



Purpose of Program

- Reduce the occurrence of nosocomial infections
- Identify problem areas and microbiological hot spots
- Limit the re-admittance rate within hospitals
- Improve the welfare of patients and enhance the reputation of health-care providing institutions
- Enhance patient safety

ARC Service Offerings

- **Environmental sampling for pathogen contamination**
 - Matrices - rinsates, direct item enrichment, water, surfaces, textiles
- **Microbial strain identification and characterization**
 - Next gen sequencing
 - Whole genome
 - Antimicrobial susceptibility profiling
 - Virulence factor evaluation
 - Metabolic fingerprinting
 - Population diversity
- **Biofilm treatment and prevention studies**
- **Antimicrobial efficacy studies of disinfection/sanitization agents**
 - Strain susceptibility
- **Product and consumable compatibility and claim evaluation**
 - Surface coatings, textiles and patient contact materials
 - Microbial resistance
 - Allergenic claims
 - Leachable / extractable analysis
- **Validation of cleaning protocols**
- **Comparison of cleaning regimens**
- **On-site monitoring and verification of cleaning practices**

Applied Research Center (ARC)

Infection Control and Prevention Program Continued



Robert S. Donofrio, Ph.D.

Director, Applied Research Center

Dr. Robert S. Donofrio has more than 20 years of expertise in microbiology (environmental, water, food and clinical), lab design, technical operations management and method development and validation. He holds a Ph.D. in biological sciences from Michigan Technological University and an M.S. in environmental microbiology from Duquesne University. Dr. Donofrio's research focus has been on microbial control in water distribution systems and in food production settings, as well as characterizing microbial contamination in various environments (such as households in NSF's Germ Studies) and assessing the efficacy of various treatment approaches. During his tenure at NSF, he spearheaded initiatives to incorporate molecular techniques for pathogen detection in food and water testing and established retail food and biofilm testing capabilities and the formation of virology and cell toxicity labs. He has authored numerous publications, serves on several advisory boards (i.e. Healthy House Institute, NoroCore, IAFP and US TAG for Nanomaterials), and is on the Board of Directors for the Society for Industrial Microbiology and Biotechnology.

To learn how ARC can support your business, contact arc@nsf.org or visit www.nsf.org/info/arc