



TITLE: Postdoctoral Research Fellow
DEPARTMENT: Public Service & Agriculture
REPORTS TO: Director of Center for Food Safety & Health
EFFECTIVE DATE: Immediately
EMPLOYMENT STATUS: Full-time
SALARY: Highly Competitive

Position Description

The Center for Food Safety & Health at South Carolina State University's Public Service & Agriculture (SC State PSA) seeks a full-time skilled, independent, proactive microbiologist for a four-year project to gain an understanding of the types of lytic phages in South Carolina's agricultural and aquatic environments. The researcher will detect, isolate, and characterize the lytic bacteriophages, investigate their interaction and antibacterial activity against common food borne pathogens. The researcher is also responsible for data collection and analysis for the center's other biocontrol research projects as well as delivering learnings to diverse audiences in collaboration with the extension department. This is an opportunity to join an exciting new research center at a premier 1890 Land Grant University. The center's current area of focus is the biocontrol of foodborne pathogens in agriculture and food.

General Responsibilities:

- Detect and isolate lytic bacteriophages in South Carolina's agricultural and aquatic environments.
- Characterize the isolated phages and examine their interaction and antibacterial activity against common food borne pathogens in model systems and food matrices of significance to South Carolina.
- Serve as the laboratory leader, supervising and coordinating all aspects of laboratory operations (e.g., lab safety, supply purchasing, supervising staff).
- Design and conduct robust, scientifically sound research studies to fulfill grant project deliverables.
- Design and execute sampling plans, including environmental sampling in agricultural and aquatic environments.
- Modification of existing methods and/or design of new methods for laboratory analysis.
- Conduct statistical analysis of data collected to provide study results using Excel, SAS, SPSS, R, or other appropriate software or data analysis tools.
- Draft and publish scientific reports, peer-reviewed manuscripts and presentations.
- Manage all aspects of laboratory operations for purchasing and lab safety.
- Effectively lead staff and undergraduate student workers to safely complete tasks to fulfill grant projects or other work as assigned.
- Develop, implement, and monitor lab protocols.
- Maintain laboratory in sanitary condition.
- Mentor students and staff and aid in professional development.
- Transfer knowledge to society through outreach (e.g., collaborative research; seminars; workshops; lectures; websites; publications) and, where applicable, through technology transfer (e.g., collaborative research; contract work; and commercialization of intellectual property)
- Provide subject matter support and resources to 1890 Extension personnel to effectively plan and implement quality educational programs to meet the informational expectations of clientele.

- Maintain communication with PSA Administration, College of Agriculture, Family and Consumer Sciences Personnel, including 1890 Research and 1890 Extension leadership.
- Write and assists in writing grant proposals.
- Other duties as assigned.

Knowledge, Skills, and Abilities:

- Self-starter that can function independently with minimal supervision
- Strong background and expertise in Microbiology, Molecular Biology, Microbial Pathogenesis, Bacteriology, and associated techniques
- Excellent knowledge of and execution of aseptic technique
- Ability to lead laboratory operations and staff, as well as to function as a strong collaborator on a multidisciplinary team
- Highly organized
- Ability to work cooperatively with others
- Excellent English writing and verbal communication, public speaking, and presentation skills
- Able to give and receive constructive feedback and uphold accountability
- Professional demeanor
- Resourceful individual who leverages creativity and available resources to achieve goals
- Strategic thinker with the ability to manage competing priorities, pivot as needed, and meet deadlines
- Ability to effectively communicate with PSA Administration, College of Agriculture, Family and Consumer Sciences Personnel, including 1890 Research and 1890 Extension leadership
- Knowledge and understanding of the mission and role of the Land Grant University System

Required Education/Experience:

- Ph.D. in Food Science, Microbiology, Molecular Biology, or a related discipline
- Solid research background in microbiology or related discipline, as demonstrated by completing a doctoral degree, grant funding, scientific scholarly society memberships, etc.

Preferred Education/Experience:

- At least three years conducting competitively funded research
- At least three years of developing and designing food microbiology scientific studies, conducting statistical analysis, and dissemination of results
- Experience in phage biology, phage-host interactions, metagenomics, designing and performing microbial challenge studies will be considered as strong assets
- Experience in BSL2 settings
- Record of high productivity as demonstrated by peer-reviewed journal publications (preferably multiple first-author papers), peer-reviewed presentations and/or research presentation competitions, publication of educational materials, engagement in scientific and trade organizations, etc.
- At least one year of teaching and/or serving as a student mentor/coach.
- At least one year of delivering and/or supporting the delivery of extension programs or community outreach.

Application Requirements

Interested candidates can submit their application package including cover letter, CV, and one-page summary of research experience to Dr. Subash Shrestha at sshrest3@scsu.edu Please use 'Postdoctoral Research Fellow' as the subject line of your email.