**2019 NSE Grantees Conference**

# Nanoplastics: Knowledge Gaps

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**Abstract:** There is greater awareness regarding nano and microplastics in the environment with recent news and research articles about their presence in food, water and air. This is emerging as a global problem with marine debris even with recent ban on single use plastics in many countries. While methods and data for detection of microplastics are more mature, there is limited data available on nanoplastics and chemicals bound to them. This presentation will highlight knowledge gaps with a hope that appropriate methods will be developed by the research community for the detection, separation, identification, and quantitation of nanoplastics. Once identified and quantified, efforts can be centered around mitigation, upcycling, identify hazards, exposure and assess risk for environment, humans and animals to address public concerns.

**Disclaimer:** *The views expressed in this presentation do not necessarily represent those of the U.S. Food and Drug Administration*

**Bio:** Dr. Anil Patri serves as the Chair, Nanotechnology Task Force in the Office of the Commissioner, and as the Director of Nanocore, National Center for Toxicological Research, US Food and Drug Administration (US FDA). His laboratory is very active in nanotechnology regulatory science research to understand material characteristics, their safety and efficacy. Dr. Patri serves on the U.S. National Nanotechnology Initiative (NNI) NSET Subcommittee and NEHI working group for US government inter-agency coordination. He is as member of ISO TC229 and serves on the executive committee of ASTM E56 to facilitate standards development. Prior to joining FDA in 2014, Dr. Patri served as the Deputy Director of the Nanotechnology Characterization Laboratory (NCL) at the Frederick National Laboratory for Cancer Research and

developed nanotechnology-based targeted drug delivery and imaging agents until 2004 at the University of Michigan Medical School. He is a synthetic chemist by training and earned his Ph.D., at the University of South Florida.