

Kylie McCauley

Associate Toxicologist

Paustenbach and Associates
970 West Broadway
Suite E-395 Jackson, WY 83001

(561) 789 -8849
KMccauley@paustenbachandassociates.com



Academic and Professional Profile

Kylie McCauley is an Associate Toxicologist and Consultant with Paustenbach and Associates. Her focuses are toxicology, risk assessment, and industrial hygiene. Some of her current interests include per- and polyfluoroalkyl substances (PFAS) and electric vehicle battery production, where she uses her biological science and laboratory chemist background to characterize risk and analyze data for chemical exposures under the guidance of Dr. Dennis Paustenbach. Her interest in exposure science and consulting is driven by her passion for learning how to optimize human health and safety in an age of technological innovation.

Education and Degrees Earned

- Bachelor of Science in Molecular, Cell and Developmental Biology and Minor in Evolutionary Medicine from the University of California, Los Angeles (UCLA), 2023

Honors/Awards

- Highest Departmental Honors
- *Cum laude*
- Dean's Honor list: Fall 2019, Winter 2020, Winter 2022, Spring 2022, Fall 2022, Winter 2023, Spring 2023

Experience Summary

Paustenbach and Associates

Associate Toxicologist

Jackson Hole, Wyoming

November 2023 – Present

- Consultant in toxicology, risk assessment, occupational health, and industrial hygiene
- Special interest in per- and polyfluoroalkyl substances (PFAS) and risk characterization of electric vehicle battery production
- Involved in litigation work, interpreting toxicological studies, and characterizing risks posed by chemicals in the environment

UCLA Health Molecular and Medical Pharmacology, Nuclear Medicine

Clinical and Research Coordinator

Los Angeles, California

June 2023 - October 2023

- Coordinate clinical and research efforts for Dr. Daniel Silverman in the Molecular and Medical Pharmacology, Nuclear Medicine division of UCLA health
- Synthesize IRB protocol for clinical study involving treatment of Parkinson's Disease utilizing induced pluripotent stem cell (iPSC) therapy
- Scribe and generate reports for FDG-PET scans interpreted by Dr. Silverman for the presence of neurodegenerative diseases
- Assist with Brain Wellness Clinic visits by obtaining patient history and completing visit notes after patient consultations with Dr. Silverman

Epic Advanced Materials & Nanoarmor Laboratory Chemist

Los Angeles, California

December 2022 - August 2023

- Collaborate with Lead Project Chemist to optimize material compositions of Boron Nitride Nanotubes (BNNTs) as an additive in ceramic matrix composites (CMCs) for hypersonic aerospace vehicles
- Apply characterization procedures such as thermogravimetric analysis for accurate validation of experimental formulations of nanomaterials and CMCs
- Leverage streamlined nanomaterial and CMC manufacturing to improve quality assurance and accelerate application in numerous technical fields
- Independently plan and execute synthesis of alternate additive CMCs using lab stoichiometry and knowledge of weight percentage calculations

Kylie McCauley

February 9, 2024

Page 2 of 4

UCLA Bitan Lab
Undergraduate Researcher
Los Angeles, California
June 2021 – July 2023

- Investigate effect of Alzheimer's Disease pathogenesis on bone health in transgenic mice and co-author research submitted to American Society for Bone and Mineral Research, Northeast Bioengineering Conference, and Society for Neuroscience San Diego Conference
- Independently design, maintain and execute a stringent schedule to perform hundreds of cryosection and immunohistochemistry procedures on brain tissue from Alzheimer's mouse models to isolate, quantify, and analyze amyloid plaque accumulations before and after an experimental microbiome treatment
- Perform microscopy using a Keyence digitally integrated microscope and quantification of plaque presence using image processing software, ImageJ

UCLA Department of Environment, Health, and Safety
Wastewater Sampling Technician
Los Angeles, California
August 2022 – December 2022

- Collaborated with multiple student teams to collect wastewater samples from residential buildings in the UCLA community to check COVID-19 viral levels as well as the development of new variants using RT-PCR
- Conduct proper PPE utilization to protect from pathogens present in the process of collection or in the samples
- Maintain public health and safety by providing insight into COVID-19 active infection levels within discrete locations in the UCLA community, allowing for more accurate contact tracing

Real Diagnostics
Laboratory Technician
Reisterstown, Maryland
April 2020 – July 2021

- Coordinated with a team of thirty lab members to process and execute thousands of Polymerase Chain Reaction COVID-19 tests daily; worked daily during the height of the pandemic to deliver test results nationally and internationally
- Assessed and analyzed up to fifty bacterial cultures daily for the presence of pathogenic, urinary tract infection-causing bacteria, as well as other miscellaneous microbiology lab work when extra support was needed

- Practiced HIPAA confidentiality and standard operating procedures when performing patient data entry or lab work for up to eight hundred patients daily

Key Projects

1. **TERA Beyond Science and Decisions XIV: PFAS Limits: How Did We Get So Far Apart? Conference highlights.** Worked with Drs. David Brew and Careen Khachatoorian to develop conference highlights for the three-day conference focused on PFAS.

PUBLICATIONS

Poster Presentation

1. McCauley K, Kosnik S, Rampado A, Butler N, Siddique I, Barquera B, Vashishth D, Bitan G. Characterizing the relationship between Alzheimer's disease plaque pathology and the gut microbiota in 5xFAD Amyloid- β accumulating mice. Poster Presented at: UCLA Department of Neurology 12th Annual Science Day; May 8 2023; Los Angeles, CA.

Published Abstracts

1. S.E. Kosnik, J.E.Labre, A. Rampado, N. Butler, I. Siddique, **K. McCauley**, G. Bitan, B. Barquera, D. Vashishth (April 2022) Loss of Bone Quality in the 5xFAD Mouse Model for Alzheimer's Disease Associated with Neurodegeneration. Northeast Bioengineering Conference.
2. S.E. Kosnik, J.E.Labre, A. Rampado, N. Butler, I. Siddique, **K. McCauley**, G. Bitan, B. Barquera, D. Vashishth (May 2022) Gut Dysbiosis and Loss of Bone Quality Associated with Neurodegeneration in the 5xFAD Mouse Model for Alzheimer's Disease. American Society of Bone and Mineral Research.
3. I. Siddique, J. Di, C.K. Williams, D. Markovic, H.V. Vinters, S. Tawakley, C. Zang, A. Vaishampayan, **K. McCauley**, G. Bitan (Nov. 2022) Exophers are components of mammalian neurobiology in health and disease. Society for Neuroscience San Diego Conference.