



Jo Anne Shatkin

Jo Anne Shatkin, Ph.D. is President of Vireo Advisors, LLC, a woman-owned business based in Boston, Massachusetts focused on regulatory and safety strategies for novel bio-based and nanoscale technology development and innovation. She has extensive experience in working with entrepreneurs to guide responsible product development and commercialization. As CEO of CLF Ventures, she worked with early stage and large organizations on new technology introduction strategies, including business planning, environmental impact assessment, and networking for financing. She develops state of the art analyses on behalf of public and private organizations to inform safe and sustainable product new development. Dr. Shatkin is an environmental health scientist and recognized expert in environmental science and policy, human health risk assessment, emerging contaminants policy and environmental aspects of nanotechnology.

Since 2005, Jo Anne has provided leadership on the responsible development of nano-and bio-based technologies, and on approaches for decision making under uncertainty. She served as an expert to several international committees on nanotechnology safety, including the joint WHO_FAO Expert Panel on Nanotechnology in Food, the Canadian Council of Academies, and the US/Russia Bilateral Commission for Science and Technology Nanotechnology Environmental Health and Safety Panel. She serves as EHS Advisor to P3Nano, the US public private partnership to advance commercialization of nanocellulose. She pioneered the use of life cycle thinking in risk analysis for nanomaterials, collaborating with the U.S. Environmental Protection Agency to develop several case studies that informed EPA's risk analysis, research agenda and policies for nanomaterials. Jo Anne developed and uses NANO Life Cycle Risk Analysis to inform safe development strategies for nanomaterials, described in her book, *Nanotechnology Health and Environmental Risks Second Edition* (CRC Press 2012). She founded the Emerging Nanoscale Materials Specialty Group of the international Society for Risk Analysis, where she is a Fellow and served as councilor, and in 2015 received the Outstanding Practitioner Award. She serves on the board of the Center for Environmental Policy at American University and the University of Maine Forest Bioproducts Research Institute and was a Switzer Environmental Fellow. She is leading efforts to develop methods and standards for environmental health and safety for TAPPI and participates in the US Technical Advisory Group to ANSI on EHS Standards Development for nanocellulose. Jo Anne received an Individually Designed Ph.D. in Environmental Health Science and Policy and her MA in Risk Management and Technology Assessment from Clark University, Worcester, Massachusetts and possesses a Bachelor of Science degree from Worcester Polytechnic University in Molecular Biology and Biotechnology.