

PATSY MARIA POLSTON, PhD, MSPH

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EDUCATION

PhD	2015	Environmental Sciences & Engineering, University of North Carolina Gillings School of Global Public Health, Chapel Hill, NC <i>Formal Minor:</i> Health Behavior <i>Doctoral Dissertation:</i> "Development and Evaluation of Candidate Microbial Source Tracking Markers to Use Following Land Application of Biosolids"
MSPH	2011	Environmental Sciences & Engineering, University of North Carolina Gillings School of Global Public Health, Chapel Hill, NC
	2010	<i>Certificate:</i> Global Health Certificate
BS	1997	Double Degree: Electrical Engineering, Physics, Tuskegee University, Tuskegee, AL

PROFESSIONAL EXPERIENCE

2019 – present	Adjunct Faculty, Academic Affairs and Department of Health Behavior, University of North Carolina Gillings School of Global Public Health, Chapel Hill, NC
2015 – 2018	Gillings Pasteur Postdoctoral Fellow, Department of Enteric Viruses, Institut Pasteur, Paris, France <i>Research:</i> Environmental and Human Surveillance of Poliovirus and other Enteroviruses in Madagascar
2008 – 2015	Graduate Research Assistant, Department of Environmental Sciences & Engineering, University of North Carolina Gillings School of Global Public Health, Chapel Hill, NC
2009	Research Assistant, Deshpande Foundation Global Exchange Program, Bhageerath (Non-governmental Organization), Hubli, India
2011 – 2012	Research Assistant, Rogers Road Eubanks Neighborhood Association (RENA), Community Advocacy Group Volunteer, Chapel Hill, NC
2000 – 2002	Engineer, Ford Motor Company, Dearborn, MI

FELLOWSHIP AND AWARDS

2015 – 2018	Dennis and Mireille Gillings Foundation Fellowship, University of North Carolina Gillings School of Global Public Health and Pasteur Foundation
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- 2011 – 2015 NIH (T32ES007018), University of North Carolina Gillings School of Global Public Health
- 2008 – 2011 The Public Health Service Training Grant – NIH (US Department of Health and Human Services Public Health Service), University of North Carolina Gillings School of Global Public Health

PUBLICATIONS AND PRESENTATIONS

Peer-reviewed research papers

PM. Polston, DR Singleton, Y Yuen, WA Gerhard, MD Aitken, JR Stewart. *Microbial Source Tracking Markers to Track Land-Applied Biosolids*. *Frontiers in Microbiology – Microbiotechnology Specialty Section* 2021 [Under review].

P Grozdanov, ML Joffret, A Stoyanova, **P Polston**, E Achouri, I Nikolova, F Delpeyroux, A Galabov. *Genome Analysis of Coxsackievirus B1 Isolates during the Consecutive Alternating Administration Course of Triple Antiviral Combination in Newborn Mice*. *Antiviral Chemistry & Chemotherapy* 2019.

ML Joffret, **PM Polston**, R Razafindratsimandresy, M Bessaud, JM Heraud, F Delpeyroux. *Whole Genome Sequencing of Enteroviruses Species A to D by High-Throughput Sequencing: Application for Viral Mixtures*. *Frontiers in Microbiology – Virology Section* 2018.

M Bessaud, S Sadeuh-Mba, ML Joffret, R Razafindratsimandresy, **P Polston**, R Volle, M Rakoto-Andrianarivelo, B Blondel, R Njouom, F Delpeyroux. *Whole Genome Sequencing of Enterovirus Species C Isolates by High-throughput Sequencing: Development of Generic Primers*. *Frontiers in Microbiology – Virology Section* 2016.

PM Polston, RA Rodriguez, K Seo, M Kim, G Ko, MD Sobsey. *Field evaluation of an improved cell line for the detection of human adenoviruses in environmental samples*. *Journal of Virological Methods* 2014.

RA Rodriguez, **PM Polston**, MJ Wu, J Wu, MD Sobsey. *An Improved Infectivity Assay Combining Cell Culture with Real-Time PCR for Rapid Quantification of Human Adenoviruses 41 and Semi-Quantification of Human Adenovirus in Sewage*. *Water Research* 2013.

Poster presentations

Environmental and Human Surveillance of Polioviruses and other Enteroviruses in Madagascar: Impact of the Trivalent to Bivalent Oral Polio Vaccine Switch. **PM Polston**, ML Joffret, R Razafindratsimandresy, A Ghozlane, M Bessaud, JM Heraud, F Delpeyroux. Poster Presentation. Europic 2018. Egmond aan Zee, the Netherlands. June 2018.

Environmental and Human Surveillance of Polioviruses and other Enteroviruses in Madagascar: Impact of the Trivalent to Bivalent Oral Polio Vaccine Switch. **PM Polston**, ML Joffret, R Razafindratsimandresy, A Ghozlane, M Bessaud, JM Heraud, F Delpeyroux. Poster Presentation. Institut Pasteur, Department of Enteric Viruses Conference. Paris,

France. October 2017.

The Development of Novel Microbial Indicators Used for Environmental Tracking of Biosolid Contaminants. **PM Polston**, E Rodgers-Vieira, MD Aitken, JR Stewart. Poster Presentation. American Society for Microbiology. Boston, MA. June 2014.

The Development of Novel Microbial Indicators Used for Environmental Tracking of Biosolid Contaminants. **PM Polston**, E Rodgers-Vieira, MD Aitken, JR Stewart. Poster Presentation. Water Microbiology Conference. Chapel Hill, NC. May 2014.

Field Evaluation of an Improved Transactivated Cell Line for the Detection of Enteric Adenoviruses. **PM Polston**, RA Rodriguez, M Kim, G Ko, MD Sobsey. Poster Presentation. American Society for Microbiology. New Orleans, LA. May 2011.

The Use of the Cellular Housekeeping Gene GAPDH as Control for the Performance of Infection Assays of Adenoviruses Isolated from Sewage. **PM Polston**, RA Rodriguez, MJ Wu, MD Sobsey. Poster Presentation. American Society for Microbiology. San Diego, CA. May 2010.

Oral presentation

Environmental and Human Surveillance of Polioviruses, VDPVs, and other Enteroviruses in Madagascar: Impact of the Trivalent to Bivalent Oral Polio Vaccine Switch. **PM Polston**, ML Joffret, R Razafindratsimandresy, A Ghozlane, M Bessaud, JM Heraud, F Delpeyroux. Oral Presentation. Virology Department. Institut Pasteur. Paris, France. September 2018.

Invited Lectures and Presentation

“Combating COVID-19 through Community Mobilization” NIH NC CEAL Community Spotlight Series, Spring 2021

“Vaccines Are Here: Now What? What to expect as vaccines become widely available?” NIH NC CEAL Alliance Learn and Share Series, Spring 2021.

“Unwrapping the Truth About COVID-19: Conversations to Have with Your Family and Friends over the Holidays.” NIH NC CEAL Alliance Learn and Share Series, Fall 2021

“My Journey to Environmental Microbiology and Public Health Research.” University of North Carolina at Chapel Hill, Honors Carolina, (Food for Thought Dinner Series), Spring 2020.

“An Environmental and Behavior Health Perspective to Global Research.” University of North Carolina at Chapel Hill, Department of Environmental Sciences and Engineering, (ENVR 230 Seminar Series), Fall 2020.

TEACHING ACTIVITIES

Adjunct Instructor

- 2019 – present
- SPHG 701: *Leading from the Inside-Out*, University of North Carolina Gillings School of Global Public Health
- Spring 2021 – 4 MPH Sections (65 students; Concentrations: Health Behavior, Health Equity, Social Justice and Human Rights, Environmental Health Solutions)

SPHG 701 and 702: *MPH Practicum Preparation*, University of North Carolina Gillings School of Global Public Health

- Spring 2020 - 4 MPH Sections (Concentrations: Health Behavior, Health Equity, Social Justice and Human Rights, Environmental Health Solutions, Global Health)
- Fall 2021 – 4 MPH Sections (Concentrations: Health Behavior, Health Equity, Social Justice and Human Rights, Environmental Health Solutions, Global Health)

SPHG 351: *Foundation of Public Health*, University of North Carolina Gillings School of Global Public Health

- Fall 2019 - BSPH program (Co-Instructor)

Practicum Manager

2020 MPH Practicum (83 students), Concentrations: Health Equity, Social Justice and Human Rights, Health Behavior, Environmental Health Solutions, Global Health, University of North Carolina Gillings School of Global Public

Masters Advisees

2020 -- present Joia Freeman, Health Equity, Social Justice and Human Rights University of North Carolina Gillings School of Global Public Health

Capstone Faculty Advisor

2020 – present Chatham Habitat for Humanity, Chatham County, NC
Team: Morgan Cooper, Emily Gvino, Eduardo Hernandez, Marlyn Pulido, Emma Stockton

Student Faculty Advisor

2021 Minority Student Caucus, University of North Carolina Gillings School of Global Public Health

Doctoral Committee

2021 Committee Member, Belinda Young-Rose, Health Behavior, University of North Carolina Gillings School of Global Public Health (proposal defense Spring 2021)

- *Nation-state Human Trafficking Legislation and Exploitation Risk Profiles*

Research Assistant Co-Supervisor

2021 Emmanuel Saint-Phard (Health Behavior Student Based Tuition Project Health Behavior Equity Task Force), University of North Carolina Gillings School of Global Public Health

- *Using an Equity Lens to Assess and Improve Student Mentorship Experience in the Health Behavior Department*

Scientific Instructor

- 2015 – 2016 Scientific Instructor, International Genetically Engineered Machine (iGEM) Competition at Massachusetts Institute of Technology (MIT) for Institut Pasteur Paris Team
- 2014 Scientific Preceptor, Project IMHOTEP, University of North Carolina Gillings School of Global Public Health Department of Environmental Sciences & Engineering

Teaching Assistant

- 2011 Graduate Teaching Assistant, Summer Fellows Program, Introduction to Public Health, University of North Carolina Gillings School of Global Public Health
- 2010 Graduate Teaching Assistant, Summer Fellows Program, Introduction to Public Health, University of North Carolina Gillings School of Global Public Health

Mathematics Instructor

- 2006 – 2007 Mathematics Instructor, College Algebra, Community College of Baltimore County - Catonsville

LEADERSHIP AND SERVICE

- 2020 – present Health Behavior Equity Task Force, Minority Student Caucus Faculty Advisor, Gillings Alumni Inclusive Excellence Committee Member, Inclusive Excellence Strategic Messaging Focus Group, Department of Health Behavior, Health Behavior BSPH Planning Committee, MPH Core Teaching Group, Black Student Support Pod, Jr Faculty Support Pod, Gillings Immersions Planning Committee, Experience Gillings Day, Global Health Practice Travel Awards Committee, ESE Centennial Planning Committee, Public Health Foundation Board Scholarship Committee, Carolina Black Caucus Executive Committee, University of North Carolina at Chapel Hill Gillings School of Global Public Health
- 2019 – present Board Member (3-year term), Public Health Foundation Board, University of North Carolina at Chapel Hill Gillings School of Global Public Health
- 2014 – 2015 Co-President, Student Government, University of North Carolina at Chapel Hill Gillings School of Global Public Health
- 2009 – 2011 Co-President (2 terms), Minority Student Caucus (MSC), University of North Carolina at Chapel Hill Gillings School of Global Public Health
- 2009 – 2015 Representative, Deans Council for Gillings School of Global Public Health, Student Government Association for Gillings School of Global Public Health, Gillings School of Global Public Health Diversity and Inclusion Task Force-Co-Committee Chair, Gillings School of Global

Public Health Diversity and Inclusion Task Force Student Representative,
Ethnicity Culture and Health Outcomes (ECHO) Advisory Board, Various
Administrative School Search Committees, Gillings School of Global
Public Health Recruiter

PROFESSIONAL TRAINING

Managing Microaggressions in the Classroom Training, 2021
Equity in Teaching Institute at Gillings, 2020-2021
Health Behavior Equity in Teaching Workshop, 2020
Inclusive Classroom Symposium – Understanding and Addressing Structural Racism, 2020
REI Groundwater Training, 2020
REI Phase 1 Workshop, 2020
Microaggressions: How to Identify and Combat them in your Workplace and School, 2020
Emergency Preparedness, Ethics and Equity Series webinars about COVID-19, 2020