



Building Capacity: Food Virology

NoroCORE

USDA NIFA Food Virology Collaborative

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Viruses, not bacteria, are the leading cause of foodborne illness, with human noroviruses responsible for about 5.5 million illnesses annually in the United States. The differences between viruses and bacteria mean that much of the existing knowledge and solutions that apply to controlling bacterial pathogens in the food chain are not readily extensible to viruses. Despite the need, there is limited food virology expertise. NoroCORE is taking a multi-faceted approach to building the necessary scientific and human capacity to support increased and sustained efforts in food virology, with an eye towards increasing workforce diversity. Towards this end, NoroCORE has established competitive internship and fellowship programs to help develop a cohort of highly qualified and diverse M.S. and Ph.D. scientists trained in the interdisciplinary, collaborative model.

An undergraduate summer internship program is offered in cooperation with North Carolina Central University, a NoroCORE HBCU partner institution. The program offers a paid internship to undergraduates participating in the Biomanufacturing Research Institute and Technology Center of Excellence at NCCU. To date, eleven undergraduate interns have been placed with NoroCORE partners and completed the program over a period of three years. Host institutions represent a variety of research objectives across the field. Students gain experience in a research project, but also unique access to education resources, seminars, and firsthand exposure to highly collaborative research environments.

NoroCORE's graduate fellowship program offers a one-year fellowship award to highly qualified graduate students working with NoroCORE investigators. Awards cover stipend and cost of education. Four students each received fellowships for project years 2, 3, and 4, for a total of twelve graduate fellowship awards to date. Recipients represent a variety of fields and institutions, all with projects related to NoroCORE research objectives, including such studies as sampling of surfaces in retail food establishments, development of improved norovirus diagnostic assays for detection, investigation of the interaction between noroviruses and produce during contamination, development of biosensor platforms, and investigation of the prevalence of norovirus in at-risk populations. Students gain a supportive network of collaborators across diverse disciplines and valuable experience in a highly collaborative research program.

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Collaborative for Outreach, Research & Education