

PERSONAL DATA

Name: Catherine M. Loc-Carrillo
 Birth Place: Lima, Peru
 Citizenships: United Kingdom, United States

EDUCATION

<u>Years</u>	<u>Degree</u>	<u>Institution (Area of Study)</u>
2010 - 2011	Postdoctoral Fellow	University of Utah School of Medicine (Microbiology & Bacteriophage) Salt Lake City, UT
2005 - 2006	Postdoctoral Fellow	The Evergreen State College (Phage Biology) Olympia, WA
2004 - 2005	Postdoctoral Research Fellow	Nottingham Trent University (Microbiology) Nottingham, England, United Kingdom
2000 - 2004	Ph.D.	University of Nottingham (Microbiology) Nottingham, England, United Kingdom
1999	M.Sc.	Nottingham Trent University (Biotechnology) Nottingham, England, United Kingdom
1994 - 1998	B.Sc. (Hons)	University of Wales Institute, Cardiff (Biomedical Sciences) Cardiff, Wales, United Kingdom

ACADEMIC HISTORY**Internal Medicine (Epidemiology), 05/16/2017 - Present**

05/16/2017 Research Assistant Professor
 01/04/2023 Adjunct Assistant Professor

Surgery (Plastic Surgery), 07/01/2015 – 03/31/23

07/01/2015 Adjunct Instructor

Pathology (Medical Laboratory Science), 06/01/2013 – 04/14/23

06/01/2013 Adjunct Instructor

Orthopaedics, 01/01/2012 - 06/30/2015

01/01/2012 Research Instructor

PROFESSIONAL EXPERIENCE**Full-Time Positions**

2017 - 2023 Research Assistant Professor, Department of Internal Medicine, Division of Epidemiology, University of Utah, Salt Lake City, UT
 2014 - 2017 Research Program Manager, IDEAS (Informatics, Decision-Enhancement, And Surveillance) Center, VA Salt Lake City Health Care System, Salt Lake City, UT
 2012 - 2015 Research Instructor, Department of Orthopaedics, University of Utah School of Medicine, Salt Lake City, UT
 2012 - 2014 Micro-Phage Lab Manager, Department of Orthopaedics, University of Utah School of Medicine, Salt Lake City, UT
 2011 - 2023 Principal Investigator, George E. Wahlen Department of Veterans Affairs Medical Center, Salt Lake City, UT

- 2007 - 2009 Senior Researcher/Lead Scientist, OmniLytics, Salt Lake City, UT
- 2006 - 2007 Postdoctoral Research Associate, Institute for Environmental Health, Lake Forest Park, WA
- 2003 - 2004 Research Assistant, Department of Biosciences, Nottingham Trent University, Nottingham, England
- 1996 - 1997 Trainee Medical Laboratory Scientific Officer, Department of Microbiology, University Hospital of Wales, Public Health Laboratory Services, Cardiff, Wales

Part-Time Positions

- 2023 -Present Adjunct Assistant Professor, Department of Internal Medicine, Division of Epidemiology, University of Utah, Salt Lake City, UT

Editorial Experience

- 2012 - 2014 Associate Editor-in-Chief for *Journal of Postdoctoral Research*
- 2011 - Present Review Editor for *Frontiers in Microbiology*

Reviewer Experience

- Reviewer for *Antibiotics*
- Reviewer for *Advances in Medical Sciences*
- Reviewer for *Antimicrobial Agents & Chemotherapy*
- Reviewer for *Applied & Environmental Microbiology*
- Reviewer for *Archives in Virology*
- Reviewer for *BMC Infectious Diseases*
- Reviewer for *BMC Microbiology*
- Reviewer for *Bone and Joint Research*
- Reviewer for *Clinical Microbiology Reviews*
- Reviewer for *FEMS Microbiology Letters*
- Reviewer for *Journal of Applied Microbiology*
- Reviewer for *Journal of Bioanalysis & Biomedicine*
- Reviewer for *Journal of Microbiological Methods*
- Reviewer for *Medical Microbiology & Immunology Review*
- Reviewer for *Microbiology & Molecular Biology Reviews*
- Reviewer for *Microbes & Infection*
- Reviewer for *Pharmaceutics*
- Reviewer for *PLoS ONE*
- Reviewer for *Viruses*

SCHOLASTIC HONORS

- 2014 - 2015 Vice President's Clinical & Translational Research (VPCAT) Scholar. A two-year, intensive mentored program for 20 junior faculty members within the University of Utah's School of Medicine. The program involved an intensive curriculum that provided essential research knowledge and practical skills needed to be an effective clinical or translational researcher
- 2002 President's Fund Award to attend IUMS - XIIth International Congress of Virology, Society for Applied Microbiology, UK
- 1999 EU Scholarship, European Master's in Biotechnology, Nottingham Trent University, Nottingham, England, UK

ADMINISTRATIVE EXPERIENCE

Administrative Duties

- 2018 - 2021 Director, Infectious Disease Research Program for IDEAS (Informatics, Decision-Enhancement, And Surveillance) Center, VA Salt Lake City Health Care System, Salt Lake City, UT
- 2021 - 2023 Member of Management Team, Trajectory of Resilience, Community, & Health, VA Salt Lake City Health Care System, Salt Lake City, UT

Professional Organizations & Scientific Activities

- 2021 – 2022 Intermountain Branch Secretary, American Society for Microbiology
- 2020 – 2023 Council on Microbial Sciences (COMS) Representative for Intermountain Branch, American Society for Microbiology
- 2012 – 2015 Organization Committee Member, American Society for Microbiology, Student & Postdoc Membership Committee
- 2011 – 2012 Committee Member & Senior Chair, National Postdoctoral Association: Utah Post-Doctoral Association, Utah Post-Doctoral Association (UPDA)
- 2010 – 2011 Committee Member & Junior Chair, National Postdoctoral Association: Utah Post-Doctoral Association, Utah Post-Doctoral Association (UPDA)

Grant Review Committee/Study Section

- 2023 - 2027 Reviewer, Microbiology and Immunology Disease B (MID-B) Research Study Section (for K and T awards), National Institute for Allergy and Infectious Diseases
- 2021 - 2023 Scientific Reviewer, Intramural Funding, Military Infectious Disease Research Program (MIDRP), Prolonged Field Care, US Army Medical Research and Development Command, Department of Defense
- 2021 Scientific Reviewer, Discovery Award, Peer Reviewed Medical Research Program (PRMRP), Congressionally Directed Medical Research Programs (CDMPR), Department of Defense
- 2020 Reviewer, Phage Biology and Bacteriophage Therapy SEP (R21), Center for Scientific Review
- 2020 Ad Hoc Reviewer, SUPER Follow on Fund, Biotechnology and Biological Sciences Research Council (BBSRC), United Kingdom
- 2019 - 2020 Reviewer, Exploration of Antimicrobial Therapeutics and Resistance SEP (R21 and R03), Center for Scientific Review
- 2019 Scientific Reviewer, Discovery Award Antimicrobial Resistance, Peer Reviewed Medical Research Program (PRMRP), Congressionally Directed Medical Research Programs (CDMPR), Department of Defense
- 2019 Reviewer, Support for Conferences and Scientific Meeting (R13), National Institute for Allergy and Infectious Diseases
- 2016 External Reviewer, AO Foundation, Switzerland
- 2016 Ad Hoc Reviewer, Canadian Poultry Research Council
- 2016 Ad Hoc Reviewer, Industrial Research Fund KU Leuven (IOF)
- 2015 Ad Hoc Reviewer, 2014-2015 Global Center for Food Systems Innovation (GCFSI) Grants
- 2015 Ad Hoc Grant Reviewer, Israel Science Foundation (ISF)
- 2013 Reviewer, Sherman S. Coleman Grant Review Committee, Department of Orthopaedics, University of Utah School of Medicine, Salt Lake City, UT

Symposium/Meeting Chair/Coordinator

- 2013 - 2015 Co-Organizer, 21st Evergreen International Phage Meeting, Olympia, WA.
- 2010 - 2013 Planning Committee & Session Chair, Evergreen International Phage Biology Meeting, 19th Evergreen International Phage Biology Meeting, Olympia, WA

- 2009 Session Chair, Evergreen International Phage Biology Meeting, 18th Evergreen International Phage Biology Meeting, Olympia, WA
- 2007 Session Co-Chair, Evergreen International Phage Biology Meeting, 17th Evergreen International Phage Biology Meeting, Olympia, WA

PROFESSIONAL COMMUNITY ACTIVITIES

- 2019 Science Fair Judge, Salt Lake Valley Regional Science & Engineering Fair, Salt Lake Valley Regional Science & Engineering Fair
- 2013 Coordinator, Evergreen International Phage Biology Meeting, 20th Evergreen International Phage Biology Meeting, Olympia, WA
- 2012 - 2013 Science Fair Judge, Salt Lake Valley Regional Science & Engineering Fair, Salt Lake Valley Regional Science & Engineering Fair
- 2010 - 2015 Advisory Board Member, International Society for Viruses of Microorganisms, International Society for Viruses of Microorganisms

UNIVERSITY COMMUNITY ACTIVITIES

University Level

- 2022 Research Mentor, Rural & Underserved Utah Training Experience (RUUTE), School of Medicine, University of Utah
- 2019 - 2022 Member, University Studies Committee, Review for approval baccalaureate programs of study individually designed by students under the supervision of a faculty advisor, leading to the Bachelor of University Studies degree
- 2014; 2022 Research Mentor, Native American Research Internship (NARI), School of Medicine, University of Utah
- 2012 Member, University of Utah, Graduate Student and Postdoctoral Scholar Distinguished Mentor Award Review Committee
- 2012, 2014, 2019, 2023 Research Mentor, ACCESS Program for Women in Science and Mathematics, College of Science, University of Utah

University of Utah Health

- 2020 - 2023 Coach Member, Utah Coaching and Advancement Network (UCAN)
- 2012 - 2013 Committee Member, University of Utah Hospitals and Clinics, 'Bug Busters'

College Level

- 2021 - 2024 Member, School of Medicine Admissions Committee, As a member of the Selection Committee, I review medical school applications post interviews, and discuss candidates with the other members of the team on a weekly basis from September to February during the admissions process.
- 2021 Admissions Assessment Work Group Member, School of Medicine Admissions Sub-Committee, Involved in creating and selecting new Standardized Video Interview (SVI) and Multiple Mini Interview (MMI) prompts and rubrics for assessing and selecting the Class of 2022.
- 2019 Member, School of Medicine Admissions Sub-Committee, Involved in appraising Standardized Video Interview (SVI) and Multiple Mini Interview (MMI) rubric for assessing and selecting the Class of 2020.
- 2017 - 2021 Member, School of Medicine Admissions Committee, I assist in the process of selecting medical school candidates. I meet with applicants face-to-face as part of the multiple mini interviews (MMIs) process and review standardized video reviews (SVIs).

2012 - 2014 Member, School of Medicine Admissions Committee, I have a commitment to assist in selecting a medical school class that will ultimately produce excellent physicians who will contribute to the welfare of the profession and serve the health care needs of the community. As part of the interview committee, I meet with applicants face-to-face in order to explore the applicant's genuine and sincere commitment to pursue a career in medicine.

SERVICE AT AFFILIATED INSTITUTIONS

2019 - 2023 Member, Subcommittee on Research Safety. This is a subcommittee of the Salt Lake City VA's Research & Development Committee (RDC). The purpose of the SRS committee is to oversee all research safety, security, environmental and emergency response programs.

2018 - 2019 Member, Staff and Investigators Council, IDEAS (Informatics, Decision-Enhancement, And Surveillance) Center, Salt Lake City VA

CURRENT MEMBERSHIPS IN PROFESSIONAL SOCIETIES

American Society for Microbiology

FUNDING

Current Grants

09/01/23 - Linking SARS-CoV-2 Aerosol Viability and Environmental Factors in Healthcare Settings
08/31/26 Principal Investigator(s): Rachael Jones; Kerry Kelly
Total Costs: \$2,272,684
National Institutes of Health
Role: Co-Investigator

09/30/21 - Intermountain Program on Antibiotic Resistance and microbial Threats (IMPART)
09/29/26 Principal Investigator(s): Samore, Matthew; Rubin, Michael
Total Costs: \$3,795,379
Centers for Disease Control and Prevention
Role: Co-Investigator

Past Grants

01/01/22 - Microbiome targeted oral butyrate therapy in Gulf War multisymptom illness
12/31/26 Clinical Science Research & Development (CSR&D)
Principal Investigator(s): Chaterjee, Saurabh ; Tuteja, Ashok
Veterans Affairs Merit Award
Role: Co-Investigator

05/01/20 - A Safe Validation to Test the Efficacy of Disinfectants on Reusable 3D Printed Face Masks
04/30/21 During the COVID-19 Pandemic
Principal Investigator(s): Loc-Carrillo, Catherine
Total Costs: \$37,626
Veterans Affairs Biomedical Laboratory Research and Development Service (BLR&D)

07/03/17 - Phage and Antibiotic Combination Therapy for Use on Polymicrobial Infections
06/28/21 Small Projects in Rehabilitation Research (SPiRE) program
Principal Investigator(s): Catherine M. Loc-Carrillo
Total Costs: \$199,872
Veterans Affairs Rehabilitation Research & Development
Role: Principal Investigator

07/01/16 - Intramedullary Antibiotic Therapy for the Treatment of Osteomyelitis
06/30/18 Biomedical Laboratory Research and Development Service (BLR&D)
Principal Investigator(s): Jayant Agarwal
Total Costs: \$299,580
Veterans Affairs Merit Review Award

- Role: Co-Investigator
- 10/01/15 - Microbiome and Innate Immunity with Percutaneous Osseointegrated Prostheses.
09/30/18 Musculoskeletal/Orthopedic Rehabilitation (RRD2)
Principal Investigator(s): James Beck
Total Costs: \$400,000
Veterans Affairs Merit Review Award
Role: Co-Investigator
- 09/01/15 - Keratin Nanomaterial Coating for Interfacing Advanced, Musculoskeletal Anchored Prosthetics
08/31/18 to Epithelial Tissues
Principal Investigator(s): Mark Van Dyke; Sujee Jeyapalina
Total Costs: \$1,499,711
Department of Defense Peer Reviewed Medical Research Program
Role: Sub-Contractor
- 08/03/13 - Evergreen Phage Conference 2015
08/09/13
Principal Investigator(s): Elizabeth Kutter
National Institute of Food and Agriculture
Role: Co-Investigator
- 05/19/11 - Development of Highly Functional, Neurally Controlled, Skeletally Attached and Intelligent
05/30/14 Prosthetic Devices
Principal Investigator(s): Roy Drake Bloebaum
Direct Costs: \$290,240 Total Costs: \$439,743
U.S. Army Medical Research and Materiel Command
Role: Sub-Contractor
- 07/12/05 - Bacteriophages for Food-Chain Biocontrol of *E. coli* O157
06/30/06
Principal Investigator(s): Andrew Brabban
National Institutes of Health
Role: Postdoc
- 07/01/00 - Use of Campylobacter bacteriophage as biocontrol agents against *Campylobacter jejuni* in
06/30/03 chickens
Principal Investigator(s): Ian F. Connerton
Department for Environment, Food and Rural Affairs - UK
Role: Ph.D. Student

Past Contracts

- 06/01/15 - Fluorohydroxyapatite Coatings for Facilitating Epithelial Cells Adhesion to the Implant Surface
05/31/18 for Preventing Infection in Percutaneous Implant Systems
Principal Investigator(s): Sujee Jeyapalina
Total Costs: \$749,000
Department of Defense Peer Reviewed Orthopaedic Research Program
Role: Sub-Contractor
- 01/01/13 - Annular Device for Intramedullary Infusion and Aspiration
12/26/14
Principal Investigator(s): Jayant Agarwal
Total Costs: \$25,000
University of Utah Seed Grant
Role: Sub-Contractor
- 12/03/10 - Microbiological Testing of Animal Tissue from Experimentally Infected Model
08/31/11
Principal Investigator(s): Catherine M. Loc-Carrillo
Innovative Medical Device Solutions

- 01/04/10 - 12/30/12 Role: Principal Investigator
 The Treatment of an Osteomyelitis Animal Model Using Phage Therapy
 Principal Investigator(s): James P. Beck
 University of Utah Department of Orthopaedics
 Role: Co-Investigator
- 07/12/05 - 06/30/06 Characterization of Pseudomonas bacteriophages for their potential use as therapeutic agents towards *Pseudomonas aeruginosa* infections
 Principal Investigator(s): Elizabeth Kutter
 PhageBiotics Foundation
 Role: Project Manager
- 09/01/04 - 07/01/05 Isolation and identification of opportunistic Enterobacteriaceae found in powdered infant formula milk
 Principal Investigator(s): Stephen J. Forsythe
 Nottingham Trent University
 Role: Postdoctoral Research Fellow

TEACHING RESPONSIBILITIES/ASSIGNMENTS

Course Lectures

- 2022 Foundations of Medicine Case-Based Learning Facilitator, MS2026: The course entails small group facilitation of pre-clerkship medical students. LOM Facilitators guide and assess students on their engagement with the course. The longitudinal curriculum is designed to equip medical students with the knowledge, skills, attitudes, and behaviors necessary to: 1) Provide compassionate care to a diverse patient population; 2) Understand the complexities of a changing health care system and how access to health care impacts patient outcomes; 3) Practice medicine informed by ethical principles; 4) Analyze the impact of social, economic, gender, and cultural factors on health care outcomes; 5) Develop a positive professional attitude; 6) Appreciate and manage the influence of personal values and attitudes on relationships with patients; and 7) Appreciate the role of arts and humanities in medicine.
- 2013 - 2019 Instructor, MDLB 5100: Principles of Education and Research Design, 30 students, University of Utah, Pathology. The course was structured to include two components: a section on educational principles and a segment presenting various aspects of establishing a research project. Professor Wales Nematollahi conducts the education component and Dr. Catherine Loc-Carrillo the research component. The RESEARCH component, which was offered for the SECOND four weeks of the Fall and Spring semesters, allowed students to review major steps of a research project, including how to: identify research topics, evaluate the literature, construct and test a working hypothesis, analyze and interpret data, and report results. Basic research terminology and major formats of research designs were also discussed.
- 2012 Instructor, Bio 2870: University of Utah, Faculty Research Seminar - Using Bacteriophage to Fight Bacterial Infections.
- 2004 Instructor, Food Science, 20 students, Nottingham Trent University. Taught part of the course that covered food safety and HACCP management.
- 2003 Instructor, Microbiology: Introduction to Practical Microbiology Lab, Nottingham Trent University.

Laboratory Teaching

- 2012 BIOL 2115 - Basic Techniques Laboratory; Taught basic PCR assay techniques to detect and identify *Pseudomonas* spp. from a group of unknown bacteria; this course was designed to provide the necessary practical experience in basic laboratory techniques for undergraduate students interested in undertaking an undergraduate research project, Department of Biology, University of Utah, Undergraduates, 30 students

2003 Microbiology: Introduction to Practical Microbiology Lab, Nottingham Trent University

Trainee Supervision

Medical Student

2011 Mentor, Alec Runyon, University of Utah, Microbiology Research Training Program
Trainee's Current Career Activities: Medical Student, University of Nevada

Undergraduate

2022- Research Mentor, Eron Powell, University of Utah, Microbiology Research Training Program, UROP
2023 internship recipient, Biology Major.

2022- Research Mentor, Maren Shope, University of Utah, Microbiology Research Training Program, UROP
2023 internship recipient, Biology Major. ACCESS recipient.

2022 Research Mentor, Acaysha Jones, University of Utah, Native American Summer Research Internship (NARI) recipient.

2022 Mentor, Kylie Peasley, University of Utah, Rural and Underserved Utah Training Experience (RUUTE) Intern.

2020 - Mentor, Adrienne Purdy, University of Utah, Microbiology Research Training Program.
2021

2020 - Mentor, Rachael Ramsey, University of Utah, Microbiology Research Training Program.
2021

2019 - Mentor, Michael Maio, University of Utah, Microbiology Research Training Program.
2020

2019 - Mentor, Molly Czachor, University of Utah, Microbiology Research Training Program.
2022

2019 - Advisor/Mentor, Hyonoo Joo, University of Utah, Microbiology Research Training Program. UROP
2021 internship recipient.

2019 - Mentor, Taylor Christensen, University of Utah, Microbiology Research Training Program. ACCESS
2022 recipient. UROP internship recipient.

2019 Mentor, Tiffany Huynh Do, University of Utah, Microbiology Research Training Program. ACCESS
recipient.

2018 - Mentor, Anna Tidwell, University of Utah, Microbiology Research training Program. UROP internship
2022 recipient.

2016 - Advisor/Mentor, Dylan Drapeau, University of Utah, Microbiology Research Training Program, Biology
2019 Major
Trainee's Current Career Activities: Completing Medical Laboratory Science Undergraduate Program at the University of Utah

2016 - Advisor/Mentor, Dakota Crocker, University of Utah, Microbiology Research Training Program, Biology
2018 Major
Trainee's Current Career Activities: Medical Student at University of Utah

2016 - Advisor/Mentor, Emma Naatz, University of Utah, Microbiology Research Training Program, Pre-Med
2018 Student, Post-bachelor
Trainee's Current Career Activities: Medical Student at the University of Utah

2015 - Advisor/Mentor, Hunter Frederiksen, University of Utah, Microbiology Research Training Program,
2018 Bioengineering (Pre-med) Major
Trainee's Current Career Activities: Medical Student at the University of Utah

2015 Mentor, Julie Tall, University of Utah, Microbiology Research Training Program
Trainee's Current Career Activities: Biology Major

2015 Mentor, Tyson Matern, University of Utah, Microbiology Research Training Program
Trainee's Current Career Activities: Biology Major

2014 Research Mentor, Danner Peter, University of Utah, Native American Summer Research Internship (NARI) recipient

2014 - Mentor, Sheena Fernandez, University of Utah, Microbiology Research Training Program, B.Sc.
2016 Biology (Honors Program). ACCESS recipient.

- 2014 - Advisor/Mentor, Caroline Jia Wang, University of Utah, Microbiology Research Training Program, UROP internship recipient, Biology Major. ACCESS recipient.
- 2014 - Advisor/Mentor, Madeline Berger, University of Utah, Microbiology Research Training Program, B.Sc. Biology (Honors Program)
- 2013 - Mentor, Kadan Atkin, University of Utah, Microbiology Research training Program, UROP internship recipient
- 2013 - Advisor/Mentor, Yinghua (Crystal) Su, University of Utah, Microbiology Research Training Program, UROP internship recipient
- Trainee's Current Career Activities:* Graduate Student, Department of Biology, University of Utah
- 2013 Mentor, Zachary Mortensen, University of Utah, Microbiology Research Training Program
- Trainee's Current Career Activities:* Graduated with an MD from Texas Tech University Health Sciences Center.
- 2013 Advisor/Mentor, John Churchill, University of Utah, Microbiology Research Training Program
- Trainee's Current Career Activities:* Graduated with a PharmD from the University of Utah College of Pharmacy and is a Pharmacy Manager at Walmart
- 2012 - Advisor/Mentor, Kelly Hoerger, University of Utah, Microbiology Research Training Program
- 2014
- Trainee's Current Career Activities:* Medical Student, University of Utah School of Medicine
- 2012 - Mentor, Kody Allen Baumgardner, University of Utah, Microbiology Research Training Program
- 2013
- 2012 - Mentor, Elisabeth Zachary, University of Utah, Microbiology Research Training Program. ACCESS recipient.
- 2013
- 2012 - Mentor, Keenan Wells, University of Utah, Microbiology Research Training Program
- 2013
- 2012 - Mentor, Gabriel Mejia, University of Utah, Microbiology Research Training Program
- 2013
- Trainee's Current Career Activities:* Medical Student, University of Nevada
- 2011 - Mentor, Zack Cramer, University of Utah, Microbiology Research Training Program
- 2012
- Trainee's Current Career Activities:* Entrepreneur and Business Owner
- 2011 - Mentor, Kurt Webster, University of Utah, Microbiology Research Training Program
- 2012
- Trainee's Current Career Activities:* Medical Student, Western University of Health Sciences
- 2011 Mentor, Ryan Farnsworth, University of Utah, Microbiology Research Training Program
- Trainee's Current Career Activities:* Medical Student, West Virginia School of Osteopathic Medicine
- 2010 - Mentor, Kasey Brewer, University of Utah, Microbiology Research Training Program, LEAP student
- 2011
- 2010 - Mentor, Matthew Hammond, University of Utah, Microbiology Research Training Program
- 2011
- 2010 Mentor, Michael Bobbe, University of Utah, Microbiology Research Training Program, UROP internship recipient
- Trainee's Current Career Activities:* Is Director of Quality Assurance at Foldax
- 2010 - Advisor/Mentor, Sijia Wu, University of Utah, Microbiology Research Training Program
- 2013
- Trainee's Current Career Activities:* Is a Resident Physician in Family Medical at URC Health, Palm Springs, CA

High School

- 2014 Mentor, Zachary Vance, University of Utah, The Bioscience High School Summer Research Program offers students two weeks of training in basic laboratory procedures followed by six weeks of assisting faculty with research. This is a highly competitive program with a small stipend for the participants. Students must have three years of math and three science courses completed by the end of their junior year.
- 2013 Mentor, Ryan Anderson, University of Utah, The Bioscience High School Summer Research Program offers students two weeks of training in basic laboratory procedures followed by six weeks of assisting faculty with research. This is a highly competitive program with a small stipend for the participants. Students must have three years of math and three science courses completed by the end of their junior year.
- 2013 Mentor, Acer Li, University of Utah, The Bioscience High School Summer Research Program offers students two weeks of training in basic laboratory procedures followed by six weeks of assisting faculty with research. This is a highly competitive program with a small stipend for the participants. Students must have three years of math and three science courses completed by the end of their junior year.

Didactic Lectures

- 2011 **Loc-Carrillo CM.** Use of Bacteriophage to Prevent and Treat Bone Infections. LEAP Health Science Program, University of Utah, Salt Lake City, UT

Continuing Education

- 2017 **Loc-Carrillo CM.** How to Review a Research Paper. ID Core Curriculum Conference Seminar, University of Utah, Salt Lake City, UT
- 2018 **Loc-Carrillo CM.** How to Write a Research Manuscript. ID Core Curriculum Conference Seminar, University of Utah, Salt Lake City, UT

PEER-REVIEWED JOURNAL ARTICLES

1. Joo H, Wu SM, Soni I, Wang-Crocker C, Matern T, Beck JP, **Loc-Carrillo C** (2023). Phage and Antibiotic Combinations Reduce *Staphylococcus aureus* in Static and Dynamic Biofilms Grown on an Implant Material. *Viruses*. Feb 7;15(2):460. doi: 10.3390/v15020460.
2. Working ZM, Frederiksen H, Drew A, **Loc-Carrillo C**, Kubiak EN (2017). Bone penetrance of locally administered vancomycin powder in a rat femur fracture model. *Injury*.
3. **Loc-Carrillo C**, Wang C, Camden A, Burr M, Agarwal J (2016). Local Intramedullary Delivery of Vancomycin Can Prevent the Development of Long Bone *Staphylococcus aureus* Infection. *PLoS ONE*, 11(7), e0160187.
4. Sinclair KD, Pham TX, Williams DL, Farnsworth RW, **Loc-Carrillo CM**, Bloebaum RD (2013). Model development for determining the efficacy of a combination coating for the prevention of perioperative device related infections: a pilot study. *J Biomed Mater Res B Appl Biomater*, 101(7), 1143-53.
5. Janez N, **Loc-Carrillo C** (2013). Use of phage to control *Campylobacter* spp. *J Microbiol Methods*, 95(1), 68-75.
6. Wu S, Zachary E, Wells E, Loc-Carrillo C (2013). Phage therapy: future inquiries. *Journal of Postdoctoral Research*, 1(6), 24-35.
7. Chan BK, Abedon ST, **Loc-Carrillo C** (2013). Phage cocktails and the future of phage therapy. *Future Microbiol*, 8(6), 769-83.
8. Sinclair KD, Pham TX, Farnsworth RW, Williams DL, **Loc-Carrillo C**, Horne LA, Ingebretsen SH, Bloebaum RD (2012). Development of a broad spectrum polymer-released antimicrobial coating for the prevention of resistant strain bacterial infections. *J Biomed Mater Res A*, 100(10), 2732-8.
9. **Loc-Carrillo C**, Abedon ST (2011). Pros and cons of phage therapy. *Bacteriophage*, 1(2), 111-114.

10. Townsend SM, Hurrell E, Caubilla-Barron J, **Loc-Carrillo C**, Forsythe SJ (2008). Characterization of an extended-spectrum beta-lactamase *Enterobacter hormaechei* nosocomial outbreak, and other *Enterobacter hormaechei* misidentified as *Cronobacter* (*Enterobacter*) *sakazakii*. *Microbiology*, 154 (Pt 12), 3659-67.
11. Caubilla-Barron J, Hurrell E, Townsend S, Cheetham P, **Loc-Carrillo C**, Fayet O, Prere MF, Forsythe SJ (2007). Genotypic and phenotypic analysis of *Enterobacter sakazakii* strains from an outbreak resulting in fatalities in a neonatal intensive care unit in France. *J Clin Microbiol*, 45(12), 3979-85.
12. **Loc Carrillo CM**, Connerton PL, Pearson T, Connerton IF (2007). Free-range layer chickens as a source of *Campylobacter* bacteriophage. *Antonie Van Leeuwenhoek*, 92(3), 275-84.
13. Scott AE, Timms AR, Connerton PL, **Loc Carrillo C**, Adzfa Radzum K, Connerton IF (2007). Genome dynamics of *Campylobacter jejuni* in response to bacteriophage predation. *PLoS Pathog*, 3 (8), e119.
14. Townsend S, Caubilla Barron J, **Loc-Carrillo C**, Forsythe S (2007). The presence of endotoxin in powdered infant formula milk and the influence of endotoxin and *Enterobacter sakazakii* on bacterial translocation in the infant rat. *Food Microbiol*, 24(1), 67-74.
15. **Loc Carrillo C**, Atterbury RJ, el-Shibiny A, Connerton PL, Dillon E, Scott A, Connerton IF (2005). Bacteriophage therapy to reduce *Campylobacter jejuni* colonization of broiler chickens. *Appl Environ Microbiol*, 71(11), 6554-63.
16. Connerton PL, **Loc Carrillo CM**, Swift C, Dillon E, Scott A, Rees CE, Dodd CE, Frost J, Connerton IF (2004). Longitudinal study of *Campylobacter jejuni* bacteriophages and their hosts from broiler chickens. *Appl Environ Microbiol*, 70(7), 3877-83.

BOOK CHAPTERS

1. **Loc-Carrillo C**, Runyon A, Beck JP (2012). Periprosthetic Infection Issues with Osseointegrated (OI) Implant Technology in Amputees. In Trebse R (Ed.), *Infected Total Joint Arthroplasty* (pp. 255-67). London: Springer-Verlag.
2. **Loc-Carrillo C**, Wu S, Beck JP (2012). Therapy of wounds and related purulent infections. In Hyman P, Abedon ST (Eds.), *Bacteriophages in Health and Disease: Advances in Molecular and Cellular Microbiology* (pp. 185-202). Oxford, UK: CAB International Press.

POSTER PRESENTATIONS

- 2021 Soni I, Ramsey R, Czachor ME, **Loc-Carrillo CM**. *Effect of Phage and Antibiotic Combination (PAC) on Methicillin Resistant S. aureus (MRSA) Biofilms*. World Microbe Forum, Online Worldwide.
- 2019 Wang CJ, Joo H, Tidwell A, Agarwal, A, **Loc-Carrillo C**. *Advantages and Disadvantages of Phage and Antibiotic Combination (PAC) Treatments against Staphylococcus aureus and Pseudomonas aeruginosa*. ASM Microbe, San Francisco, CA.
- 2019 Christensen T, Wang CJ, **Loc-Carrillo C**. *Treatment of S. aureus and P. aeruginosa Polymicrobial Biofilms using Phage and Antibiotic Combination (PAC) Therapy*. ACCESS Scholarship Project Presentation, University of Utah, Salt Lake City, UT.
- 2018 Drapeau D, Berger M, **Loc-Carrillo C**. *Effectiveness of Antimicrobial Treatments on S. aureus and P. aeruginosa Biofilms*. Undergraduate Research Symposium. University of Utah, UT.
- 2017 Tanner W, Zhang Y, Leecaster M, Stratford K, Mayer J, Croft L, Alhmidi H, Cadnum J, Jencson A, Koganti S, Piedrahita C, Donskey C, Jernigan J, Noble-Wang J, Reddy S, Rose L, Slayton R, Barko L, Ide E, Wipperfurth T, Safdar N, Hughes M, Macke C, Roman P, Krein S, **Loc-Carrillo C**, and Samore M.. *Likelihood of Environmental Contamination of Patient Rooms in Six Acute Care Facilities based on Facility, Unit Type, and Precautions Status*. Poster session presented at IDWeek, San Diego, CA.
- 2017 **Loc-Carrillo CM**, Hanson J, Frederiksen H, Wang C, Agarwal J. *Intramedullary Antibiotic Therapy for the Treatment of Osteomyelitis Using a Local Delivery System*. ASM Microbe, New Orleans, LA.
- 2016 Hanson J, Frederiksen H, Wang C, **Loc-Carrillo C**, and Agarwal J. *Treatment of Osteomyelitis with a Single Local Infusion of Vancomycin*. Microbial Pathogenesis Retreat, University of Utah, Salt Lake City, UT.

- 2016 Frederiksen H, **Loc-Carrillo C**. *Fracture Model on Live Sedated Rats and Pharmacokinetics of Locally Administered Powdered Vancomycin on Fracture Model*. Undergraduate Research Symposium, University of Utah, Salt Lake City, UT.
- 2016 Wang C, Agarwal A, **Loc-Carrillo C**. *Treatment of Osteomyelitis Using Locally Administered Vancomycin in an In-vivo Rat Model*. Research on Capitol Hill, Salt Lake City, UT.
- 2015 Su Y, Tall J, Matern T, Anderson A, **Loc-Carrillo C**. *The Application of Staph Phage Cocktails on Methicillin-Resistant Staphylococcus aureus Infection*. 21st Evergreen International Phage Meeting, Olympia, WA.
- 2015 Wang C, Agarwal J, **Loc-Carrillo C**. *Treatment of Osteomyelitis Using Vancomycin Administered Locally in an In-vivo Rat Model*. Undergraduate Research Symposium, University of Utah, Salt Lake City, UT.
- 2013 Wu S, Beck JP, **Loc-Carrillo CM**. *Combination Therapy of Vancomycin and Staphylococcal Phage K on S. aureus Biofilms Can Significantly Reduce the Bacterial Load Compared to Individual Treatments Alone*. American Society for Microbiology 113th General Meeting, Denver, CO.
- 2012 **Loc-Carrillo CM**, Beck JP. *Pharmacokinetics of Staph phage K in Healthy Rats*. Viruses of Microbes EMBO Conference Series. Belgium, Brussels.
- 2012 **Loc-Carrillo CM**, Beck JP. *Blood Pharmacokinetics of Staph phage K in Healthy Male Sprague Dawley Rats*. American Society for Microbiology 112th General Meeting, San Francisco, CA.
- 2006 **Loc-Carrillo CM**, Angermeyer A, Bennett M, Oetjens M, Gogokhia L, Kvelashvili T, Bennett G, Brabban A, Kutter K. *The potential to treat dog-ear infections with Pseudomonas specific bacteriophages*. American Society for Microbiology 106th General Meeting.
- 2006 **Loc-Carrillo C**, Fayet O, Caubilla-Barron J, Prere MF, Forsythe SJ. *Fatal outbreak of Enterobacter sakazakii in a neonatal intensive care unit; retrospective 1994 study*. American Society for Microbiology 106th General Meeting, Orlando, FL.
- 2005 Caubilla-Barron J, **Loc-Carrillo C**, Townsend S, Druggan P, Forsythe SJ. *Endotoxin levels in powder infant milk formula and the translocation of Enterobacter sakazakii from the intestine*. American Society for Microbiology 105th General Meeting.
- 2004 **Loc-Carrillo C**, Connerton PL, Dilon E, Connerton I. *Therapeutic use of bacteriophage to reduce Campylobacter in broiler chickens*. American Society for Microbiology 104th General Meeting.
- 2004 **Loc-Carrillo C**, Waddington M, Li X, Forsythe SJ. *Phylogenetic relationship of Enterobacter sakazakii and related organism*. American Society for Microbiology 104th General Meeting.
- 2002 **Loc-Carrillo C**, Connerton I. *Isolation of Campylobacter bacteriophage with their corresponding hosts from broiler chickens*. XIIth International Congress of Virology.
- 2001 **Loc-Carrillo C**, Connerton I. *Improved method for isolating Campylobacter phage from free-range chicken excreta*. 14th Evergreen International Phage Meeting.

ORAL PRESENTATIONS

Meeting Presentations

International

- 2019 **Loc-Carrillo CM**. *Advantages and Disadvantages of Phage and Antibiotic Combination (PAC) Treatments Against Staphylococcus aureus and Pseudomonas aeruginosa*. ASM Microbe. San Francisco, CA.
- 2019 **Loc-Carrillo CM**. *Combining Bacteriophage and Antibiotics for Wound Infections*. Phage Futures Congress. Washington DC.
- 2017 **Loc-Carrillo CM**. *Using Musculoskeletal Infected Small Animal Models to Test Antimicrobial Agents*. The 4th Stevens Conference on Bacteria-Material Interactions, Hoboken, NJ.
- 2013 **Loc-Carrillo CM**. *Animal Models of Surgical Phage Applications*. 20th Biennial Evergreen International Phage Meeting, Olympia, WA.
- 2009 **Loc-Carrillo CM**. *Challenges of Commercialization: An OmniLytics' Perspective*. 17th Evergreen International Phage Meeting, Olympia, WA

2005 **Loc-Carrillo CM.** The Use of Campylobacter Bacteriophages to Reduce Campylobacter in Chickens. 16th Evergreen International Phage Meeting, Olympia, WA

Local/Regional

2014 **Loc-Carrillo CM.** Systematically Delineating the Efficacy of Phage Therapy to Use Against Bone Infection. Immunity, Inflammation and Infectious Disease (III) Summer Symposium, Midway, UT

2021 **Loc-Carrillo CM.** Phage Therapy for Treating Antibiotic-Resistant Infections, Weber State, UT

2021 **Loc-Carrillo CM.** The Pros and Cons of Phage Therapy Research, Utah Valley University, UT