

## Cynthia Torres, M.P.H.

SCIENTIST II

### CONTACT INFORMATION

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ToxStrategies, A BlueRidge Life Sciences Company  
1010 B Street, Suite 210  
San Rafael, CA 94901  
Phone (415) 855-3028  
[ctorres@toxstrategies.com](mailto:ctorres@toxstrategies.com)

### PROFESSIONAL PROFILE

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Cynthia Torres is an environmental health scientist and industrial hygienist in ToxStrategies' Exposure Sciences practice. She recently earned a Master of Public Health in Environmental Health Sciences, with a concentration in Industrial Hygiene, from the University of California, Berkeley. Her thesis work focused on occupational exposure to airborne polycyclic aromatic hydrocarbons (PAHs) during agricultural prescribed burns. Her professional experience includes research roles and internships in both the academic, state, and private sectors. She has field experience in various IH and EHS investigations, including indoor air sampling (particulate matter [PM], peracetic acid [PAA], polycyclic aromatic hydrocarbons, polychlorinated biphenyls [PCBs], personal exposure sampling, noise dosimetry, and ergonomic evaluations. Her skill set includes the use of R Package software (modeling, ggplot), geographic information system (GIS) software, data visualization, and various laboratory and assay development techniques.

### EDUCATION AND DEGREES EARNED

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- 2024 M.P.H., Environmental Health Sciences, Industrial Hygiene concentration  
University of California, Berkeley
- 2021 Advanced Biosciences Certificate  
University of California, Berkeley
- 2020 B.A., Environmental Studies, Chemistry concentration  
University of California, Santa Barbara

## PROFESSIONAL ASSOCIATIONS

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2023–present American Industrial Hygiene Association (AIHA)

2023–present AIHA Northern California Section (NCS)

- Developing World Outreach Initiative Committee (2024-present)

## FELLOWSHIPS AND AWARDS

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2024 Finalist for the Award for Research Excellence, UC Berkeley Environmental Health Sciences Department

2024 EHS Leadership Award

2023 Graduate Opportunity Program Fellowship Award

2022–2023 Berkeley Public Health Fellowship

2022–2023 UC Berkeley Latinx and the Environment Graduate Leadership Fellowship

2023 AIHA-NCS Robert T. Legge Student Award

2019 UCSB Environmental Studies Program Outstanding Service Award Recipient

2018 2nd Place Proposal, Sustainability category, UCSB Professional Writing Contest

## SELECTED PROFESSIONAL AND ACADEMIC EXPERIENCE

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### *Industrial Hygiene*

Conducted ventilation screening and assessments using a Balometer for California and NYC skilled nursing facility and long-term care facilities. Performed N95 fit testing using quantitative and qualitative methods (TSI PortaCount Respirator Fit Tester) in compliance with OSHA Standard 29 CFR 1910.134. Provided respiratory protection training to on-site staff. Prepared guidance on Train the Trainer written materials and oral presentation for N95 fit testing.

Conducted a preliminary literature review related to silicosis, natural and engineered stone, and control implementation. Prepared an air-sampling protocol to evaluate crystalline silica.

Identified and reviewed publicly available health data on Legionnaires' disease and guidance on Legionella risk management. Summarized findings in written report for stakeholder.

Conducted environmental indoor air testing for PCBs near and on 20 railway tracks in New York City. Supported sample handling and delivery to third-party laboratory. Performed a job hazard analysis for the railroad mechanic.

Conducted routine fume-hood assessments and airflow maintenance for two university campuses using a TSI Q-Trak indoor air quality monitor and a VelociCalc Multi-Function Ventilation Meter. Facilities included biological, chemistry, and geological laboratories, animal testing facilities, spray-painting booths, and outdoor maintenance shops, in compliance with OSHA Standard 29 CFR 1910.1450. Performed laboratory safety audits as needed. Maintained and submitted records, varying from fume-hood velocities to safety data sheet (SDS) management, for hazard mitigation and emergency planning for 50 facilities. Used ArcGIS to map campus safety locations and hazardous materials, and also uploaded records to California's Environmental Reporting System.

Performed employee noise dosimetry for 11 workstations at a bakery. Calculated noise exposure in compliance with OSHA and ACGIH TLVs. Finalized findings in a report for the site manager.

Conducted PAA sampling using ChemDAQ SafeCide. Supported ergonomic evaluation for a poultry facility.

### ***Relevant Research Experience***

Reviewed epidemiological and toxicological literature on air pollution and associated health effects related to indoor NO<sub>2</sub> emitted from gas stoves. This involved a systematic literature search using Zotero and EndNote in PubMed and Web of Science databases. Created search strings and developed exclusion criteria, screened titles and abstracts for eligibility, and completed full-text review of multiple papers. Prepared a report on the literature review and meta-analysis for policy stakeholders.

Identified alternatives for azodicarbamide (ADCA) in footwear foams. Tasks for this alternative assessment included reviewing chemical ingredients and concentrations present in ethylene-vinyl acetate (EVA) foam and screening potential adverse effects on human and ecological health. Primary data sources included chemical CAS No., GreenScreen guidance, Pharos chemical screening, European Chemicals Agency (ECHA), and computational toxicology tools, such as CompTox and QSAR, to perform human and environmental health hazard identification and assessment. Presented findings to corporate stakeholders and as a poster at BizNGO's 2023 Annual Meeting.

Conducted independent research on Sundowner winds to evaluate trends on aerosol dispersion and future wildfire spread in California's Central Coast. Estimated PM<sub>2.5</sub>, PM<sub>10</sub>, and ozone concentrations retrospectively from California Air Resources Board data and using Python software and Jupyter Notebook. Research concluded that PM concentrations decreased as wind patterns increased. Presented findings in oral and written reports.

### ***Wet Laboratory Work***

Performed assay development and validation to measure molecule and metabolite concentration and for detection of antibodies. Analyzed data via Prism GraphPad and presented findings.

Completed pre-clinical sample analysis using relevant assays (cytokine biomarker assays/Luminex assays, liquid chromatography/mass spectrometry, ligand binding assays, cell-based assays/ELISA).

Procured and characterized assay reagents (screening antibodies, determining label efficiency). Performed reagent aliquoting and inventorying. Led routine cell maintenance, cell culture, and optimizing ELISA assays.

Assisted with RT-PCR experiments driven by discovery platform.

Performed routine equipment maintenance, and managed laboratory inventorying and SDS records. Managed biospecimen shipping for domestic and international laboratory partners, monitored sample LN<sub>2</sub> Dewar flasks, and assisted in updating safety documents for biosafety level (BSL) for multiple labs.

Maintained and tracked laboratory reagents and supplies, following standard operating procedures.

Assisted with research projects to support corporate lab management and sustainability efforts.

### ***Extracurricular Sustainability and Environmental Justice Work at University of California, Santa Barbara***

Environmental Affairs Board: Environmental Justice Campaign Chair

- Educated members on environmental justice theory and local issues such as local oil-well proposals
- Facilitated dialogue on an environmental justice minor among faculty, staff, and students
- Represented the student boards in collaborations and through community outreach efforts with student activist organizations, faculty, and on college radio

## Environmental Justice Alliance: Founder and Co-Chair

- Wrote the legal code for UCSB's first environmental justice-centered entity under Associated Students
- Organized and served on a delegation to UC Berkeley's Students of Color Environmental Conference
- Acted as one of the first members of and served on UCOP's Diversity, Equity, and Inclusion UCSB Committee

## Zero-Waste Committee: Activities Chair

- Brainstormed, created, and publicized educational events for general and officer members centered on living a zero-waste lifestyle and/or the UC system-wide goal of achieving zero waste by 2020.
- Collaborated and held discussions with other UCSB environmental organizations on achieving a zero-waste lifestyle
- Represented ZWC in environmental organization coalitions such as the A.S. Sustainability Policy Working Group

## Environmental Studies: Research Assistant Intern

- Planned and administered interviews with individuals based on their relevance to local environmental activism
- Conducted research at UCSB's Special Collections library on environmental activism

## ABSTRACTS AND PRESENTATIONS

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**Torres C**, Noth B, Pillarisetti A. Risk of polycyclic aromatic hydrocarbons (PAHs) exposure from almond agricultural waste burns. Poster presented at AIHA Connect, Columbus, OH, May 2024.

## LICENSES AND CERTIFICATIONS

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OSHA HAZWOPER 40

OSHA 30 Hour Construction and General Industry

Group 1 Biomedical Research Investigators