

JACOB J. WHITE, Ph.D.

Voinovich School of Leadership & Public Affairs

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Education

- Ph.D. Chemistry, 2006, Ohio University, curriculum/research emphasis in Bioanalytical Chemistry. Dissertation: “*The Role of the L-Arginine/Nitric Oxide Pathway in Alzheimer’s Pathology*”
- B.S. Chemistry, 2001, Shawnee State University, cum laude, minors in Mathematics and Philosophy

Professional Experience

- Senior Executive in Residence for Education and Evaluation, 2020-Present, Ohio University, Athens, OH
- STEM Research and Administrative Associate III, 2019, Gallia-Vinton Educational Service Center, Rio Grande, OH
- Professor of Chemistry (tenured), 2005-2019, University of Rio Grande, Rio Grande, OH
- Associate Director, 2006-2010, Southeast Ohio Center for Excellence in Mathematics and Science, Ohio University, Athens, OH
- Graduate Assistant, 2001-2005, Department of Chemistry and Biochemistry, Ohio University, Athens, OH

Courses Taught

- Principles of Chemistry (Ohio Transfer Module approved course for non-science majors)
- General Chemistry 1 (Ohio Transfer Assurance Guide approved course for science majors)
- General Chemistry 2 (Ohio Transfer Assurance Guide approved course for science majors)
- Quantitative Chemical Analysis
- Instrumental Chemical Analysis
- Analytical Chemistry
- Integrated Chemistry Laboratory 1
- Integrated Chemistry Laboratory 2
- Senior Research I
- Senior Research II
- Directed Studies in Chemistry
- Special Topics in Chemistry
- Graduate Workshops for In-Service Science Teachers

Publications

In-Press

- White, J., Means, J., Hall, T., Shockley, D. A simple, inexpensive, and simulated experiment for pollution monitoring. Accepted for publication. *The Science Teacher*, 2020.
- White, J., Shockley, D., Hopkins II, R., Lewis, M., Hutzal, M., Crabtree, D. Evidence of effective science professional development in a small Appalachian school district. *Research in the Schools*, 2018, 25(1), 59-71.
- White, J., Shockley, D., Hutzal, M., Wilson, N. Interdisciplinary professional development for teaching science and reading. *Ohio Journal of Science*, 2014, 114(2), 2-10.
- White, J., Hopkins, R., Shockley, D., Gaining insights from a case study of high school student performance in dual credit college chemistry courses. *Journal of Chemical Education*, 2014, 91(1), 30-36.
- White, J., Smith, W., 2013. A brief note on the temperature-dependent photocatalytic degradation of Congo red using zinc oxide. *American Journal of Water Resources*, 1(4), 66-69.
- Hopkins II, R.L., B. Altier, D. Haselman, A. Merry, and J.J. White. 2013. Exploring the legacy effects of surface coal mining on stream chemistry. *Hydrobiologia*, 713, 87-95.
- White, J., Crosier, J. Determination of soluble phosphorus content in black walnut husk compost via formation of molybdenum blue. *Ohio Journal of Science*, 2010, 110(4), 94-95.
- Madajka, M.; Korda, M.; White, J.; Malinski, T. Effect of aspirin on constitutive nitric oxide synthase and the bioavailability of NO. *Thrombosis Research* 2003, 110, 317-321.
- Kalinowski, L.; Madajka, M.; White, J.; Bohr, D.; Malinski, T. Endothelin-1 stimulates NO release in the brain and causes a fall in blood pressure. In *Heart Disease: Pathogenesis, Diagnosis and Treatment*, Proceedings of the International Academy of Cardiology, Washington, D.C., July 12-15, 2003.

In-Preparation

- White, J. & Nichols, A. Under review. Analysis of lead in playground soils in southeast Ohio parks. *Ohio Journal of Science*.
- White, J., Shockley, D. Under review. Strategies for promoting teacher engagement in content-focused professional development: Why the taboo? *Journal of Teacher Education*.
- White, J., Costilow, K., Dotson, J., Landrum, A., Mauldin, R., Schanandore, M., Shockley, D. Under review. A novel analytical chemistry experiment for teaching the calibration method of standard addition. *Journal of Chemical Education*.
- Mauldin, R. and White, J. Under review. Dimensional analysis and the concept of the mole: A workbook designed to prepare students for college chemistry. Pearson Publishing.

Mentorship of Undergraduate Student Research

- 2019 Independent Research—Ethan Greenawalt. Topic: “Does the Lifestraw Keep You Alive?” Presented work at 2019 URG research and scholarship exhibition.
- 2019 Independent Research—Naomi Oberg. Topic: “Survey of Heavy Metal Contamination within the Ohio River Watershed.” Presented work at 2019 URG research and scholarship exhibition.
- 2018 Independent Research—Alex Nichols. Topic: “Concentration of Lead in Playground Soil within Southeast Ohio Region.” Presented work at 2018 URG research and scholarship exhibition.
- 2017 Independent Research – Jay Michael Moore. Topic: “Concentration of Lead in Tea Samples.” Presented work at 2017 Annual Meeting of the Ohio Academy of Science.

- 2016 Independent Research Project—Kim Costilow. Topic: “Effect of Matrix Modification on Measured Signals Using Graphite Furnace Atomic Absorption Spectroscopy.”
- 2015 High School Senior Project – Keara Clay. Topic: “Beer’s Law and Standard Additions.” Wahama High School, Mason, WV.
- 2014 Academic Excellence Initiative Project – Michael MacKnight and Jacob Dotson. Topic: “Correlation of Contamination with Carapace Dimensions in the Common Snapping Turtle of the Southeast Ohio Region.” Presented work at 2014 Annual Meeting of the Ohio Academy of Science.
- 2013 Academic Excellence Initiative Project – Whitney Smith and Brad Altier. Topic: “Accumulation of Lead, Mercury, and PCBs in Chelydra Serpentina of Southeast Ohio.” Presented work at 2013 Annual Meeting of the Ohio Academy of Science.
- 2012 Independent Research – Whitney Smith. Topic: “Photocatalytic Decomposition of Congo Red.” Manuscript published in American Journal of Water Resources.
- 2012 Independent Research – Brad Altier. Topic: “Matrix Effect in the Analysis of Lead in Well Water via Atomic Absorption Spectroscopy.” Presented work at 2012 Annual Meeting of the Ohio Academy of Science.
- 2011 Academic Excellence Initiative Project – Derek Haselman and Andrea Merry. Topic: “Effects of Surface Coal Mining on Stream Water Chemistry in the Raccoon Creek Watershed, Ohio.” Presented work at 2011 Provost’s Academic Excellence Initiative Forum. Manuscript published in Hydrobiologia.
- 2008 Independent Research Project – Josh Crosier. Topic: “Determination of Soluble Phosphorus Content in Black Walnut Husk Compost.” Manuscript published in Ohio Journal of Science.

Successful Grant Funding

- Principal Investigator, 2015-2017, Southeast Ohio Science Partnership. \$416,881 funded by the Ohio Department of Education.
- Principal Investigator/Co-Principal Investigator, 2013-2016, Increasing Continuity Throughout the Science Curricula. \$555,754 funded by the Ohio Department of Education.
- Principal Investigator, 2013-2014, Accumulation of Lead and Mercury in Chelydra Serpentina of the Southeast Ohio Region. \$1,200 funded by the URG Provost’s Office.
- Principal Investigator, 2010-2013, Rio Connection: Jackson Focus on Mathematics and Science Teaching. \$606,608 funded by the Ohio Department of Education.
- Principal Investigator, 2012-2013, Rio Connection: Focus on 3-8 Earth & Space Sciences. \$114,048 funded by the Ohio Board of Regents.
- Principal Investigator, 2012-2013, Accumulation of Lead, Mercury, and PCBs in Chelydra Serpentina of the Southeast Ohio Region. \$1,200 funded by the URG Provost’s Office.
- Principal Investigator, 2011-2012, Rio Connection: Gallipolis Focus on Science Education. \$90,000 funded by the Ohio Board of Regents.
- Principal Investigator, 2011-2012, Inclusion of Atomic Absorption Spectroscopy in the School of Sciences Curriculum. \$10,000 funded by the Pittsburgh Conference of Analytical Chemistry and Applied Spectroscopy.
- Principal Investigator, 2011-2012, A High Impact Learning Experience for Chemistry Majors. \$1,200 funded by the URG Provost’s Office.
- Principal Investigator, 2007-2010, Rio Connection: Improving Mathematics and Science Teaching. \$818,350 funded by the Ohio Department of Education.

- Principal Investigator, 2009-2010, Rio Connection: Expanding the Vision in Science. \$100,000 funded by the Ohio Board of Regents.
- Principal Investigator, 2008-2010, STEM Internship Program. \$63,450 funded by the Southeast Ohio Center for Excellence in Mathematics and Science.
- Principal Investigator, 2008-2010, STEM Teaching and Learning Program. \$28,500, funded by the Southeast Ohio Center for Excellence in Mathematics and Science.
- Principal Investigator, 2008, Rio Connections: Science Seed Grant. \$25,000, funded by the Ohio Department of Education.

University Service

- Career Technical Education Faculty Search Committee 2018-2019
- General Education Committee 2018-2019
- Facilitator, Summer STEM Camp, 2018-2019
- Judge, Ohio Academy of Science District Science Day 2017-2019
- Chair, Tenure Evaluation Committee 2013-2016
- Presidential Search Committee 2014
- Facilitator, Chemistry Scholarship Competition 2011-2013
- Interim Grants Director, 2012
- Lead Negotiator, Faculty Association 2011-2012
- Chair, Faculty Association 2010-2011
- Academic Affairs Committee 2007-2011
- Provost Search Committee 2010

Awards & Accomplishments

- Recipient of Edwin A. Jones Excellence in Teaching Award, University of Rio Grande, 2011
- Recipient of Donald R. Clippinger Research Award, Ohio University, 2005
- College of Arts & Sciences Fellow, Ohio University, 2003-2005
- Outstanding Chemistry Graduate Award, Shawnee State University, 2001
- First Student Representative Seated on University Wide Curriculum Committee, Shawnee State University, 2001

Professional References

- Available upon request