

College of Veterinary Medicine

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EDUCATION/TRAINING

Institution and Location	Degree	Graduation Year	Major
Alabama State University	Ph.D.	2021	Microbiology
Tuskegee University	M.Sc.	2006	Immunotoxicology
Khartoum University	B.Sc.	1993	Veterinary Science

TEACHING

VMED-0819 Infection and Immunity III Bacteriology and Mycology Lecture

RESEARCH INTERESTS

My research interest lies in elucidating the intricate molecular mechanisms employed by hgcAB genes to catalyze mercury (Hg) methylation. Specifically, I aim to unravel the roles of hgcA and hgcB in serving as methyl group and electron donors, respectively, within the proposed microbial methylation pathway. Furthermore, I intend to explore the Hg-ligand interactions and exchange processes, shedding light on their influence on Hg speciation and intake mechanisms in methylating bacteria. This investigation holds promise for developing strategies to interfere with Hg methylation, thereby mitigating methylmercury (MeHg) synthesis in the environment and curbing its accumulation in the food chain.

PUBLICATIONS

- Benefield, D., **Abdelmageed, Y.**, Fowler, J., Smith, S., Arias-Parbul, K., Dunning, C., & Rowe, G. C. (2023). Adult skeletal muscle PRC is involved in maintaining mitochondrial content. *American Journal of Physiology-Regulatory, Integrative, and Comparative Physiology*.
- **Y. Abdelmageed**, Carrie Miller, Alexander Johs, and Boakai Robertson. (2021) Mercury Methylation by Desulfomonile tiedjei DCB-1 and Biochar Effects on Methylmercury Production. It was submitted to the Environmental Toxicology Journal.
- **Abdelmageed, Y.** et al., *Assessing Microbial Communities Related to Mercury Transformations in Contaminated Streambank Soils*. Water, Air, & Soil Pollution, 2021. **232**(1): p. 1-15.
- Egbo, T. E., Johs, A., Sahu, R., **Abdelmageed, Y.**, Ogbudu, J., & Robertson, B. K. (2021). Interaction of Soil Microbes with Organoclays and their Impact on the Immobilization of Hg under Aerobic Conditions. *Water, Air, & Soil Pollution*, 232(4), 1-9.
- Timothy E Egbo & Carrie A Sanders, **Y. Abdelmageed**, Ali Saber, Rajnish Sahu & Boakai K Robertson, 2019. "Strategies for Remediating Environmental Pollution, and Applicable Indicators for Identifying them: Mini Review," Biomedical Journal of Scientific & Technical Research, Biomedical Research Network+, LLC, vol. 13(3), pages 9926-9935, January.
- Heath, John & **Abdelmageed, Y** & Braden, Tim & Goyal, Hitesh. (2012). The Effects of Chronic Ingestion of Mercuric Chloride on Fertility and Testosterone Levels in Male Sprague Dawley Rats. *Journal of biomedicine & biotechnology*. 2012. 815186. 10.1155/2012/815186.
- Heath, John, **Y. Abdelmageed**, Tim Braden, Carol Williams, John W. Williams, Tessie Paulose, Isabel H. Ochoa, Rupesh Gupta, Jodi A. Flaws, and Hari O. Goyal. "Genetically-Induced Estrogen Receptor Alpha (ESR1) Overexpression Does Not Adversely Affect Fertility or Penile Development in Male Mice." (2010): 273-273.
- Heath, J. C., **Abdelmageed, Y.**, Braden, T. D., Nichols, A. C., Steffy, D. A. (2009). The effects of chronic mercuric chloride ingestion in female Sprague Dawley rats on fertility and reproduction. *Food and Chemical Toxicology*, 47(7):1600-1605.
- Heath, J. C., **Abdelmageed, Y.**, Nichols, A. C., Steffy, D. A., Braden, T. D., and Goyal, H.O. (2008). The Comparative effects of chronic ingestion of mercuric chloride on fertility on male and female Sprague Dawley rats. *Birth Defects Research Part A*. 82(5):385.
- Heath, J. C., **Abdelmageed, Y** and Goyal, H.O. (2007). The effects of chronic ingestion of mercuric chloride on the fertility rates of female rats. *Birth Defects Research Part A*. 79(5):416