

Gabriella Iacono

Bigelow Laboratory for Ocean Sciences
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Education

2014 - 2018

BS, Chemistry, State University of New York College of Environmental Science and Forestry (SUNY-ESF)
Focus: Analytical Chemistry & Environmental Chemistry

Experience

2020 - Present

Research Associate

Bigelow Laboratory for Ocean Sciences

Bigelow Analytical Services

- Provides analytical expertise to a broad range of research projects across the institution
- Advises scientists on analytical method applications and experimental design/approach
- Performs Shellfish/HAB toxin monitoring using LC-MS/MS in an FDA certified laboratory
- Performs volatile organic compound analysis via GC-MS
- Develops and validates new methods and techniques for highly specialized, often novel applications
- Consults external clients on product testing and troubleshooting analysis methods
- Manages analytical instrumentation use and maintenance

Air-Sea Interaction Laboratory

- Developing an algal-based feed additive for cows to reduce methane
 - Key team member in product development, testing, and process optimization
 - Contributes to the design and undertaking of animal trials
 - Designs and executes *in vitro* rumen fermentation experiments employing sterile techniques
 - Collaborates with scientists and experts from multiple institutions and backgrounds
- Specializes in trace-gas analysis and interactions at the air-sea interface
 - Studies marine influence on cloud formation and atmospheric conditions

2018 - 2020

Laboratory Technician

Upstate Freshwater Institute

- Performed several water quality analyses of freshwater systems across New York state following DOH and ELAP/NELAC requirements
- Lead analyst for nitrogen, phosphorus, and carbon analyses
- Collected water samples from streams, rivers, and lakes for laboratory analysis
- Method development and validation for nutrient analysis using continuous flow autoanalyzers
- Data review for compliance with regulatory requirements and quality controls
- Develops and verifies Standard Operating Procedures (SOPs)
- Experienced in using Laboratory Information Management System (LIMS)

2017 - 2018

Research Assistant

SUNY-ESF, Biogeochemistry Lab

- Utilized GC-MS analysis to establish sterol composition of Caribbean coral species
- Performed statistical analysis of results to interpret data and present research to faculty and students

2015 - 2017

Research Assistant

SUNY-ESF, Inorganic Chemistry Lab

- Assessed efficacy of nitrogen-doped TiO₂ for photocatalytic applications
- Designed a new, highly sensitive technique for the measurement of light intensity
- Developed and tested a copper oxide film for photovoltaic applications
- Optimized inorganic synthesis reaction to produce SiO₂ nanospheres for drug delivery research, using Scanning Electron Microscopy (SEM) to assess particle size

Relevant Skills

Lab Experience:

- Sample collection, handling, preservation, storage, organization, processing, and analysis
- Accurate and precise preparation of calibration standards, quality control standards, and chemical reagents
- Sample extraction and clean-up techniques for an expansive variety of solid, liquid, and gas sample types
- Method development, optimization, and validation
- Data analysis, sample database organization/management, data review and troubleshooting for quality control compliance

Laboratory Instruments: Gas Chromatography Mass Spectrometry (GC-MS), Liquid Chromatography Mass Spectrometry (LC-MS), Gas Chromatography Electron Capture (GC-ECD), Flame Ionization (GC-FID), Thermal Conductivity (GC-TCD), Flame Photometry (GC-FPD), Total Organic Carbon Analyzer (DOC, TOC, POC), Continuous and Segmented Flow Autoanalyzers (FIA and SFA), UV/VIS spectrophotometry, Purge and Trap Concentrators, Head Space Analyzers, Trace gas analyzers (LICOR)

Special Software: R, Agilent EZChrom, Agilent MassHunter, Shimadzu LabSolutions, SRI PeakSimple

Published Peer-Reviewed Papers

Functional stress responses in Glaucophyta: Evidence of ethylene and abscisic acid functions in *Cyanophora paradoxa*

Journal of Eukaryotic Biology, 00, e13041 (2024)

B. Genot, M. Grogan, M. Yost, G. Iacono, S.D. Archer, J.A. Burns

Transformation of bromoform in rumen fluid incubations (in review)

K. Posman, G. Iacono, C. Cartisano, S. Archer, N.N. Price

Published Abstracts

Assessing Bromoform Residue In Milk Produced From Dairy Cows Fed 1% Of Dietary Dry Matter As Processed Seaweed (*Saccharina latissima*) – A Preliminary Study

Poster Presentation, UC Davis State of the Science Summit: Reducing Methane from Animal Agriculture, Davis, California, USA. 2024

G. Omoruyi, S. Y. Morrison, G. Iacono, B. Carr, K. Posman, K. Ballard, S.D. Archer, N.N. Price

Feeding Seaweed to Dairy Cows to Enhance Milk Production and Reduce Greenhouse Gas Emissions

Oral Presentation, National Seaweed Symposium, Portland, Maine, USA. 2023

K. Posman, G. Iacono, N.N. Price

Mud, Marshes, and Methane: An investigation into methane & carbon dioxide fluxes within mudflats and salt marshes in Mid-Coast Maine

Oral Presentation, Ocean Sciences Meeting, New Orleans, Louisiana, USA. 2024

D. Polinske, G. Iacono, S.D. Archer

Professional Development/Activities/Service

2023 Staff Representative, Senior Research Scientist Committee, Bigelow Laboratory for Ocean Sciences

2022-present Board Member, Rebuilding Together-Lincoln County, Board of Directors

2014-2018 Volunteer, Syracuse City Trash Cleanup

2023 Advanced Open Water, Rescue, and Scientific Diver Certifications

2021 Agilent GC-MS Training Courses & Seminars

2020 R software training course

Honors and Awards

2018 Dean's List, SUNY-ESF

2016 Achievement in Analytical Excellence, SUNY-ESF