

Margaret E. (Peg) Coleman

Medical Microbiologist/Risk Analyst

Areas of Expertise

Expert testimony on microbial risk
Microbial risk assessment and analysis
Microbial ecology, peer review
Predictive microbiology, public health

Credentials and Professional Honors

M.S., Medical Microbiology, University of Georgia
M.S., Biology/Biochemistry, Utah State University
B.S., Biology/Chemistry, SUNY College of Environmental Science and Forestry and Syracuse University (*cum laude*)

Professional Affiliations and Activities

Society for Risk Analysis, Editorial Board for journal Risk Analysis, Member
Upstate New York Chapter of the Society for Risk Analysis, President
SUNY Upstate Medical University Masters in Public Health Board, Member
SUNY College of Environmental Science and Forestry Alumni Board, Member
American Society for Microbiology
The Society of Federal Health Professionals

Professional Profile

Ms. Peg Coleman began serving as a medical microbiologist and microbial risk assessor in the US federal government in 1992, and continued that work as founder of the woman-owned small business *Coleman Scientific Consulting*. Peg's assessments all address the extensive gaps in scientific knowledge of microbial risks and benefits in health and disease. She is recognized as a trusted advisor, invited expert, educator, and peer-reviewer for methodology to assess microbial risks, including attendant uncertainties due to limited data that is often ambiguous, fragmented, and indirect. Her **unique knowledge and leadership** was essential to developing coherent models that reflect biologically relevant data and uncertainty for underlying causal mechanisms. Many assessments incorporated her insights from environmental and food chain exposures to pathogens from scenarios for intentional biothreat attacks and natural farm to fork systems. Her work continues to raise challenges to use of outdated conservative assumptions that overestimate risk, underestimate uncertainty, and poorly reflect pathogen interactions in complex biological systems like the gastrointestinal tract.

Peg's assessments include air-borne, food-borne, and water-borne pathogens for natural and contaminated environments. Her most innovative recent projects apply knowledge emerging from culture-independent studies of microbial genes or molecules produced by microbes, rather than relying solely on culture-based methods and simplified *in vitro* test systems for assessing predictable effects of microbes, both benefits and risks. Her recent manuscripts in the prestigious journals *Human and Ecological Risk Assessment* and *Risk Analysis* challenge the outdated assumptions of simple non-threshold models with low-dose linearity for microbial dose-response assessment.

Her work on issues related to the microbiota of milks began in 2014 with a presentation entitled *Exploring Disagreements Regarding Health Risks of Raw and Pasteurized Human and Bovine Milk* at the Society for Risk Analysis (SRA) meeting. Since then, she has led a multi-year international project on the microbiota of milks, published five manuscripts (most recent below), and presented on microbiota of milks at four regional, national, and international events. Peg is leading an SRA crowd funding campaign (*Whole Truth, Whole Milk Campaign*) to obtain support to communicate the 'Whole Truth' about the scientific evidence on benefits and risks of fresh unprocessed 'Whole Milk' with natural fats and microbiota intact.

- Coleman, et al. 2018. Microbiota and dose-response: Evolving paradigm of health triangle. Upcoming *Risk Analysis* volume.
- McClellan, Coleman, et al. 2018. Human dose-response data for *Francisella tularensis* and a dose- and time-dependent mathematical model of early-phase fever associated with tularemia after inhalation exposure. Upcoming *Risk Analysis* volume.
- Coleman, et al. 2017. Special Collection . *Human and Ecological Risk Assessment: An International Journal*. 2. Mechanistic modeling of salmonellosis. 23(8):1830-56; 3. Scientific data and theories for salmonellosis dose-response assessment. 23(8):1857-76.