



THE
UNIVERSITY
OF RHODE ISLAND
COLLEGE OF
PHARMACY



BROWN



**Rhode Island Infectious Diseases (RIID) Research Program
Veterans Affairs Medical Center (VAMC), Providence, RI Funded Fellowship, in
conjunction with, University of Rhode Island (URI) College of Pharmacy,
Kingstown, RI and the Warren Alpert School of Medicine, Brown University,
Providence, RI**

**RIID Program Director
Co-Director (Non-executive) of Fellowship Program**

Kerry LaPlante, PharmD, FCCP, FIDSA
Director of Pharmacology PK/PD

Chair and Professor of Pharmacy, University of Rhode Island, Kingston, RI
Adjunct Professor of Medicine, Brown University, RI

Infectious Diseases Pharmacotherapy Specialist, Providence Veterans Affairs Medical Center,
Providence, RI

Co-Director (Executive) of Fellowship Program

Haley Appaneal, PharmD, PhD

Director of Antimicrobial Stewardship Implementation

Research Health Scientist and Antimicrobial Stewardship Pharmacist, Providence Veterans Affairs
Medical Center, Providence, RI

Adjunct Assistant Professor, University of Rhode Island, Kingston, RI

Program Coordinator

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Fellowship offered:

Infectious Diseases Pharmacotherapy Fellowship, Rhode Island Infectious Diseases (RIID) Research Program.

Program Description:

The Rhode Island Infectious Diseases (RIID) Research Program is focused on the prevention, treatment, virulence inhibition and outcomes associated with drug resistant bacteria. The program is divided into three divisions, the in vitro division, focused on pharmacology specifically pharmacokinetic and pharmacodynamic modeling, the clinical outcomes division focused on pharmacoepidemiology, and the antimicrobial stewardship implementation division focused on improving antibiotic use and patient outcomes. The program is located in the State of Rhode Island, at the Providence Veterans Affairs Medical Center and the College of Pharmacy at the University of Rhode Island.

Educational Purpose of Fellowship:

This two-year program is designed to provide skills that are necessary to pursue a career in academia, outcomes research and basic clinical practice focused in infectious diseases. The program integrates a formal hands-on research experience (80%), teaching both in the classroom and experiential, and practical clinical experience for the Antimicrobial Stewardship Program (~20%). A major focus of this program is research design, development, analysis and writing for final publication. Fellows are responsible for submitting their research to national and international infectious diseases meetings and submitting their papers to peer reviewed journals for publication.

During the two-year program, the fellow will be responsible for providing Antimicrobial Stewardship services, including providing clinical infectious diseases pharmacotherapy and pharmacokinetics expertise to the VAMC hospital and the Infectious Diseases consult team for approximately 16 weeks per year. This clinical service should not take more than ½ of the fellow's day, leaving time to focus on the fellow's research efforts. In order to provide a well-rounded clinical experience, there is opportunity for the fellow to participate on the Antimicrobial-Sub Committee, and Infection Control Committee at the Providence VAMC. Participation on these committees is not required but will be based upon current research projects in areas of Antimicrobial Stewardship and Infection Control.

The research environment is conducive to scholarly work. The fellow will receive formal training in both laboratory and clinically based research. Laboratory training will allow for the understanding and implementation of in vitro infectious diseases research including but not limited to, pharmacodynamic and pharmacokinetic modeling, molecular technologies, and statistical analysis. Clinically based research will allow for the fellow to gain experience in quantitative and qualitative methodologies. This training will allow for understating of pharmacoepidemiology and implementation science. All research will include development of a research project and experience in Investigational Review Board (IRB). The fellow is responsible for submitting research proposal to the VAMC Institutional Review Board (IRB; human), and Research and Development Board (R&D).

Teaching: The fellows will have several opportunities for teaching. The requirement will encompass classroom teaching at the University of Rhode Island's College of Pharmacy, Noon conference (given to Brown University medical students, interns, residents and staff), and assisting in precepting the 6th year Pharm.D. students during their Infectious Diseases experiential rotation.

Research Goals:

- To contribute to clinical, humanistic and economic outcomes analyses through infectious diseases pharmacy research.
- To employ knowledge acquired through experiential training, conduct infectious diseases practice research using effective research design and management skills by formulating a hypothesis, creating a feasible design for research projects, and utilizing appropriate statistical methods to interpret data.
- To effectively present the results of research, successfully employ accepted manuscript style for final research report, and secure publication of research results.

Clinical Goals:

- To become an independent pharmacy practitioner with a wealth of knowledge of the epidemiology and treatment of infectious diseases.
- To successfully serve healthcare organizations as the ultimate resource for information about anti-infectives including leadership in formulary decision-making for anti-infectives.

Essential functions:

- Maintain up-to-date knowledge in infectious diseases pharmacotherapy and provide expert consultation with other healthcare professionals in development of pharmacotherapy plans for patients as appropriate.
- Participate in objective evaluation and dissemination of medication use trends and pharmaco-economic/clinical outcomes information for appropriate areas throughout the system.
- Coordinate, support, and participate in research, research protocol review, and research development related to the specialty area.
- Prepare grant proposals for funding of research.
- Publish original research articles, and present at local and national functions relevant to practice area.
- Master understanding, application, and relevance of an antimicrobial stewardship to an organization and ultimately in the delivery of safe, effective patient care.
- Promote and develop the application of antimicrobial stewardship strategies to reinforce practice infrastructure within Providence VAMC
- Teach pharmacy, medical, nursing, and other personnel where appropriate. Co-precept clinical clerkship students and residents participating in practical experience training programs.
- Perform other functionally related duties as assigned.

Qualifications:

- Pharmacist with a masters or doctoral degree required.
- Residency or equivalent clinical experience preferred.
- Demonstrated interest in or an aptitude for a career in research.

This program has been reviewed by the Fellowship Review Committee (2021) and is recognized as meeting the ACCP Guidelines for Research Fellowship Training Programs.

<http://www.accp.com/resandfel/peerReview.aspx>

Pharmacology PK/PD Fellowship Division

The pharmacology PK/PD division was developed in 2004 and has received uninterrupted funding from the National Institutes of Health (NIH), The United States Department of Veterans Affairs (VA), Rhode Island foundation grants and investigator-initiated research from pharmaceutical industry. The focus of the fellowship is the treatment, virulence inhibition, control and prevention of methicillin-resistant *Staphylococcus aureus* (MRSA) and other pathogenic drug resistant bacteria. Laboratory experiments are directed towards discovery of new knowledge in biofilm prevention and treatment, Antibiotic Lock Therapy (ALT), pharmacodynamic interactions of combination therapy, infection control and decolonization of MRSA and high throughput screening of novel agents (natural products and synthetic) that possess antimicrobial activity.

Outcomes Fellowship Division

The outcomes research division began in 2008, and is focused on pharmacoepidemiologic research, including a major focus upon comparative effectiveness, outcomes, risk factors and infectious disease epidemiologic research. A larger focus of this program is in the area of health outcomes and antimicrobial stewardship. The outcomes division applies advanced epidemiologic and pharmacoepidemiologic methods to the study of infections caused by dangerous bacterial pathogens. There is a critical need for active comparator trials and comparative effectiveness research in light of present-day efforts to increase antimicrobial drug development and extend the life of the current antimicrobial pipeline as multi-drug resistance increases.

Antimicrobial Stewardship Implementation Division

The antibiotic stewardship implementation division began in 2012 and is focused on implementing interventions to improve antibiotic use and patient outcomes. The implementation division is focused on promoting the appropriate and safe use of antibiotics and supports research related to the development, adoption, and analysis of evidence-based antimicrobial stewardship approaches to improve antimicrobial use and ultimately the care of our patients in all health-care settings. The implementation division uses qualitative and quantitative methods to assess the effectiveness and implementation success of antibiotic stewardship interventions. The implementation division works closely with the Providence VA Medical Center's Antibiotic Stewardship Program to support intervention in the acute care and outpatient settings and the Center of Innovation in Long-Term Services and Supports for Vulnerable Veterans (COIN-LTSS) to support intervention in the long-term care setting.

Leadership

About the Fellowship Program Director (non-executive): The program is directed by Kerry LaPlante, Pharm.D. who has over 18 years of experience in infectious diseases, and has authored more than 100 peer-reviewed journal articles, abstracts, and textbook chapters in this area of research. Dr. LaPlante is Department Chair and a tenured Professor of Pharmacy at the University of Rhode Island and an Adjunct Professor of Medicine at the Warren Alpert Medical School at Brown University. Her clinical practice site and research program is at the Providence Veterans Affairs Medical Center (VAMC) where she serves as an infectious diseases' pharmacotherapy specialist. Complete List of Published Work in My [Bibliography](#):

About the Fellowship Program Director (executive): Dr. Haley J. Appaneal, PharmD, PhD is research health scientist investigator and clinical pharmacist specialist at the Providence Veterans Affairs Medical Center (VAMC). Dr. Appaneal graduated from University of Connecticut School of Pharmacy with a Doctor of Pharmacy in 2011. Dr. Appaneal then completed a pharmacy practice residency at the PVAMC in July 2012 and subsequently a two-year VA funded post-doctoral fellowship for PharmDs in July 2014. Her fellowship training was in infectious diseases clinical outcomes with a focus on the appropriate and safe use of antibiotics (antibiotic stewardship). Since completing her fellowship, Dr. Appaneal has been a health services investigator at Providence VAMC with the Rhode Island ID (RIID) Research Program and the Center of Innovation in Long-Term Services and Supports for Vulnerable Veterans (COIN-LTSS) and a core member of the Providence VAMC's Antimicrobial Stewardship Program. Dr. Appaneal was awarded an early Career Development Award (CDA) from the VA New England Healthcare System to describe antibiotic use, resistance, and barriers and facilitators to antibiotic stewardship among all the long-term care facilities of the VA New England Healthcare System in 2014. Dr. Appaneal entered the PhD program in Health Services Research at Brown University in August 2016 to pursue her interest in antibiotic stewardship outcomes research, and to gain additional training in pharmacoepidemiology and pharmaceutical health services research (HSR). She received her PhD from Brown University School of Public Health in October 2020. Dr. Appaneal was awarded a national VA Health Services Research and Development (HSR&D) 5-year CDA to advance antibiotic stewardship in VA long-term care facilities in 2016. The majority of her research to date has focused on the development, adoption, and analysis of evidence-based antimicrobial stewardship approaches to improve antimicrobial use and ultimately the care of our Veterans in the acute care and long-term care settings.

About the Director of Outcomes Program: Dr. Caffrey is Director of Outcomes Research for the Rhode Island Infectious Diseases (RIID) Research Program of the Providence Veterans Affairs Medical Center and University of Rhode Island College of Pharmacy, where she is engaged in interdisciplinary infectious diseases research. Dr. Caffrey applies advanced epidemiologic and pharmacoepidemiologic methods to the study of infections caused by dangerous bacterial pathogens. There is a critical need for active comparator trials and comparative effectiveness research in light of present-day efforts to increase antimicrobial drug development and extend the life of the current antimicrobial pipeline as multi-drug resistance increases. As such, the objective of her research program is to quantify the benefits and harms of antibiotics in real-world clinical practice. Dr. Caffrey earned an M.S. degree in Epidemiology with a concentration in Infectious Diseases from the State University of New York at Albany in 2005, as well as a B.A. in Psychology and Spanish Linguistics in 2003. She went on to pursue her Ph.D. in Pharmacoepidemiology and Pharmacoconomics from the University of Rhode Island in 2009. She then completed a Post-Doctoral Fellowship in Infectious Disease Pharmacoepidemiology at the Providence VA Medical Center in Rhode Island. A complete list of her publications and CV can be found at and CV can be found at https://works.bepress.com/aisling_caffrey/.

Laboratory Program Coordinator: Katie Daffinee, B.Sc. has served as laboratory manager since 2012 and project coordinator since 2016. She has extensive experience managing multiple in vitro projects data collections, analysis, and final reports. She directly reports to Dr. LaPlante for all results and project status updates. Ms. Daffinee coordinates with all co-investigators and consultants to set up essential meetings to discuss data as well as manage all data collection, project reports, abstracts, and manuscripts. Additionally, she aids with coordinating, troubleshooting, and conducting the in vitro experiments for fellowship projects, and will supervise all the research experiments that will be carried out in the laboratory. She is in charge of procuring lab supplies and equipment as well as maintaining the laboratory equipment's functionality. Further duties are to ensure compliance with all safety and infection control standards in BSL2 lab. Managing all grant activities per the grant scope of work to ensure milestones are being completed in timely fashion.

Program Coordinator: Jennifer DeAngelis, MBA has served as Coordinator for The Rhode Island Infectious Diseases Research Program since 2013 and has managed over 3 million dollars in research funding. She has assisted with over 20 grant submissions to National Institutes of Health, Department of Veterans Affairs, and various Industry Investigator Initiated applications, and has extensive experience coordinating multi-institutional collaborative research projects. Mrs. DeAngelis assists the Executive Director, and the Non-Executive Director, in the following major areas: She is in charge of all administrative aspects of the program, invoices, sub-contracts, hospital and university committee submissions, strategic planning, benchmarks, meetings, advisory boards, timelines, progress reports, and she serves as support and contact for all RIID staff and research faculty.

About Rhode Island: Rhode Island, the Ocean State, is loved for its many beaches, for the historic city of Newport, and for the up-and-coming capital city of Providence, rich with culture and interesting dining. Visitors love the unspoiled Block Island, easily reached by ferry from the fishing village of Point Judith. Other parts of the state are rich in history, farms, and beautiful outdoor getaways.
<http://www.visitrhodeisland.com/>

About the University of Rhode Island: Located in the historic village of Kingston, the University of Rhode Island is close to the ocean and major beaches. Our 1,200-acre campus is a handsome mix of ivy-covered buildings and contemporary architecture. Just 30 miles south of Providence, URI is within easy reach of Newport, Boston, and New York City. 14,653 undergraduate students and 2,242 graduate students' study on campus making the true beauty of URI lie within its dynamic students.
<https://www.uri.edu/>

About the Providence Department of Veteran's Affairs: The Providence VAMC consists of the VA Medical Center located at 830 Chalkstone Avenue, Providence, RI, and Community Based Outpatient Clinics (CBOCs) in Middletown RI, New Bedford MA, Hyannis MA. The Providence VAMC provides services for veterans in RI, southeastern MA and eastern CT. The medical center has 238 beds, 250,000 outpatient visits per year and is adding greater than 400-500 new patients per month.

The Providence VAMC is a primary and secondary health care facility providing a full range of patient care services with state-of-the-art technology. The Providence VAMC is a community leader in medical education and research. Comprehensive health care is provided in areas of medicine, surgery and psychiatry, including over 32 sub-specialty clinics. The Providence VAMC is a part of VISN 1 that includes facilities in RI, CT, MA, VT, NH and ME.

<http://www.providence.va.gov/>

The Providence VA Medical Center is also a performance site for an HSR&D funded Center for Innovation (COIN). The COIN has 3 specific goals: a) to support partnered and cross-medical center research to improve Long-Term Services and Supports (LTSS) programming for vulnerable Veterans across the US; b) to develop the Geriatrics and Extended Care Data Analysis Center program as a resource for research in LTSS; c) to facilitate partnered and cross-medical center research to address local and regional LTSS issues in operations and clinical care. The COIN infrastructure provides synergistic research opportunities in addition to serving as a resource for the co-education of research fellows and junior faculty.

Building #7 houses the LaPlante Research Team. This dedicated space for the RIID, provides 1,984 square feet of research space, and includes a conference room/lunchroom, offices used by investigators and research staff, and lab space. Building #7 is a secure space for research-related equipment and files. All project computers are password protected, behind the VA firewall, and are in locked temperature-controlled offices within the building, which utilizes electronic passkey access to users who are granted access by research administration. In addition, a secured research server is housed within the IT group on campus and has ample memory to house the VA and Medicare data sets. The database management facilities are built with multiple levels of security and access to the data is limited to persons with IRB approval and appropriate VA privacy, human subjects, and security training. Access privileges to research project directories on the server are monitored on a quarterly base by research personnel.

The LaPlante Laboratory is in room 106 of building 7. Room 106 is bio-safety level 2 certified laboratory space, which includes a media preparation and tissue culture room, and 3 main laboratory benches. The laboratory can accommodate up to 6 people and is equipped with a 4 ft. biosafety cabinet, a 5 ft. Chemical Fume Hood, and a dishwasher. Other equipment assigned to the investigator includes 2 Incubators, 1 New Brunswick Scientific Tabletop Incubator Shaker, 1 refrigerator, 1 Revco Ultra Low

Temperature Hi Efficiency -80°C freezer, and 1 Tuttnauer 3870 Autoclave. The LaPlante laboratory and offices are equipped with all-in-one Windows and Dell desktop computers and a multi-functional Brother printer with copying, scanning, faxing and wireless capabilities. Software that can be installed on your laptop includes Microsoft Office, SPSS, Stata, R, Sigma Plot, SAS, and Endnote. This software includes word processing, data analysis, data plotting, literature searching, report writing, and other tasks.

About Brown University: Located in historic Providence, Rhode Island and founded in 1764, Brown University is the seventh-oldest college in the United States. Brown is an independent, coeducational Ivy League institution comprising undergraduate and graduate programs, including the Alpert Medical School, School of Public Health, School of Engineering, and the School of Professional Studies. Brown's vibrant, diverse community consists of 6,400 undergraduates, 2,000 graduate students, 450 medical school students, more than 5,000 summer visiting, and online students, and over 700 faculty members. Brown students come from all 50 states and more than 100 countries.

The Veterans Affairs Medical Center in Providence, RI has professional affiliations with the Warren Alpert Medical School of Brown University. Medical staff associated with the Providence Veterans Affairs Medical Center have academic appointments at Brown University. The Division of Geriatrics and Palliative Care at Rhode Island Hospital/Brown University is a nationally known program (<http://umf.brownmedicine.org/redesign/ger.asp>) under the direction of Richard Besdine, MD with significant interests in the care of the frail elderly including outpatient care, nursing home medicine, and inpatient medicine. The division includes eleven physicians and five nurse practitioners, with three practitioners located primarily at the Providence VAMC. <http://www.brown.edu/>