Antimicrobials composition and co-agents to treat resistant infections”.

## **(II) Peer-Reviewed Publications**

1. Ajami, Nadim, H. Koo, **C. Darkoh**, R. L. Atmar, P. C. Okhuysen, Z. D. Jiang, J. Flores, H. L. DuPont. 2010. Characterization of norovirus-associated traveler's diarrhea. *Clinical Infectious Diseases*. 15; 51(2):123-30. PMID: 20540620.
2. **Darkoh, C.**, M. El-Bouhssini, M. Baum, and B. Clack. 2010. Characterization of a prolylendoprotease from *Eurygaster integriceps* puton (Sunn pest) infested wheat. *Archives Insect Biochemistry and Physiology*; 74 (3):163-178. PMID: 20568295.
3. **Darkoh, C.**, L. M. Lichtenberger, N. Ajami, E. J. Dial, Z. D. Jiang, and H. L. DuPont. 2010. Bile acids improve the antimicrobial effect of rifaximin. *Antimicrobial Agents and Chemotherapy*, 54 (9): 3618-3624. PMID: 20547807.
4. **Darkoh, C.**, H. B. Kaplan, and H. L. DuPont. 2011. Harnessing the glucosyltransferase activities of *Clostridium difficile* for functional studies of toxins A and B. *Journal of Clinical Microbiology*, 49(8):2933-41.
5. **Darkoh, C.**, and H. L. DuPont. 2011. Unraveling the role of host endocytic proteins in pedestal formation during enteropathogenic *E. coli* infection. *Journal of Infectious Diseases*, 667-667. DOI: 10.1093/infdis/jir391.
6. **Darkoh, C.**, H. L. DuPont, H. B. Kaplan. 2011. A novel approach for the detection of toxigenic *Clostridium difficile* from stool samples. *Journal of Clinical Microbiology*. 49(12): 4219-4224.
7. **Darkoh, C.**, Eric L. Brown, Heidi B. Kaplan, Herbert L. DuPont. 2013. Bile Salt Inhibition of Host Cell Damage from *Clostridium difficile* Toxins. *PLoS One* 8(11): e79631. doi: 10.1371/journal.pone.0079631.
8. **Darkoh, C.**, L. Comer, G. Zewdie, S. Harold, N. Snyder, H. L. DuPont. 2014. Chemotactic Chemokines are Important in the Pathogenesis of Irritable Bowel Syndrome. *PLoSOne*. 9(3):e93144. doi: 10.1371/journal.pone.0093144.

9. **Darkoh, C.**, Bradley Turnwald, Zhi-Dong Jiang, Hoonmo L. Koo, Kevin Garey, and Herbert DuPont. 2014. Colonic Immunopathogenesis of *Clostridium difficile* Infections. *Clinical and Vaccine Immunology*. 21(4):509-17. doi: 10.1128/CVI.00770-13.
10. Yandamuri, R.C., Gautam, R., **Darkoh C.**, Vanitha Dareddy, V., El-Bouhssini, M., and Clack, B.A. 2014. Cloning, Expression, Sequence Analysis and Homology Modeling of the Prolyl Endoprotease from *Eurygaster integriceps Puton*. *Insects*. 5, 762-782, doi:10.3390/insects5040762.
11. **Darkoh, C.**, H. L. DuPont, S. J. Norris, and H. B. Kaplan. 2015. Toxin Synthesis by *Clostridium difficile* is Regulated through Quorum Signaling. *mBio*. 6:e02569-02514, doi: 10.1128/mBio.02569-14. PMID: 25714717.
12. **Darkoh, C.**, C. Chappell, C. Gonzales, and P. Okhuysen. 2015. A Rapid and Specific Method for the Detection of Indole in Complex Biological Samples. *Applied and Environmental Microbiology*. 81(23):8093-7, doi: 10.1128/AEM.02787-15. Epub September 18, 2015. PMID: 26386049.
13. Chappell, C., **C. Darkoh**, L. Shimmin, N. Farhana, K. Do-Kyun, P. Okhuysen, and J. Hixson. 2016. Fecal Indole as a Biomarker of Susceptibility to *Cryptosporidium* Infection. *Infection and Immunity*. 84(8):2299-306. doi: 10.1128/IAI.00336-16. PMID: 27245413.
14. **Darkoh, C.**, C. Odo\*, and H.L. DuPont. 2016. Accessory Gene Regulator-1 Locus is Essential for Virulence and Pathogenesis of *Clostridium difficile*. *mBio*. 7(4): e01237-16. doi:10.1128/mBio.01237-16. PMID: 27531912
15. \*Tsai, I.H., D.E. Graves, W. Chan, **C. Darkoh**, M. Lee, L. A. Pompeii. 2017. Environmental barriers and social participation in individuals with spinal cord injury. *Rehabilitation Psychology*. 62(1):36-44. doi: 10.1037/rep0000117. PMID: 28045281.
16. \*Heather, T. E., **C. Darkoh**, E. McHugh, and E. Brown. 2017. The *Clostridium difficile* Quorum-Sensing Molecule Alters the *Staphylococcus aureus* Toxin Expression Profile. *International Journal of Antimicrobial Agents*. 49(3):391-393. doi: 10.1016/j.ijantimicag.2017.01.001. PMID: 28111286.
17. **Darkoh, C.** and H. L. DuPont. 2017. The accessory gene regulator-1 as a therapeutic target for *C. difficile* infections. *Expert Opinion on Therapeutic Targets*. 21(5):451-453. doi: 10.1080/14728222.2017.1311863. PMID: 28338356.
18. **Darkoh, C.**, M. Deaton\*, H.L. DuPont. 2017. Nonantimicrobial Drug Targets for *Clostridium difficile* infections. *Future Microbiol*. 12: 975-985. doi: 10.2217/fmb-2017-0024. PMID: 28759258.
19. Okyere, Ama\*, D. Bishoff\*, M. Oyaró, N. Ajami, and **C. Darkoh**. 2018. Analysis of Fish Commonly Sold in Local Supermarkets Reveals the Presence of Pathogenic and Multidrug-Resistant Bacterial Communities. *Microbiol Insights*. doi: 10.1177/1178636118786925. eCollection 2018. PMID: 30038503.

20. Oyaro MO, K. Plants-Paris\*, D. Bishoff\*, P. Malonza, C. Gontier, H.L. DuPont, **C. Darkoh**. 2018. High rate of *Clostridium difficile* among young adults presenting with diarrhea at two hospitals in Kenya. *Int J Infect Dis*. 74:24-28. doi: 10.1016/j.ijid.2018.06.014. PMID: 29960098.
21. Plants-Paris\* K, Bishoff D, Oyaro MO, Mwinyi B, Chappell C, Kituyi A, Nyangao J, Mbatha D, **Darkoh C**. 2019. Prevalence of *Clostridium difficile* Infections Among Kenyan Children with Diarrhea. *International journal of infectious diseases : IJID : official publication of the International Society for Infectious Diseases*.
22. **Darkoh, C.**, Plants-Paris\* K., Bishoff D., DuPont HL. 2019. *Clostridium difficile* Modulates the Gut Microbiota by Inducing the Production of Indole, an Interkingdom Signaling and Antimicrobial Molecule. *mSystems*. 19:4(2).pii: e00346-18. doi: 10.1128/mSystems.00346-18. PMID: 30944877 PMCID: PMC6426650.
23. Martinez P.J., A. Farhan, M. Mustafa, N. Javaid, **C. Darkoh**, Garrido-Sanabria E, Fisher-Hoch S.P., Briles D.E., Kantarci A., Mirza S. 2019. PspA facilitates evasion of pneumococci from bactericidal activity of neutrophil extracellular traps (NETs). *Microb Pathog*. 36:103653. doi: 10.1016/j.micpath.2019.103653. PMID:31398527.
24. Carstens\* C.K., J.K. Salazar, **C. Darkoh**. 2019. Multistate Outbreaks of Foodborne Illness in the United States Associated With Fresh Produce From 2010 to 2017. *Front Microbiol*. 10:2667. doi: 10.3389/fmicb.2019.02667. PMID: 31824454.
25. Onwona-Kwakye M., Plants-Paris\* K., Keita K., Lee\* J., Brink, P.J.V.D., Hogarh J.N., **Darkoh, C**. Pesticides Decrease Bacterial Diversity and Abundance of Irrigated Rice Fields. *Microorganisms*. 2020 Feb 25;8(3). doi: 10.3390/microorganisms8030318. PubMed PMID:32106524.
26. Amboree\*, T. L., **C. Darkoh**. 2021. Barriers to Human Papillomavirus Vaccine Uptake Among Racial/Ethnic Minorities: a Systematic Review, *Journal of Racial and Ethnic Health Disparities*, 8(5):1192-1207. PMID: 33025422.
27. Tadese\*, B., Nutt, A., Chaudhary, I., Offiong, C., **Darkoh, C**. (2021). Regional Outbreak of Multidrug-Resistant *Klebsiella pneumoniae* Carbapenemase-Producing *Pseudomonas aeruginosa*. *Infection Control & Hospital Epidemiology*, 1-3. PMID: 34593069. doi:10.1017/ice.2021.394
28. Amboree\*, T.L., Montealegre, J.R., Fujimoto, K., Mgbere, O., **Darkoh, C.**, Wermuth, P.P. 2022. Exploring Preventive Healthcare in a High-Risk Vulnerable Population. *Int. J. Environ. Res. Public Health*, 19, 4502. PMID: 33025422. <https://doi.org/10.3390/ijerph19084502>
29. **Darkoh C**, Keita\*, K., Odo\*, C., Oyaro, M., Brown, E.L., Arias, C.A., Hanson, B. M., DuPont, H. L. 2022. Emergence of Clinical *Clostridioides difficile* Isolates With Decreased Susceptibility to Vancomycin. *Clin Infect Dis*. 74(1):120-126. doi: 10.1093/cid/ciaa912. PMID: 35016207; PMCID: PMC8752249.

30. Tadese\* B. K., Olumuyiwa, T., **Darkoh, C.** 2022. Emergence of Dual and Multicarbapenemase Coproducing Organisms in the United States. *Antimicrob Steward Healthc Epidemiol.* 2(1): e19. doi: 10.1017/ash.2022.6. Epub 2022 February 3. PMID: 35274108; PMCID: PMC8903192.
31. Tadese\*, B.K., Fujimoto, K., DeSantis, S.M., Mgbere, O., **Darkoh, C.** 2022. Regional Transmission Patterns of Carbapenemase-Producing Enterobacterales: A Healthcare Network Analysis. *Infect Control Hosp Epidemiol.* 2022 Apr 22:1-7. doi: 10.1017/ice.2022.102. PMID: 35450553.
32. Amboree\*, T.L., Montealegre, J.R., Fujimoto, K., Mgbere, O., **Darkoh, C.**, Wermuth, P. P. 2022. Exploring Preventive Healthcare in a High-Risk Vulnerable Population. *Int J Environ Res Public Health.* 19(8):4502. doi: 10.3390/ijerph19084502. PMID: 35457380.
33. Alkhulaifi\*, F., **Darkoh, C.** 2022. Meal Timing, Meal Frequency and Metabolic Syndrome. *Nutrients.* 14(9):1719. doi: 10.3390/nu14091719. PMID: 35565686; PMCID: PMC9102985.
34. Amboree\*, T.L., Montealegre, J.R., Wermuth, P.P., Mgbere, O. Kayo Fujimoto, K., **Darkoh, C.**, 2022. Awareness of human papillomavirus and reported human papillomavirus vaccine uptake in a high-risk population, *Preventive Medicine Reports*, 28:101853. doi: 10.1016/j.pmedr.2022.101853. PMID: 35733608.
35. Tadese\*, B.K., **Darkoh, C.**, DeSantis, S.M., Mgbere, O., Fujimoto, K. 2022. Clinical Epidemiology of Carbapenem-Resistant Enterobacterales in the Greater Houston Region of Texas: A 6-year Trend and Surveillance Analysis. *J Glob Antimicrob Resist.* June 25, 2022; 30:222-227. doi: 10.1016/j.jgar.2022.06.019. PMID: 35764216.
36. Keita\*, K., **Darkoh, C.**, Okafor, F. 2022. Secondary plant metabolites as potent drug candidates against antimicrobial-resistant pathogens. *SN Appl Sci.* 2022;4(8):209. doi: 10.1007/s42452-022-05084-y. PMID: 35821909.
37. Carstens\*, C., Salazar, J., Sharma, S.V., Chan, W., **Darkoh, C.** 2022. Food Safety Attitudes, Behaviors, and Hygiene Measures among Predominantly Low-Income Parents. *J Food Prot.* doi: 10.4315/JFP-22-179. Online ahead of print. PMID: 36048912.
38. Carstens\*, C., Salazar, J., Sharma, S.V., Chan, W., **Darkoh, C.** 2022. Evaluation of the Kitchen Microbiome and Food Safety Behaviors of Predominantly Low-Income Families, *Frontiers in Microbiology*, DOI: 10.3389/fmicb.2022.987925. PMID: 36246211
39. Tadese\* BK, DeSantis SM, Mgbere O, Fujimoto K, **Darkoh C.** 2022. Clinical Outcomes Associated with Co-infection of Carbapenem-Resistant Enterobacterales and other Multidrug-Resistant Organisms. *Infect Prev Pract.* 2022 Oct 17;4(4):100255. doi: 10.1016/j.infpip.2022.100255. PMID: 36387607; PMCID: PMC9649373.
40. Amboree\* TL, Wermuth PP, Montealegre JR, Fujimoto K, Mgbere O, **Darkoh C.** Sexual Behaviors and Human Papillomavirus Vaccination in a Heterosexually

Active Adult Population at Increased Risk for HIV Infection. *Arch Sex Behav.* 2023 Feb;52(2):793-801. doi: 10.1007/s10508-022-02438-w. Epub 2022 October 18. PMID: 36255610.

41. Osaghae\*, I., **Darkoh, C.**, Onyema Greg Chido-Amajuoyi, O.G., Chan, W., Wermuth, P.P., Pande, M., Sonia A Cunningham, S.C., Shete, S., 2022. Association of provider HPV vaccination training with provider assessment of HPV vaccination status and recommendation of HPV vaccination. *Hum Vaccin Immunother.* October 20, 2022; 2132755. doi: 10.1080/21645515.2022.2132755. Online ahead of print. PMID: 36265005.
42. Osaghae\*, I., **C. Darkoh**, O. Chido-Amajuoyi, W. Chan, P. Wermuth, M. Pande, S. A. Cunningham, S. Shete. 2022. HPV Vaccination Training of Healthcare Providers and Perceived Self-Efficacy in HPV Vaccine-Hesitancy Counseling. *Vaccines* 2022, 10(12), 2025, <https://doi.org/10.3390/vaccines10122025>
43. Osaghae\*, I.; **Darkoh, C.**; Chido-Amajuoyi, O.G.; Chan, W.; Padgett Wermuth, P.; Pande, M.; Cunningham, S.A.; Shete, S. Healthcare Provider's Perceived Self-Efficacy in HPV Vaccination Hesitancy Counseling and HPV Vaccination Acceptance. *Vaccines* 2023, 11, 300. <https://doi.org/10.3390/vaccines11020300>
44. Adesoji AT, Mgbere O, **Darkoh C.** Pediatric Diarrhea Patients Living in Urban Areas have a Higher Incidence of *Clostridioides difficile* Infection. *PLOS Glob Public Health.* 2023 Jan 24;3(1): e0000477. doi: 10.1371/journal.pgph.0000477. PMID: 36962940; PMCID: PMC10022077.
45. Alkhulaifi\*, Fatema, Suad Al-Hooti, Sameer Al-Zenki, Husam AlOmirah, and **Charles Darkoh.** 2023. "Dietary Habits, Meal Timing, and Meal Frequency in Kuwaiti Adults: Analysis of the Kuwait National Nutrition Surveillance Data" *Nutrients* 15, no. 21: 4537. <https://doi.org/10.3390/nu15214537>
46. Mgbere O, Nwabuko OC, Olateju OA, Adepoju OE, Liaw W, Darkoh C, Essien EJ. Population-based assessment of the burden of COVID-19 infection in African countries: a first-year report card and public health implications. *Ther Adv Infect Dis.* 2023 Sep 28;10:20499361231202116. doi: 10.1177/20499361231202116. PMID: 37779674; PMCID: PMC10540606.
47. Vaziri\* C, Darkoh C. Environmental contamination contributing to the spread of vancomycin-resistant enterococci in nursing homes. *The Lancet.* 2023 Nov;4(11):e587-e588. doi: 10.1016/S2666-7568(23)00197-6. PMID: 37924838.
48. Alkhulaifi\* F, Al-Hooti S, Al-Zenki S, Alomirah H, Xiao Q, Chan W, Wu F, **Darkoh C.** Association of Nightly Fasting, Meal Frequency, and Skipping Meals with Metabolic Syndrome among Kuwaiti Adults. *Nutrients.* 2024 Mar 28;16(7):984. doi: 10.3390/nu16070984. PMID: 38613017; PMCID: PMC11013774.
49. Christina K. Carstens\*, Joelle K. Salazar, Shreela Sharma, Wenyaw Chan, and **Charles Darkoh.** 2024. Viability Discrimination of Bacterial Microbiomes in Home Kitchen Dish Sponges via Propidium Monoazide Treatment. *Environ Microbiol Reports.* (Accepted).

50. Ayodele T. Adesoji, Osaro Mgbere, and **Charles Darkoh**. 2024. Association between the Duration of Diarrhea and the Length of Hospitalization among *Clostridioides difficile* Patients in Northern Nigeria. *Acta Microbiologica Hellenica* (Accepted).

### **(III) Manuscripts In Review/Submitted**

1. Darkoh, Charles, C. Vaziri, M.O. Oyaro, H. L. DuPont. 2024. Unusual Vancomycin Persistence Among *C. difficile* Isolates Circulation in Patients Population. *Journal of Infectious Diseases* (Submitted).
2. Darkoh, Charles, C. Vaziri, M.O. Oyaro, O. Mgbere, H. L. DuPont. 2024. Co-Infecting Enterococci Degrade Metronidazole Thereby Increasing Disease Severity in Metronidazole-Treated *Clostridioides difficile* patients. *Clinical Infectious Diseases* (Submitted).
3. Catherine Vaziri, Charles Darkoh. 2024. A Deletion in *C. difficile* Hypervirulent Strain Genome Confers Resistance to Increased Fitness. *PNAS* (In preparation).
4. Kadiatou Keita, Florence Okafor, Darkoh, Charles. 2024. *Voacanga africa* Extract inhibits *C. difficile* Toxin synthesis and Activity. *Antimicrobial Agent and Chemotherapy* (In preparation).

### **(IV) Book Chapters**

1. **Darkoh, C.** and Odo\*, Chioma. 2016. The *Clostridium difficile* Toxins: Mechanism of Action and Immunopathogenesis: In *Protein Purification: Principles and Trends*. Chapter 11, IConcept Press Ltd. ISBN 978-1-922227-40-9.
2. **Darkoh, C.**, and Asiedu, G.A. 2015. Quorum Sensing Systems in Clostridia, p. 133-154. *In* V. C. Kalia (ed.), *Quorum Sensing vs Quorum Quenching: A Battle with No End in Sight*. Springer India. ISBN 978-81-322-1982-8.
3. **Darkoh, C.**, 2011. Isolation, purification, and characterization of gluten-specific enzyme from Sunn pest, *Eurygaster integriceps*. MS thesis. ProQuest. 106 pages. (ISBN-10: 1243420138, ISBN-13: 978-1243420138).
4. **Darkoh, C.** and Antwi-Boasiako, Kwame Badu. 2007. "Benin." *In* *Global Perspectives on the United States: A Nation-by-Nation Survey: Volume 1*, pp. 50-53. Edited by David Levinson and Karen Christensen, Great Barrington, MA: Berkshire Publishing Group.

\* = Student mentee



## **(V) Invitations and Abstract Presentations**

### **Peer-Reviewed Published Abstracts**

1. **Darkoh, C.**, L. M. Lichtenberger, N. Ajami, E. J. Dial, Z. D. Jiang, and H. L. DuPont. **2010**. Bile acids improve the bioavailability and bacteriostatic effect of rifaximin. *Gastroenterology*, Volume 138, Issue 5, Pages S-5.
2. Ajami, Nadim, H. Koo, **C. Darkoh**, R. L. Atmar, P. C. Okhuysen, Z. D. Jiang, J. Flores, H. L. DuPont. 2010. Characterization of norovirus-associated traveler's diarrhea. *Gastroenterology*, Volume 138, Issue 5, Pages S-629.

### **Presentations**

1. Guest Speaker, University of Nairobi (August 10, 2023). Immunopathogenesis of *Clostridioides difficile* infections, Nairobi, Kenya.
2. Guest Speaker, University of Nairobi (September 6, 2022). Status of *Clostridioides difficile* infections in Kenya, Nairobi, Kenya.
3. Speaker, 2nd Annual Texas Medical Center Antimicrobial Resistance Research and Stewardship Conference (January 23-25, 2019), Targeting Toxin Production and Toxin Activity as a Novel Non-Antibiotic Therapy for *Clostridium difficile* Infections, Bioscience Research Collaborative, Houston, Texas.
4. Guest Speaker, University of Texas Health Science Center at San Antonio (October 20, 2019). Interracial Modulation of the Gut Microbiota by *Clostridium difficile*: Impact on Pathogenesis and Treatment, San Antonio, Texas.
5. Speaker, 2nd Annual Texas Medical Center AMR and Stewardship Conference (January 23-25, 2019). Targeting Toxin Production and Toxin Activity as a Novel Non-Antibiotic Therapy for *Clostridium difficile* Infections. Houston, Texas.
6. Poster talk, ASM Microbe 2017, General Meeting of the American Society for Microbiology, (June 1-5, 2017). *Clostridium difficile* Modulates the Gut Microbiota by Inducing the Expression of Indole, an Inter-Kingdom Signaling and Antimicrobial Molecule, New Orleans, Louisiana.
7. Poster presentation, ASM Microbe 2017, General Meeting of the American Society for Microbiology, (June 1-5, 2017). *Clostridium difficile* Modulates the Gut Microbiota by Inducing the Expression of Indole, an Inter-Kingdom Signaling and Antimicrobial Molecule, New Orleans, Louisiana.
8. Guest speaker, 4<sup>th</sup> Annual International Raising C. *difficile* Awareness Conference and Health EXPO (September 20, 2016), Targeting Toxin Production and Toxin Activity as a Novel Non-Antibiotic Therapy for *Clostridium difficile* Infections, Atlanta, Georgia.

9. Invited speaker, Anaerobe 2016 (July 11-16th), Quorum sensing in *Clostridium difficile*, Nashville, Tennessee.
10. Invited speaker, Microbiology and Molecular Genetics Department Seminar Series, University of Texas Medical School (December 3, 2015). Regulating to Wreak Mayhem: The Case of *Clostridium difficile* Toxins, Houston, Texas.
11. 115th General Meeting of the American Society for Microbiology, (May 29-June 3, 2015). Agr Quorum Signaling-Dependent Regulation of *Clostridium difficile* Toxin Production and Pathogenesis, New Orleans, Louisiana.
12. Invited speaker, American Society for Microbiology, Texas Branch-Spring Meeting, (November 6-8, 2014). Uncovering the Role of Quorum Signaling in *Clostridium difficile* Pathogenesis, Houston, Texas.
13. Abstract presentation (October 18 - 21, 2014) American Society for Microbiology 5<sup>th</sup> ASM Conference on Cell-Cell Communication in Bacteria, Toxin Synthesis by *Clostridium difficile* is Stringently Regulated Through Quorum Signaling, San Antonio, Texas.
14. Guest speaker, Molecular Virology and Microbiology Seminar Series, Baylor College of Medicine, (November 21, 2013), A New Paradigm of *Clostridium difficile* Virulence and Pathogenesis, Houston, Texas.
15. Invited speaker, American Society for Microbiology, Texas Branch-Spring Meeting, (April 6, 2013). A New Paradigm of *C. difficile* Toxin Regulation, New Braunfels, Texas.
16. Texas Medical Center Digestive Diseases Center GI Forum (March 14, 2013). Harnessing the Power of the Community to Wreak Havoc: A New Paradigm of *C. difficile* Toxin Regulation. Baylor College of Medicine, Houston, Texas.
17. Oral presentation (March 19, 2012). Harnessing the Power of the Community to Wreak Havoc: The Case of *Clostridium difficile*. Texas A&M Institute of Biosciences, Houston, Texas.
18. Oral presentation (November 6-9, 2011). Regulation of Toxin Production in *Clostridium difficile*. American Society for Microbiology 4<sup>th</sup> ASM Conference on Cell-Cell Communication in Bacteria, Miami, Florida.
19. Oral presentation (November 10-12, 2011). Regulation of Toxin Production in *Clostridium difficile*. American Society for Microbiology-Texas Branch, University of Texas at Arlington, Arlington, Texas.
20. Oral presentation (June 28, 2011). Mechanism of Toxin Production in *Clostridium difficile*. Molecular Basis of Infectious Diseases Training Grant Summer Undergraduates research program. The University of Texas Health Science Center, Houston, Texas.
21. Oral presentation (March 24, 2011). Detection of Toxigenic *Clostridium difficile* by Harnessing the Glucosyltransferase Activities of its Toxins. Molecular Basis of Infectious Diseases Training Grant Retreat. The University of Texas Health Science Center, Houston, Texas.

22. Oral presentation (May 1-5, 2010). Bile acids improve the antimicrobial effect of rifaximin. American Gastroenterological Association, Digestive Diseases Week, Bile acids improve the bioavailability and bacteriostatic effect of rifaximin, New Orleans, Louisiana.
23. Poster presentation (March 26, 2010): Molecular Basis of Infectious Diseases (MBID) Retreat, Bile acids improve the Bioavailability and Bacteriostatic Effect of Rifaximin, Houston, Texas.
24. Oral presentation (June 30, 2010). Quorum sensing-mediated regulation of toxin production in *C. difficile*. Molecular Basis of Infectious Diseases (MBID) Summer Undergraduate program, Houston, Texas.
25. Poster presentation (April 25, 2008): Bright Ideas Conference, Stephen F. Austin State University, Characterization and purification of prolylendopeptidase from *Eurygaster integriceps*, Nacogdoches, Texas.
26. Poster presentation and Graduate Student Volunteer (February, 2008): Joint 52nd Annual Meeting of the Biophysical Society and 16th IUPAB International Biophysics Congress, Characterization and purification of prolylendopeptidase from *Eurygaster integriceps*, Long Beach, California.

## **(VI) Research Support**

### **Current Research Support**

1. **Title:** Characterizing Vancomycin-Resistant *C. difficile* Strains at Two Geographically Distinct Locations.  
**Funding agency:** NIH-NIAID R01 Grant #: R01AI150685  
**Goal:** Characterize vancomycin resistance in *Clostridioides difficile*.  
**Project period:** April 1, 2021 – March 31, 2026  
**Role:** Principal Investigator  
**Direct cost:** \$ 2,433,685.00
2. **Title:** Polyclonal antibodies for *Clostridioides difficile* infections  
**Funding agency:** Wellcome Trust  
**Goal:** Evaluate polyclonal antibodies for the treatment of patients infected by *Clostridioides difficile*.  
**Project period:** 12/01/2023-10/31/2025  
**Role:** Principal Investigator  
**Direct cost:** \$2,275,000.00
3. **Title:** Molecular Basis of Infectious Diseases Training Grant  
**Funding agency:** NIH-INRSA Grant # T32AI055449  
**Goal:** Train new scientists in microbiological research and current challenges in clinical infectious diseases.

**Project Period:** 09/15/2005 – 05/31/2026

**Role:** Co-investigator. Principal Investigator(s): Theresa M. Koehler, Ph.D.; Steven J. Norris Ph.D. (contact person)

4. **Title:** Texas Medical Center Training Program in Antimicrobial Resistance  
**Funding agency:** NIH-INRSA Grant # T32AI141349  
**Goal:** Train new scientists in antimicrobial resistance research  
**Project Period:** 07/01/2019 – 06/30/2024  
**Role:** Co-investigator. Principal Investigator: Cesar Arias (contact person)
5. **Title:** Emergency and Everyday Use of Elastomeric Respirators in Healthcare  
**Funding agency:** Centers for Disease Control (National Institutes of Health)  
**Goal:** Evaluate disinfecting methods for elastomeric respirators for use by healthcare workers.  
**Project period:** 09/01/2018-10/31/2023  
**Role:** Co-Investigator  
**Direct cost:** \$696,833.00

### **Completed Research Support**

1. **Title:** Targeting the Toxins: A Novel Non-Antimicrobial Approach to Combat *Clostridium difficile* Infections.  
**Funding agency:** NIH-NIAID R01 Grant # R01AI116914  
**Goal:** Develop a novel non-antibiotic treatment for *C. difficile* infections by targeting both toxin production and toxin activity.  
**Project period:** June 15, 2015 - May 31, 2021  
**Role:** Principal Investigator
2. **Title:** Development of a Novel One-Step Method for Detection and Isolation of Active Toxin-Producing *Clostridium difficile* Strains Directly from Stool Samples.  
**Goal:** Develop a diagnostic test for *Clostridium difficile* infections.  
**Funding agency:** University of Texas Pioneer Award  
**Project period:** November 2012- September 2019  
**Role:** Principal Investigator
3. **Title:** The Role of Acyloxyacyl Hydrolase in the Pathogenesis of Irritable Bowel Syndrome  
**Funding agency:** Gillson-Longenbaugh Foundation  
**Goal:** Investigate the role of acyloxyacyl hydrolase and genetic alterations in the pathogenesis of irritable bowel syndrome.  
**Project period:** January 1, 2013- January 1, 2019  
**Role:** Principal Investigator

4. **Title:** Mechanism of *Clostridium difficile* Pathogenesis  
**Goal:** Investigate the mechanism of toxin synthesis regulation in *Clostridium difficile*.  
**Funding agency:** The University of Texas Health Science Center at Houston School of Public Health Prime Award  
**Project period:** April 2013 - April 2014  
**Role:** Principal Investigator
5. **Title:** Quorum Signaling-Mediated Regulation of *Clostridium difficile* Toxin Production  
**Goal:** Elucidate the quorum-signaling compound responsible for toxin synthesis regulation in *Clostridium difficile*.  
**Funding agency:** Texas Medical Center Digestive Diseases Center Pilot/Feasibility Grant  
**Project period:** February 2013 - January 2014  
**Role:** Principal Investigator

#### **Pending Awards/Applications**

1. **Title:** Center for Antimicrobial Resistance and Emerging Infectious Diseases in Africa
2. **Funding agency:** NIH-NIAID U01 Grant  
**Goal:** Establish a center for infectious diseases and pandemic preparedness.  
**Project period:** June 1, 2025 – May 31, 2030  
**Role:** Principal Investigator  
**Direct cost:** \$ 6,151,420.00
3. **Title:** Anti-virulence Compounds Targeting *Clostridioides difficile*  
**Funding agency:** NIH-NIAID R01 Grant #: 1 R01 AI183193-01  
**Goal:** Preclinically evaluate anti-virulence compounds to develop a novel treatment for *C. difficile* infections.  
**Project period:** April 1, 2025 – March 31, 2030  
**Role:** Principal Investigator  
**Direct cost:** \$ 1,923,180.00

#### **Submitted but not funded.**

1. **Title:** Insight into the Regulation of *C. difficile* Toxin Production and Virulence  
**Funding agency:** NIH-NIAID R01 Grant #: 1R01AI150704-01  
**Goal:** Characterize *Clostridium difficile* virulence-associated genes to uncover their roles in pathogenesis.  
**Project period:** April 1, 2020 – March 31, 2025  
**Role:** Principal Investigator  
**Direct cost:** \$ 1,951,641.00

2. **Title:** Indole-Mediated Protection of Host Cells from Cryptosporidium Infection  
**Funding agency:** NIH-NIAID  
**Goal:** Examine the role of indole in Cryptosporidium Infections  
**Project period:** September 1, 2018 – August 31, 2020  
**Role:** Principal Investigator  
**Direct cost:** \$275,000.00
3. **Title:** Molecular Epidemiology and Pathogenesis of *Clostridium difficile* in Kenya  
**Funding agency:** NIH-NIAID R01 Grant #: 1R01AI143549-02  
**Goal:** Characterize the epidemiology and pathogenesis of *Clostridium difficile* infections in Kenya.  
**Project period:** March 1, 2020 – February 1, 2025  
**Role:** Co-Investigator  
**Direct cost:** \$675,000.00
4. **Title:** Optimizing Novel Anti-Virulence Drugs for the Treatment of *Clostridium difficile* Infections  
**Funding agency:** NIH-NIAID R21 Grant # RAI121608A  
**Goal:** Develop anti-virulence drugs for the treatment of *Clostridium difficile* infections.  
**Project period:** December 1, 2015 - November 30, 2020  
**Role:** Principal Investigator  
**Direct cost:** \$1,175,000.00
5. **Title:** Regulation of *Clostridium difficile* Toxin Synthesis and Pathogenesis  
**Funding agency:** NIH-NIAID R01 Grant # RAI119033A  
**Goal:** To elucidate the mechanisms of regulation of *Clostridium difficile* toxin synthesis  
**Project period:** April 1, 2015 - March 31, 2020  
**Role:** Principal Investigator  
**Direct cost:** \$1,250,000.00
6. **Title:** Mechanism of *Clostridium difficile* Toxin Production and Pathogenesis  
**Funding agency:** NIH-NIAID DP5 Grant # DOD017939A  
**Goal:** To elucidate the mechanisms of regulation of *Clostridium difficile* toxin synthesis  
**Project period:** September 1, 2013 - August 2018  
**Role:** Principal Investigator  
**Direct cost:** \$1,250,000.00
7. **Title:** Novel Non-Antibiotic Approach to Combat *Clostridium difficile* Infections  
**Funding agency:** NIH-NIAID R21 Grant # RAI113414A  
**Goal:** To evaluate non-antibiotic compounds for the treatment of *Clostridium difficile* infections

**Project period:** April 1, 2015 - March 31, 2017  
**Role:** Principal Investigator  
**Direct cost:** \$275,000.00

## **D. ACADEMIC AND PROFESSIONAL HONOR/AWARDS/SCHOLARSHIPS**

### **Faculty Awards**

1. **R. Palmer Beasley, MD and Lu-Yu Hwang, MD, Endowed Chair in Infectious Diseases and Global Health, 2022.**
2. **Carnegie African Diaspora Fellowship. 2017.**
3. **R. Palmer Beasley, M.D. Faculty Award for Innovation (2015).** The University of Texas Health Science Center at Houston, School of Public Health. Recognizes faculty members who exemplify innovative research in the field of public health.

### **Graduate student awards**

1. **Dean's Research Scholarship Award (2012).** University of Texas Medical School at Houston, Texas. Recognizes senior graduate students in good academic standing, who have achieved distinction in biomedical research.
2. **Robert W. and Pearl Wallis Knox Charitable Foundation Scholarship (2012).** University of Texas Graduate School of Biomedical Sciences. Honors a promising student in good academic standing whose research is in the area of infectious diseases in humans.
3. **Thomas F. Burks Scholarship for Academic Merit (2011-2012).** A competitive university-wide scholarship awarded for excellence and academic achievement. University of Texas Health Science Center at Houston.
4. **S. E. Sulkin Medical Microbiology Award (2011-2012).** First Place in oral presentation and outstanding scientific achievement, The Texas Branch of American Society for Microbiology. University of Texas at Arlington, Arlington, Texas.
5. **UTHealth Golf Tournament Scholarship (2011).** University of Texas of Health Science Center. A competitive award given to graduate students with good academic standing.
6. **American Society for Microbiology Travel Award (2011).** Oral presentation at 4<sup>th</sup> ASM Conference on Cell-Cell Communication in Bacteria, November 6-9, 2011, Miami, Florida.
7. **UNCF/MERCK Graduate Science Research Fellowship Award (2011).** UNCF/MERCK Science Initiative, a nationally competitive award to recognize and support outstanding African Americans pursuing studies in research in the biological, chemical, and engineering sciences.

8. **The Ralph H. and Ruth J. McCullough Foundation Fellowship Award.** Honors an outstanding doctoral graduate student whose novel research possesses a high potential to impact biomedical sciences in the area of infectious diseases (2010-2011). The University of Texas Health Science Center, Houston, Texas.
9. **Molecular Basis of Infectious Diseases (MBID) Training Grant award** (2009-2011). A competitive National Institutes of Health sponsored predoctoral training fellowship that supports outstanding predoctoral students in bacterial pathogenesis and molecular basis of infectious diseases. 2009-2011. University of Texas Health Science Center, Houston, Texas.
10. **University of Texas Health Center Student Inter-Council Scholarship.** 2011. A competitive award given to graduate students with good academic standing.
11. Elected member, Beta Beta Beta (Tri Beta) National Biological Honor Society, 2007

### **Professional Membership**

1. Member, The American Society for Microbiology, 2008-present
2. Member, American Association for the Advancement of Science, 2008-present
3. Member, American Gastroenterological Association, 2012-present
4. Member, Biophysical Society, 2006
5. Elected member, Golden Key International Honor Society, 2007

### **E. TEACHING**

1. Laboratory Methods: Applications and Implications to Public Health (PH-2785), The University of Texas Health Science Center at Houston School of Public Health, Course Director, twice yearly, 2012-present (teaching effort = 100%).
2. Epidemiology I (PHWM 2612L), The University of Texas Health Science Center at Houston School of Public Health, Course Director, Summer 2020-present (teaching effort = 100%)
3. Public Health Medical Microbiology (PH2805). The University of Texas Health Science Center at Houston School of Public Health, Course Co-Director, Spring 2017-present (teaching effort = 50%).
4. Microbial Pathogenesis, Baylor College of Medicine, Molecular Virology and Microbiology Program Course, Guest Lecturer, 2013-present.
5. Topics of Infectious Diseases, The University of Texas Health Science Center at Houston School of Public Health, Guest Lecturer, 2015-present.
6. Epidemiology I, The University of Texas Health Science Center at Houston School of Public Health, Guest Lecturer, Fall 2016-present.



## **F. STUDENT MENTORING**

### **(I) Current Ph.D. Students**

1. Ezinne Onuoha, Ph.D. in Epidemiology, Spring 2018-present.
2. Emily White, Ph.D. in Epidemiology, Fall 2019-present.
3. Kimberly Sonia Plants-Paris, Ph.D. in Epidemiology, Fall 2019- present.
4. Jessica Lee, Ph.D. in Epidemiology, Fall 2019-present.
5. Modupe Onigbogi, Ph.D. in Epidemiology, Fall 2020-present.
6. Magdalena Deaton, Ph.D. in Epidemiology, Fall 2021-2024.
7. Jovita O. Echere, Ph.D. in Epidemiology, Fall 2022-present.
8. Fatima T. Z. Makkia, Ph.D. in Epidemiology, Fall 2022-present.
9. Amanda Ojaruega, Ph.D. in Epidemiology, Fall 2022-present.
10. Angela Zieba, Ph.D. in Epidemiology, Fall 2022-2024.
11. Ifeyinwa Denise Eboh, Ph.D. in Epidemiology, Fall 2022-present.
12. Angelica Ikejiaku, Ph.D. in Epidemiology, Fall 2024-present.

### **(II) Current MS/MPH Students**

1. Nicole Felix, MPH in Epidemiology, Fall 2021-present.
2. Yomy Mexicano, MPH in Epidemiology, Fall 2021-present.
3. Deshmukh, Indraneel Abhijit, MPH in Epidemiology, Fall 2023-present.
4. Michael Efemena Diejomaoh, MPH Epidemiology, Fall 2023-present.
5. Tarique Azeez Tabaan, MPH Epidemiology, Fall 2024-present.
6. David Maly, MPH Epidemiology, Fall 2024-present.

### **(III) Ph.D. Students Graduated**

1. Fatema Alkhulaifi, Ph.D. in Epidemiology, Fall 2018-2024, graduated May 2024.
2. Ikponmwosa Osaghae, Ph.D. in Epidemiology, Fall 2019-2023, graduated May 2023.
3. Christina Carstens, Ph.D. in Epidemiology, Fall 2017- 2022, graduated May 2022.

4. Bekana Tadese, Ph.D. in Epidemiology, Fall 2017-2022, graduated May 2022.
5. Trisha Amboree, Ph.D. in Epidemiology, Fall 2018-2022, graduated May 2022.
6. Hassan Oubote Sangbana, Ph.D. in Epidemiology, Fall 2015- 2020, graduated May 2020.
7. Arielle Hernandez, Ph.D. in Epidemiology, Fall 2016-2020, graduated May 2020.
8. Sharath Sherene Esther, Ph.D. in Epidemiology, Fall 2013- 2018, graduated August 2017.
9. Tsai, I-Hsuan, Ph.D. Epidemiology, Fall 2013-2014, graduated December 2014.

**(IV) MS/MPH Students Graduated**

1. Insia Raza, MPH in Epidemiology, Fall 2020-2024.
2. Urvi Vijay Mehta, MPH in Epidemiology, Fall 2021-2024.
3. Mace Adams, MPH in Epidemiology, Fall 2022-2024.
4. Shamanta R. Shivpura, MPH in Epidemiology, Fall 2021-August 2023.
5. Sara Ehsan, MPH in Epidemiology, Fall 2021-August 2023.
2. Adina Passy, MPH in Epidemiology, Fall 2021-2023, graduated May 2023.
3. Binh Tu Chau, MPH in Epidemiology, Fall 2020-2023, graduated May 2023.
4. Catherine Vaziri, MPH in Epidemiology, Fall 2020-2023, graduated May 2023.
5. Kalpana Karthikeyan, MPH in Epidemiology, Fall 2021-2023, graduated May 2023.
6. Ganiat Davies, MPH in Epidemiology, Fall 2020-2022, graduated August 2022.
7. Helen Conforti, MPH in Epidemiology, Spring 2020-2022, graduated May 2022.
8. Kate Benandi, MPH in Epidemiology, Fall 2020-2022, graduated May 2022.
9. Anna Beningo, MPH in Epidemiology, Fall 2018-2021, graduated May 2021.
10. Ayesha Mahmood, MS in Biomedical Sciences, Fall 2018-2020, graduated August 2020.
11. Oluwayemisi Adeyinka Aladejare, MPH in Epidemiology, Spring 2018-2020, graduated May 2020.
12. Grace of God Innocent-Utulu, MPH in Epidemiology, Fall 2018-2020, graduated May 2020.

13. Shafwanur Rahman, MPH in Epidemiology, Fall 2018-2020, graduated May 2020.
14. Emily White, MPH in Epidemiology, Fall 2016-2018, graduated May 2019
15. Kimberly Sonia Plants-Paris, MS in Epidemiology, Fall 2016- 2019, graduated May 2019.
16. Magdalena R. Deaton, MPH in Epidemiology, Fall 2016- 2019, graduated May 2019.
17. Rotem Magal, MS in Epidemiology, Fall 2016-2019, graduated May 2019.
18. Jessica Lee, MPH in Epidemiology, Fall 2016-2019, graduated May 2019.
19. Chioma Odo, MS in Biomedical Sciences, Fall 2016-2018, graduated August 2018.
20. Virginia K Lachman, MPH in Epidemiology, Spring 2016- 2018, graduated May 2018.
21. Ezinne Onuoha, MPH in Epidemiology, Fall 2016-2018, graduated December 2017.
22. Beena Vikas Shirole, MPH in Epidemiology, Fall 2015- 2017, graduated August 2017.
23. Feofanova, Elena Valeryevna, MS in Epidemiology, Fall 2013-2015, graduated August 2015.
24. Adegboyega Olaoluwa Oluwatobi, MPH in Epidemiology, Fall 2013- 2015, graduated May 2015.
25. Akpalu, Yao, MPH in Epidemiology, Fall 2013- 2015, graduated August 2015.
26. Ana Gomez-Rubio, MPH in Epidemiology, Fall 2013- 2015, graduated August 2015.

### **Individual Study/Practicum/Culminating Experience/Tutorial**

1. Grace of God Innocent-Utulu, MPH in Epidemiology, Spring 2020.
2. Magdalena R. Deaton, MPH in Epidemiology, Fall 2018
3. Oluwayemisi Adeyinka Aladejare, MPH in Epidemiology, Fall 2018
2. Jessica Lee, MPH in Epidemiology, Fall 2018
3. Beena Vikas Shirole, MPH in Epidemiology, Summer 2017
4. Emily White, MPH in Epidemiology, Summer 2017
5. April H. Nguyen, Ph.D. Biomedical Sciences, GSBS Tutorial, Summer 2016
6. Data B. Don-Pedro, MPH in Occupational and Environmental Health, Individual Study, Spring 2016

7. Freida Okyere, MPH in Occupational and Environmental Health, Individual Study, Spring 2016
8. Kimberly S. Paris-Plants, MS in Epidemiology, Individual Study, Fall 2015
9. Ammar Saigal, Individual Study, Fall 2015
10. Yao Akpalu, MPH in Epidemiology, Culminating Experience, Summer 2015
11. Ana M. Gomez-Rubio, MPH in Epidemiology, Culminating Experience, Summer 2015
12. Yao Akpalu, MPH in Epidemiology, Culminating Experience, Spring 2015
13. Ana M. Gomez-Rubio, MPH in Epidemiology, Culminating Experience, Spring 2015
14. Oluwatobi O. Adeboyega, MPH in Epidemiology, Practicum, Fall 2014
15. Ana M. Gomez-Rubio, MPH in Epidemiology, Culminating Experience, Fall 2014
16. Heather T. Essigmann, MPH in Epidemiology, Practicum, Spring 2014
17. Ana M. Gomez-Rubio, MPH in Epidemiology, Practicum, Spring 2014
18. Saroochi Agarwal, Ph.D. in Epidemiology, Individual Study, Fall 2012

### **Graduated Students with Dissertation/Thesis**

1. Ikponmwosa Osaghae, Ph.D. in Epidemiology  
Dissertation Title: Leveraging the Role of Healthcare Providers to Increase HPV Vaccine Uptake in Texas.  
Role: Committee Chair
2. Carstens Christina, Ph.D. in Epidemiology  
Dissertation Title: Demographic Determinants of Food Safety Behaviors And Bacterial Contamination of Domestic Kitchens Among Low-Income Families.  
Role: Committee Chair
3. Bekana Tadese, Ph.D. in Epidemiology  
Dissertation Title: Clinical Epidemiology and Regional Transmission of Carbapenem-Resistant Enterobacteriales in Texas.  
Role: Committee Chair
4. Trisha Amboree, Ph.D. in Epidemiology  
Dissertation Title: Exploring Human Papillomavirus Vaccination in a Population at High Risk for HIV Infection.  
Role: Committee Chair
5. Hassan Oubote Sangbana, Ph.D. in Epidemiology

Dissertation Title: Determining the Driver of Quality of Life in HIV Patients Treated With Antiretroviral Therapy in Sub-Saharan Africa  
Role: Committee Chair

6. Arielle Hernandez, Ph.D. in Epidemiology  
Dissertation Title: Epidemiological Evaluation of the National Sickle Cell Screening Program in the Republic of Uganda  
Role: Committee Chair
7. Kimberly S. Paris-Plants, MS Epidemiology.  
Thesis Title: Oxidative Stress Response in *Clostridium difficile* and its Implication in Pathogenesis  
Role: Committee Chair
8. Rotem Magal, MS in Epidemiology  
Thesis Title: Understanding the Similarity and Diversity of the Accessory Gene Regulator Quorum Sensing Systems in the Genus *Clostridium*  
Role: Committee Chair
9. Sharath Sherene Esther, Ph.D. in Epidemiology  
Thesis Title: Factors Associated with Adherence to Claudication Therapy Among Veterans-The FAACT Study  
Role: Committee Chair
10. Chioma Odo, MS in Biomedical Sciences  
Thesis Title: Characterization of Metronidazole- and Vancomycin-Resistant Clinical Isolates of *Clostridium difficile*  
Role: Thesis Advisor
11. Feofanova, Elena Valeryevna, MS Epidemiology  
Thesis Title: A Large-scale Candidate Gene Association Study of Blood Pressure Change in Children and Adolescents.  
Role: Academic Advisor/Thesis Committee member
12. Akpalu, Yao, MPH in Epidemiology  
Thesis: Buruli Ulcer: Insight Into the Epidemiology, transmission, Prevention, and Control  
Role: Thesis Advisor
13. Ana Gomez-Rubio, MPH Epidemiology  
Thesis: Incidence of Bacterial Tracheitis in Pediatric Patients with Artificial Airways  
Role: Thesis Advisor

## **Dissertation/Thesis Committee Membership**

1. Erika, Flores, Ph.D., Microbiology and Infectious Diseases, MD Anderson UTHealth Graduate School of Biomedical Sciences, 2018- present  
Dissertation Title: The Role of Muc2 Sulfation in Shaping the Adherence and Colonization of Adherent-invasive *E. coli* in the Gut.  
Role: Committee member
2. Chukwuemeka Ezeikpe Nwackwu, Ph.D. Epidemiology, UTHealth School of Public Health, graduated in May 2021.  
Dissertation Title: Evaluating and Improving the Hepatitis B Virus Perinatal Transmission Prevention Program in Nigeria.  
Role: Committee member
3. Feofanova, Elena Valeryevna, MS Epidemiology, Graduated in August 2015  
Thesis Title: A Large-scale Candidate Gene Association Study of Blood Pressure Change in Children and Adolescents  
Role: Committee member
4. Heather T. Essigmann, MPH Epidemiology, graduated in December 2015  
Thesis Title: *Clostridium difficile* Quorum Sensing Molecule on Growth and Virulence Factor Production in *Staphylococcus aureus*  
Role: Committee member
5. Rahman Mohammed, Ph.D. Biostatistics, graduated in May 2015  
Dissertation Title: Sparse Structural Equations and Integrated Genomic and Epigenomic Analysis  
Role: External reviewer
6. Tsai, I-Hsuan, Ph.D. Epidemiology, graduated in December 2014  
Dissertation Title: The Factors for Social Participation in People with Spinal Cord Injury  
Role: Committee member

## **G. SERVICE TO THE INSTITUTION, SCHOOL, PROFESSION, AND COMMUNITY**

### **(I) Service to the Profession and Grant Review Panels**

#### **National Institutes of Health Grant Review Panel/Study Sections**

1. Member, Topics in Bacterial Virulence, 2024/05 ZRG1 BV-Y (91) S, 04/18/2024, National Institutes of Health.

2. Member, Topics in Drug Discovery and Molecular Pharmacology, 2024/10 ZRG1 DCAI-U (90) S, 07/15/2024, National Institutes of Health.
3. Member, NIH Director's New Innovator Award Program (DP1), 2024/05 ZRG1 MBBC-N (70) R, Center for Scientific Review Special Emphasis Panel.
4. Member, National Institute of Allergy and Infectious Diseases Special Emphasis Panel, Support for Research Excellence (SuRE) Award (R16) 2024/01 ZAI1 MMO-D (J1)1, November 7, 2023.
5. Member, 2023/10 ZRG1 AIRT-J (01) Q, Anti-Infective Resistance and Targets Study Section, National Institutes of Health, June 13-14, 2023.
6. Member, NIH Director's New Innovator Award Program (DP1), 2023/05 ZRG1 MBBC-N (70) R, Center for Scientific Review Special Emphasis Panel, April 3-5, 2023.
7. Member, 2023/01 ZAI1 RK-M (J1) 1: NIAID Clinical Trial Planning Grants (R34); NIAID SBIR Phase II Clinical Trial Implementation Cooperative Agreement (U44); NIAID Clinical Trial Implementation Cooperative Agreement (U01), National Institutes of Health, October 18, 2022.
8. Adhoc Member, 2022/05 ZRG1 DDR-B (01): Drug Discovery and Mechanisms of Antimicrobial Resistance Study Section, National Institutes of Health, March 1-2, 2022.
9. 2022/10 ZRG1 DDR-C (01) Q: Drug Discovery and Mechanisms of Antimicrobial Resistance Study Section, National Institutes of Health, June 23-24, 2022.
10. 2022/05 ZRG1 CVRS-B (70)S, NIH Director New Innovator Award Program (DP2), May 2022.
11. 2022/05 ZRG1 BCMB-N (50) R, RFA-RM-21-015: 2022 Pioneer Award Review.
12. Member, P01 SAS-M J1 Review Meeting, NIAID Investigator-Initiated Program Project Applications, National Institutes of Health, September 27-28, 2021.
13. Member, NIH Director's New Innovator Award Program (DP2), 2021/05 ZRG1 CVRS-A (70) S, March 16-17, 2021.
14. Member, 2020/10 ZRG1 IDM B81 Review Meeting, Topics in Bacterial Pathogenesis Study Section, National Institutes of Health, June 30, 2020.
15. Member, IDM-B (81) Review Meeting, Topics in Bacterial Pathogenesis Study Section, National Institutes of Health, March 13, 2020.

16. Member, ZRG1 IDM-U (02) M, Drug Discovery, Clinical, and Field Research Special Emphasis Panel Study Section, National Institutes of Health, December 10, 2019.
17. Member, 2019/10 ZRG1 IDM-B (02) M, Member Conflict: Bacterial Pathogenesis Study Section, National Institutes of Health, July 10, 2019.
18. Member, ZRG1 IDM-S 02 M, Member Conflict: Topics in Drug Discovery and Clinical Field Studies Study Section, National Institutes of Health, November 19, 2018.
19. Ad hoc member, Scientific Review Group, Drug Discovery and Mechanisms of Antimicrobial Resistance (DDR) Study Section, National Institutes of Health, June 2017.
20. Ad hoc member, Review Panel, International Research in Infectious Diseases, National Institutes of Health, November 2016.
21. Reviewer- Research Proposals, Czech Health Research Council, Ministry of Health, Czech Republic, September 2016-Present.
22. Ad hoc member, Scientific Review Group, Bacterial Pathogenesis Study Section, National Institutes of Health, June 2016.
23. Member, Scientific Review Board of the Rehabilitation Research and Development Service, Spinal Cord Injury and Neuropathic Pain Panel, U.S. Department of Veterans Affairs, 2015.

### **Journal Editorial Membership**

1. Member, Board of Editors, mBio, July 2023-present
2. Editorial Board member, Journal of Antimicrobial Agents and Chemotherapy, American Society for Microbiology, 2021-present.
3. Associate Editor, Frontiers in Gastroenterology, 2021-present.

### **Journals Peer Review**

I have reviewed manuscripts for the following journals:

1. The Lancet
2. mBio
3. PLOS Pathogens
4. Journal of Infectious Diseases
5. Antimicrobial Agents and Chemotherapy
6. mSphere



7. Clinical Microbiology and Infection
8. BMC Microbiology
9. Clinical Infectious Diseases
10. Infection and immunity
11. Journal of Clinical Microbiology
12. PLOS One
13. Journal of Bacteriology
14. Pathogens
15. Microbial Pathogenesis
16. Gastroenterology

**(II) Service to the Institution--University of Texas Health Science Center (UTHealth) at Houston**

1. Member, Admissions Committee, School of Public Health, University of Texas Health Science Center, 2020-present.
2. Member, Microbiology and Infectious Diseases Program Admission Sub-Committee, MD Anderson Cancer Center UTHealth Graduate School of Biomedical Sciences, 2017-present.
3. Member, Membership Committee, University of Texas MD Anderson Cancer Center UTHealth Graduate School of Biomedical Sciences, 2020-present.
4. Member, Radiation Safety Committee, University of Texas Health Science Center, 2012-present.
5. Member, Admissions Committee, University of Texas MD Anderson Cancer Center UTHealth Graduate School of Biomedical Sciences, 2016-2020.
6. Member, Microbiology and Infectious Diseases Program Steering Committee, MD Anderson Cancer Center UTHealth Graduate School of Biomedical Sciences, 2017-2021.
7. Member, Academic Standards Committee, University of Texas Graduate School of Biomedical Sciences, 2011-2012.

**(III) Service to the UTHealth School of Public Health**

1. Member, Admissions Committee, School of Public Health Epidemiology Program, University of Texas Health Science Center, 2020-present.
2. Member, The Inclusion, Diversity, Equity, and Advocacy (IDEA) Committee, The University of Texas Health Science Center, School of Public Health, 2018-2023.

3. Chair, Faculty Diversity Committee, The University of Texas Health Science Center, School of Public Health, 2014-2018.
4. Poster Judge, The University of Texas Health Science Center, School of Public Health, Student Research Day, March 31, 2016.
5. Poster Judge, The University of Texas Health Science Center, School of Public Health, Student Research Day, April 6, 2017.

#### **(IV) Service to the Community**

1. Media interview: Contagion Live  
Title: *Clostridium difficile* Infections and Pathogenesis  
Date: August 17, 2016
2. Media interview: Boston Globe  
Title: *Clostridium difficile* infections  
Date: August 16, 2016
3. Media interview: Science News  
Title: *Clostridium difficile* infections  
Date: August 12, 2016
4. Media interview: Science Daily  
Title: *Clostridium difficile* infections  
Date: July 22, 2016