



Idaho State Police Forensic Services



Rachel M. Watne

Forensic Scientist I
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EDUCATION

May 2024 High Point University – High Point, NC
Bachelor of Science – Chemistry

EXPERIENCE

May 2025 – Present Idaho State Police Forensic Services
Forensic Scientist I
Duties: Controlled Substance Analysis, Provide Expert Testimony

Aug 2023 – Apr 2024 High Point University
Research Analyst
Duties: Beer Analytical Analysis, Instrument Experience

Sept 2023 – Dec 2023 High Point University
Biochemistry Student Instructor
Duties: Provide Supplemental Biochemistry Instruction, Grades Assignments

Sept 2023 – Nov 2023 High Point University
Laboratory Teaching Assistant
Duties: Instructs General Chemistry Labs, Set Up and Cleaning of General Chemistry Laboratory Spaces

May 2023 – Jul 2023 Georgia Southern University
International Research Analyst
Duties: Wood Materials Analysis, Instrument Experience, Communicate Findings Written and Orally

<https://isp.idaho.gov/forensics>

EQUAL OPPORTUNITY EMPLOYER

Revised 01/14/2026

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Sept 2021 – Apr 2023 High Point University
Research Analyst
Duties: Perform Experiments, Instrument Experience,
Communicate Findings Written and Orally

PROFESSIONAL ORGANIZATIONS; COMMITTEES; WORKING GROUPS

2023 – Present American Chemical Society (ACS) Member

PUBLICATIONS

Jan 2024 Rivera, C. N.; Smith, C. E.; Draper, L. V.; Kee, M. E.; Cook, N. E.; McGovern, M. R.; Watne, R. M.; Wommack, A. J.; Vaughan, R. A., The BCKDH kinase inhibitor BT2 promotes BCAA disposal and mitochondrial proton leak in both insulin-sensitive and insulin-resistant C2C12 myotubes. *Journal of Cellular Biochemistry* 2024, 125 (3). DOI: 10.1002/jcb.30520.

Nov 2023 Rivera, C. N.; Smith, C. E.; Draper, L. V.; Watne, R. M.; Wommack, A. J.; Vaughan, R. A., Physiological 4phenylbutyrate promotes mitochondrial biogenesis and metabolism in C2C12 myotubes. *Biochimie* 2024, 219, 155-164, DOI: 10.1016/j.biochi.2023.11.009.

Nov 2023 Rivera, C. N.; Kamer, M. M.; Cook, N. E.; McGovern, M. R.; Watne, R. M.; Wommack, A. J.; Vaughan, R. A. 5-Aza-2'-deoxycytidine-mediated DNA hypomethylation with and without concurrent insulin resistance suppresses myotube mitochondrial capacity. *Cell Biochemistry and Function* 2023. DOI: 10.1002/cbf.3878

Sep 2023 Rivera, C. N.; Watne, R. M.; Wommack, A. J.; Vaughan, R. A. The effect of insulin resistance on extracellular BCAA accumulation and SLC25A44 expression in a myotube model of skeletal muscle insulin resistance. *Amino Acids* 2023. DOI: 10.1007/s00726-023-03336-8

Jun 2023 Rivera, C.N.; Smith, C.E.; Draper, L.V.; Ochoa, G.E.; Watne, R.M.; Wommack, A.J.; Vaughan, R.A. The Selective LAT1 Inhibitor JPH203 Enhances Mitochondrial Metabolism and Content in Insulin-Sensitive and Insulin-Resistant C2C12 Myotubes. *Metabolites* 2023, 13, 766. DOI: 10.3390/metabo13060766

Jun 2023 Rivera, C. N.; Hinkle, J. S.; Watne, R. M.; Macgowan, T. C.; Wommack, A. J.; Vaughan, R. A. PPAR β/δ Agonism with

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GW501516 Increases Myotube PGC-1 α Content and Reduces BCAA Media Content Independent of Changes in BCAA Catabolic Enzyme Expression. PPAR Research 2023, 2023, 4779199. DOI: 10.1155/2023/4779199

Dec 2022 Rivera, C. N.; Watne, R. M.; Brown, Z. A.; Mitchell, S. A.; Wommack, A. J.; Vaughan, R. A., Effect of AMPK activation and glucose availability on myotube LAT1 expression and BCAA utilization. Amino Acids 2022. DOI: 10.1007/s00726-022-03224-7

Oct 2022 Rivera, C. N.; Kamer, M. M.; Rivera, M. E.; Watne, R. M.; Macgowan, T. C.; Wommack, A. J.; Vaughan, R. A., Insulin resistance promotes extracellular BCAA accumulation without altering LAT1 content, independent of prior BCAA treatment in a myotube model of skeletal muscle. Molecular and Cellular Endocrinology 2022, 559, 111800. DOI: 10.1016/j.mce.2022.111800

Feb 2022 Krone, M. J.; Rivera, C. N.; Rivera, M. E.; Watne, R. M.; Lemonds, S. E.; Wommack, A. J.; Vaughan, R. A., Excess glutamine does not alter myotube metabolism or insulin sensitivity. Amino Acids 2022, 54 (3), 455-468. DOI: 10.1007/s00726-022-03131-x

CONTINUING EDUCATION; ASSOCIATION MEETINGS; CONFERENCES

Nov 2025 – Present Idaho State Police Forensic Services Testimony Training

May 2025 – Dec 2025 Idaho State Police Forensic Services Controlled Substance Analysis Training

Sep 2025 Idaho State Police Forensic Services Ethics Course

Apr 2024 High Point University Research and Creativity Symposium (High-PURCs) Poster Presentation

Mar 2024 American Chemical Society Spring 2024 Conference Poster Presentation

Sep 2023 National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE) Poster Presentation

Jul 2023 Georgia Southern University Undergraduate Research Symposium Poster Presentation

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- Apr 2023 High Point University Research and Creativity Symposium (High-PURCs) Poster Presentation
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