

PERSONAL

Science and Mathematics Division
 School of Interdisciplinary Arts and Sciences
 University of Washington, Tacoma
 1900 Commerce Street, Box 358436
 Tacoma WA, 98402

W: (253) 692-5607
 C: [REDACTED]
 Email: groat@uw.edu

EDUCATION

2012 – 2015 Postdoctoral Scientist, Center for Infectious Disease Research, Seattle WA.
 2011 – 2012 Postdoctoral Senior Fellow, University of Washington, Seattle WA.
 2006 – 2011 Ph. D. Infectious Diseases and Immunology, University of California Berkeley, Berkeley CA.
 2002 – 2006 B. A. Biology, Reed College, Portland OR.
 Languages Fluent in English and Spanish, basic Portuguese and French.
 Technology

- *Operating Systems:* Windows (10, 7/8, Vista, XP), Mac OS.
- *Software:* Word, Excel, Powerpoint, Adobe Premiere Elements, Adobe Photoshop, Canvas X, EndNote.
- *Other:* ApE, SnapGene, FlowJo, MStat, ImageJ, Pymol, BioRender, PowToon.

PROFESSIONAL EXPERIENCE

2020 - Present **Visiting Professor**, Center for Global Infectious Disease Research, Seattle Children's Research Institute, Seattle WA.
 2018 - Present **Assistant Professor (Cellular Biology)**, Sciences and Mathematics Division (Biomedical Sciences), University of Washington Tacoma, Tacoma WA.
 2017 & 2018 **Curriculum Coordinator (STEM Survival Skills)**, Math Science Upward Bound, University of Washington, Seattle WA.
 2017 - 2018 **Curriculum Co-Coordinator (Becoming a Student of Science)**, Biology Department, Western Washington University, Bellingham WA (HHMI funded).
 2015 - 2018 **Lecturer (Biology)**, Biology Department, Western Washington University, Bellingham WA.
 2015 - 2016 **Freelance Editor**, Center of Excellence for Biochemistry, Genetic and Molecular Biology, Cactus Communications, Trevoze PA.
 2011 **Staff Research Associate I**, Infectious Diseases and Immunology Division, University of California Berkeley, Berkeley CA.
 2005 & 2006 **Notetaker (Cellular Biology, Genetics and Gene Regulation, Plant Physiology)**, Biology Department, Reed College, Portland OR.
 2003 - 2006 **Biology Greenhouse Assistant**, Biology Department, Reed College, Portland OR.
 2002 - 2006 **Biology Stockroom Student Manager**, Biology Department, Reed College, Portland OR.

TEACHING EXPERIENCE

2018 - Present **Assistant Professor (Cellular Biology)**, Sciences and Mathematics Division (Biomedical Sciences), University of Washington Tacoma, Tacoma WA. Courses taught include Introductory Biology II (TBIOL130), Cellular Biology (TBIOL303), Immunology (TBIOL414), Foundations in Biomedical Sciences (TBIOMD310), Biomedical Sciences Senior Seminar (TBIOMD410) & Biomedical Research Experiences (TBIOMD495 and TBIOMD499).

- Lecture courses give undergraduate students (mostly majors) a solid foundation in cellular biology or immunology. Introductory Biology II includes 10-24 students and is supported by a hands-on laboratory experience, including a 4-week course-based undergraduate research experience (12 students/section). Cellular Biology includes 24-48 students and is supported by a hands-on laboratory experience that focuses on cell culture techniques and fluorescence microscopy (24 students/section).

Immunology includes 20-40 students and relies on data-driven problems sets that explore real-world immunological problems.

- Seminar courses gives undergraduate students a vehicle to connect their capstone experiences with their subsequent careers, including entering the job market and/or pursuing advanced academic degrees as well as sharpening their written/oral communications skills. Foundations in Biomedical Sciences includes 15-30 students while Biomedical Sciences Senior Seminar includes 20-30 students.
- Research experience courses require undergraduate students to participate in bi-monthly lab meetings, monthly journal clubs and gain valuable hands-on experience with important laboratory techniques, applicable computer programs and bioinformatic databases so they can implement their portion of an assigned research project. Biomedical Research Experiences occur throughout the academic year (6-8 students/section).

2015 – 2019,
2022

Science Elective Instructor, Math Science Upward Bound (MSUB), University of Washington, Seattle WA. Designed and implemented coursework for the MSUB six-week summer academy for underrepresented minority students (16-18 students per course, 10-12th grade). Courses taught include Medical Microbiology & Immunology.

- Medical Microbiology is a fast-paced science elective for the first-year students and is designed to solidify the mechanics of central dogma, cellular biology and introduce students to concepts in pathogenesis and Public Health.
- Immunology is an advanced science elective for second-year students and is designed to be a cell-based overview of the innate and adaptive systems that exposes students to principles of vaccine design and advancements in cancer treatment.

2015 - 2018

Biology Instructor, Biology Department, Western Washington University, Bellingham WA. Courses taught include a seminar within the HHMI Inclusive Excellence Grant Advancing Excellence and Equity in Science (AEES) program (SEM101), Introduction to Cellular and Molecular Biology (BIO205), Methods in Molecular Biology (BIO324), Microbiology (BIO345) & Microbiology Lab (BIO346).

- The AEES Seminar provides a framework for incoming minority students and first-generation college students working within STEM fields. Seminar includes 20-30 students.
- Lecture courses give undergraduate students (includes majors and non-majors) a solid foundation in cellular and molecular biology or principles in microbiology. Introduction to Cellular and Molecular Biology includes 72-96 students. Principles in Microbiology includes 30-40 students.
- Laboratory courses give undergraduate students (includes majors and non-majors) hands-on experience with important laboratory techniques, applicable computer programs and bioinformatic databases and include an authentic research component. Introduction to Cellular and Molecular Biology includes 24 students (per section) and requires supervising 2-4 graduate TAs. Methods in Molecular Biology includes 10-16 students (per section) and requires supervising one undergraduate or one graduate TA. Microbiology Lab includes 24 students (per section) and requires supervising one graduate TA.

2013 – 2015

BioQuest Academy Aid, Center for Infectious Disease Research, Seattle WA. Provided lectures on malaria pathogenesis and vaccine research/design. Lead tour groups throughout the facility and aided preparations to promote diversity and interest in STEM fields to high school and middle school students.

2007 & 2010

Graduate Student Instructor, Infectious Diseases and Immunology Division, University of California Berkeley, Berkeley CA. Courses taught include Principles of Infectious Diseases Part I (PH260A), a survey course designed to give graduate students an in-depth examination of the etiology, epidemiology, pathogenesis, immunology and treatment of disease-causing microorganisms. Responsibilities included teaching lectures, leading a graduate seminar, providing out-of-class aid and assisting with reader preparation. Course includes 35-45 students.

2005 & 2006

Teaching Assistant, Biology Department, Reed College, Portland OR. Courses taught include Cellular Biology (BIO372) & Developmental Biology (BIO351). Responsibilities included assisting laboratory procedures and providing out-of-class aid. Courses include 35-45 students.

RESEARCH EXPERIENCE

- 2018 - Present **UW Tacoma Research Projects:** 1. Characterization of the functional role of the catalytic domain of the *Plasmodium* BEM46-like protein (PBLP) in parasite invasive-stage membrane morphogenesis. 2. Examination of the protein interactive network on the *Plasmodium* parasite plasma membrane during the mosquito- to liver-stage transition. 3. Examination of age-dependent maturation as it pertains to sporozoite infectivity in *Anopheles stephensi* mosquitoes. 4. Establishing a cell-free in vitro culturing system to study late liver-stage development of *Plasmodium yoelii* parasites. 5. Investigating the role of conserved coding-region regulatory RNA elements in modulating the dengue viral life cycle. **Dr. A. Groat Carmona** (Principal Investigator), Sciences and Mathematics Division (Biomedical Sciences), University of Washington Tacoma, Tacoma WA.
- 2016 - 2018 **WWU Research Project:** 1. Investigation of the molecular mechanisms underlying the unique membrane morphogenesis of *Plasmodium* parasites during early liver-stage development. 2. Ecological dynamics of *Mycobacterium* phage assemblages. **Dr. A. Groat Carmona** (Principal Investigator), Biology Department, Western Washington University, Bellingham WA.
- 2012 – 2015 **CIDR Postdoctoral Projects:** 1. Characterization of previously unknown *Plasmodium* proteins that are important for asymptomatic liver-stage development using the *P. yoelii* mouse model. 2. Examination of age-dependent maturation as it pertains to sporozoite infectivity in *Anopheles stephensi* mosquitoes. 3. Determine the hepatocellular characteristics that facilitate pre-erythrocytic infection by promoting intracellular parasite survival. Dr. S. Kappe (Principal Investigator), Center for Infectious Disease Research, Seattle WA.
- 2011 – 2012 **UW Postdoctoral Project:** Understanding the RNase-sensitivity of HIV-1 capsid assembly intermediates. Dr. J. Lingappa (Principal Investigator), Department of Global Health, University of Washington, Seattle WA.
- 2007 – 2011 **UC Berkeley Dissertation Project:** Investigating the role of conserved coding-region regulatory RNA elements in modulating the dengue viral life cycle. Dr. E. Harris (Principal Investigator), Infectious Diseases and Immunology Division, University of California Berkeley, Berkeley CA.
- 2006 **Merck Research Internship:** Understanding virulence: *in vitro* analysis of H-NS, Ler and SlyA mediated regulation of the *LEE5* regulatory region in enteropathogenic *Escherichia coli*. Dr. J. Mellies (Principal Investigator), Biology Department, Reed College, Portland OR.
- 2005 – 2006 **Reed College Senior Thesis:** Understanding virulence: *in vitro* analysis of H-NS and Ler mediated regulation of the *LEE5* regulatory region in enteropathogenic *Escherichia coli*. Dr. J. Mellies (Principal Investigator), Biology Department, Reed College, Portland OR.
- 2005 **Merck Research Internship:** Molecular mechanisms of *LEE5* transcription in enteropathogenic *Escherichia coli*: *in vitro* analysis of H-NS and Ler binding. Dr. J. Mellies (Principal Investigator), Biology Department, Reed College, Portland OR.
- 2004 **Howard Hughes Medical Institute Internship:** Translational control of the dengue viral genome: role of 3' untranslated region and conserved sequence 1. Dr. T. Dreher (Principal Investigator), Department of Microbiology, Oregon State University, Corvallis OR.
- 2003 – 2005 **Independent Research Projects:** Microbiology, Genetics, Animal Behavior and Behavioral Ecology, Developmental Biology & Cellular Biology; Biology Department, Reed College, Portland OR.
- 2002 **Field Assistant:** Seasonal variation of *Cecropia-Azteca* mutualisms in a neotropical dry forest. Dr. V. Carmona Galindo (Principal Investigator), Organization for Tropical Studies at Palo Verde National Park, Guanacaste, Costa Rica.

PUBLICATIONS

Manuscript in Preparation or Submitted for Publication:

- R. Shaikoski, D. Tolas and **A. M. Groat Carmona** (*ms in prep*). Susceptibility and long-term effects of Hashimoto's Thyroiditis.
- C. Rezk, M. Nguyen, D. Weaver and **A. M. Groat Carmona** (*ms in prep*). Transplantation immunosuppression: emerging methods to prevent organ/tissue rejection.
- A. Arvizo, D. Culbert, B. Miller and **A. M. Groat Carmona** (*ms in prep*). Nicotine, obesity, diet and their effect on gut dysbiosis.

- S. Bacher, C. Coalman, S. Turnberg and **A. M. Groat Carmona** (*ms in prep*). Development of synthetic T cell receptors (TCRs) as putative cancer treatments.
- A. M. Groat Carmona**, K. Johnson, and V. D. Carmona Galindo (*ms in prep*). Ecological dynamics of *Mycobacterium* phage assemblages.
- A. M. Groat Carmona**, J. Yang, J. M. McPherson, A. Salim, D. Salim, H. Kain, W. Benz, S. Mikolajczak, and S. H. Kappe (*ms in prep*). The role of age-dependent maturation in the generation of infectious *Plasmodium* sporozoites.
- A. M. Groat Carmona**, J. Sheppard, A. Arvizo, B. Menefee, R. Kim, Z. Strome, K. Aguon, M. Seto, A. Malhi, K. Barker, M. Anderson, and P. Spiegel (*ms in prep*). Biochemical analysis of the *Plasmodium* BEM46-like protein (PBLP) and its role in parasite invasive-stage membrane morphogenesis.
- A. M. Groat Carmona** and J. Lingappa (*ms in prep*). Understanding the RNase-sensitivity of HIV-1 capsid assembly intermediates.

Publications:

- M. T. Nguyen, N. K. Samra, and **A. M. Groat Carmona** (2021). Circumventing HIV-1 immune evasion strategies: utilizing broadly neutralizing antibodies to bolster current drug treatments and develop novel vaccines. *BIOS* **92**(4):139-146.
- L. Dahlberg and **A. M. Groat Carmona** (2018). CRISPR/Cas technology: in-and-out of the classroom. *The CRISPR Journal* **1**(2):99-100.
- A. M. Groat Carmona**, H. Kain, J. Brownell, A. N. Douglass, A. S. I. Aly, and S. H. Kappe (2015). A *Plasmodium* α/β -hydrolase modulates the development of invasive stages. *Cellular Microbiology* **17**(12):1848-1867.
- A. M. Groat Carmona**, S. Orozco, P. Friebe, A. F. Payne, L. D. Kramer, and E. Harris (2012). A novel coding-region RNA element modulates infectious dengue virus particle production in both mammalian and mosquito cells and regulates viral replication in *Aedes aegypti* mosquitoes. *Virology* **432**(2):511-526.
- J. L. Mellies, A. M. S. Barron, and **A. M. Carmona** (2007). Enteropathogenic and enterohemorrhagic *Escherichia coli* virulence gene regulation. *Infection and Immunity* **75**(9):4199-4210.

FUNDING

2023-2024	Fulbright U.S. Scholar Program (12440-ES), University of Washington Tacoma, Tacoma WA. <i>Awarded (Award TBD).</i>
2022	UWT Royalty Research Fund Award (A172997), University of Washington Tacoma, Tacoma WA. <i>Primary Submission (2022): Not Awarded.</i>
2017	WWU Office of Research and Sponsored Programs Mini Grant (MF1597), Western Washington University, Bellingham WA. <i>Awarded (\$1,000).</i>
2016	NIH Academic Research Enhancement Award (AREA) R15 (1R15AI133347), Western Washington University, Bellingham WA. <i>Primary Submission (2016): Not Awarded. Revision (2017): Not Awarded.</i>
2016	WWU Office of Research and Sponsored Programs Pilot Project Grant, Western Washington University, Bellingham WA. <i>Not Awarded.</i>
2016	WWU Office of Research and Sponsored Programs Mini Grant (MF1521), Western Washington University, Bellingham WA. <i>Awarded (\$1,000).</i>
2014	NIH/NIGMS Supplement to Promotion of Diversity in Health-Related Research Program (R01GM101183), Center for Infectious Disease Research, Seattle WA. <i>Awarded (\$50,000).</i>
2010	NIH Research Project Grant R01 (R01AI052324), University of California Berkeley, Berkeley CA. <i>Not Awarded.</i>
2003, 2004 & 2006	Howard Hughes Medical Institute Research Grant, Reed College, Portland OR. <i>Awarded (\$3,500).</i>
2004	National Science Foundation Research Grant, Oregon State University, Corvallis OR. <i>Awarded (\$3,500).</i>

STUDENTS MENTORED IN RESEARCH

2018 - Present **Dr. A. Groat Carmona** (Principal Investigator), University of Washington Tacoma, Tacoma WA.

Volunteers:

- India Briggs (Undergraduate Researcher) – Ongoing (tenure began Summer '21)
- Amira Salim (Undergraduate Researcher) – Tenure (1/2019 – 12/2019)
- Daliah Salim (Undergraduate Researcher) – Tenure (1/2019 – 12/2019)

Capstone Course (TBIOMD499) – Winter '23

- Carina Coalman (Undergraduate Researcher) – Ongoing (tenure began Winter '22)
- Ayat Alkadban (Undergraduate Researcher) – Ongoing (tenure began Autumn '22)

Capstone Course (TBIOMD499) – Autumn '22

- Jillian Sheppard (Undergraduate Researcher) – Ongoing (tenure began Autumn '21)
- Jamie Dahan (Undergraduate Researcher) – Ongoing
- Cindy Aprikian (Undergraduate Researcher) – Ongoing
- William Brown (Undergraduate Researcher) – Ongoing

Capstone Course (TBIOMD494) – Spring '22

- Yvette Tadeo (Undergraduate Researcher)

Capstone Course (TBIOMD499) – Winter '22

- Sabrina Bacher (Undergraduate Researcher) – Tenure (7/2021 – 6/2022)

Capstone Course (TBIOMD499) – Autumn '21

- Anjanette Arvizo (Undergraduate Researcher) – Tenure ended Spring '22

Capstone Course (TBIOMD495) – Winter '21

- Kaiya Stewart (Undergraduate Researcher) – Tenure ended Winter '22
- Kiara Wiggins (Undergraduate Researcher) – Tenure ended Winter '22
- Vanessa Begazo (Undergraduate Researcher)
- Rachel Ramirez (Undergraduate Researcher)
- Colleen Selness (Undergraduate Researcher)
- David Slattery (Undergraduate Researcher)
- Gurleen Toor (Undergraduate Researcher)

Capstone Course (TBIOMD499) – Autumn '20

- Caritina Sanchez (Undergraduate Researcher) – Tenure (1/2020 – 12/2021)
- Rachel Kim (Undergraduate Researcher) – Tenure ended Autumn '21
- John McPherson (Undergraduate Researcher) – Tenure (9/2018 – 12/2020)

Capstone Course (TBIOMD499) – Spring '20

- Britt Menefee (Undergraduate Researcher) – Tenure ended Spring '21

Capstone Course (TBIOMD496) – Winter '20

- Megan Bockman (Undergraduate Researcher)

Capstone Course (TBIOMD499) – Autumn '19

- Jeralee Yang (Undergraduate Researcher) – Tenure ended Spring '21
- Darrell Lockhart (Undergraduate Researcher) – Tenure (6/2019 – 6/2020)
- Zachary Strome (Undergraduate Researcher) – Tenure ended Spring '20

Capstone Course (TBIOMD495) – Winter '19

- Saddle Burkentine (Undergraduate Researcher) – Tenure ended Spring '20
- Koryn Aguon (Undergraduate Researcher) – Tenure ended Autumn '19

- Misaki Seto (Undergraduate Researcher) - Tenure ended Autumn '19
 - Armann Gill (Undergraduate Researcher)
 - Tracy Mwangi (Undergraduate Researcher)
 - Amy Morris (Undergraduate Researcher)
- 2016 - 2018 **Dr. A. Groat Carmona** (Principal Investigator), Western Washington University, Bellingham WA.
- Akashdeep Malhi (Undergraduate Researcher)
 - Katherine Barker (Undergraduate Researcher)
 - Michael Anderson (Undergraduate Researcher)
 - Zoe Zilz (Graduate Researcher) - Dr. Ben Miner (Principal Investigator)
 - Caitlin BeeBe (Fairhaven Undergraduate Concentration Committee) - Dr. John Bower (Chair)
- 2015 - 2017 Dr. V. Carmona Galindo (Principal Investigator), Loyola Marymount University, Los Angeles CA.
- Kendall Johnson (Undergraduate Researcher)
- 2014 – 2015 Dr. S. Kappe (Principal Investigator), Center for Infectious Disease Research, Seattle WA.
- Heather Kain (Research Technician II)
 - Dorender Dankwa (Research Fellow)
 - Nadia Arang (Research Technician I)
 - Andrew Rapanna (Undergraduate Researcher)
 - Emily Walter (Undergraduate Researcher)
- 2007 – 2011 Dr. E. Harris (Principal Investigator), University of California Berkeley, Berkeley CA
- Dipti Banerjee (Undergraduate Researcher)
 - Susana Orozco (Staff Research Associate II)
 - Ritela Gonzalez (Staff Research Associate I)

STUDENT POSTER PRESENTATIONS

- 2022 SAM Undergraduate Research Symposium, University of Washington Tacoma, Tacoma WA.
- **Anjanette Arvizo** – Analyzing the biochemistry of the *Plasmodium* BEM46-like protein (PBLP).
 - **Sabrina Bacher** – Using perfringolysin O (PFO) to create a cell-free *in vitro* system to study mouse malaria (*Plasmodium yoelii*). *1st Place Award for Best Biomedical Sciences Poster.*
- 2021 Summer SAM Undergraduate Research Symposium, University of Washington Tacoma, Tacoma WA.
- **Rachel Ramirez** – Identification and mutagenesis of conserved RNA elements in the dengue virus genome.
- 2021 SAM Undergraduate Research Symposium, University of Washington Tacoma, Tacoma WA.
- **Vanessa Begazo & Gurleen Toor** – Conserved RNA sequence and structural elements in dengue virus genome.
 - **Megan Bockman** – Surveillance of sanitation practices and their effect on surgical site infections.
 - **Britt Menefee & Rachel Kim** – Discerning the biochemical function for the catalytic domain of the *Plasmodium* BEM46-like protein (PBLP).
 - **Caritina Sanchez** – Creating a transgenic parasite to express *Plasmodium* BEM46-like protein (PBLP) with a BirA* tag. *1st Place Award for Best Biomedical Sciences Poster.*
 - **Colleen Selness & David Slattery** – Devitalizing dengue virus: identification and mutagenesis of conserved genomic RNA sequence and structural elements.
 - **Kaiya Stewart & Kiara Wiggins** – Disruption of conserved RNA sequences and structures to examine dengue virus replication.
- 2020 Fall SAM Undergraduate Research Symposium, University of Washington Tacoma, Tacoma WA.
- **John McPherson** – Tracking the maturation of *Plasmodium yoelii* sporozoites for infectivity and longevity.
- 2020 SAM Undergraduate Research Symposium, University of Washington Tacoma, Tacoma WA.
- **Ngan Huynh & Eevee Uzumaki** – *Principal Investigator:* Dr. J. Heller, Tracking the subcellular localization of an uncharacterized *Plasmodium* protein: manipulating cloning and tagging techniques.

- **Rachel Kiforishin** – *Principal Investigator*: Dr. J. Heller, PCR of *Plasmodium yoelii* gene PY02678 to understand its function.
 - **Darrell Lockhart** – Do you want to build a parasite? Using the *Plasmodium* BEM46-like protein (PBLP) to characterize the parasite plasma membrane.
 - **Zachary Strome** – Mutagenesis of the *Plasmodium* BEM46-like protein (PBLP) for isolation and biochemical analysis.
 - **Raveena Vaid** – *Principal Investigator*: Dr. J. Heller, Demystifying the role of an uncharacterized *Plasmodium* protein through gene knockout.
- 2019 Winter Student Showcase, University of Washington Tacoma, Tacoma WA.
- **Saddie Burkentine (Primary) & Darrell Lockhart** - Development of a transgenic *Plasmodium yoelii* parasite: characterizing the protein interactive network on the parasite plasma membrane.
- 2019 33rd Annual Symposium of The Protein Society, Seattle WA.
- **Koryn Aguon & Misaki Seto** - Discerning the biochemical function for the catalytic domain of the *Plasmodium* BEM46-like protein (PBLP).
- 2019 SAM Undergraduate Research Symposium, University of Washington Tacoma, Tacoma WA.
- **Koryn Aguon & Misaki Seto** - Discerning the biochemical function for the catalytic domain of the *Plasmodium* BEM46-like protein (PBLP).
 - **Armann Gill & Tracy Mwangi** - The effects of cytochalasin B on the localization of the *Plasmodium* BEM46-like protein (PBLP) to determine the role of translocated proteins during malarial infection.
 - **Amy Morris** - Generating a cell free system using perfringolysin O (PFO) to study *Plasmodium yoelii* late liver-stages.
 - **Amira Salim & Daliah Salim** - The role of age-dependent maturation in *Plasmodium spp.* (malaria) sporozoite infectivity.
- 2018 Scholars' Week, Western Washington University, Bellingham WA.
- **Katherine Barker (Primary) & Akashdeep Malhi** - Expression of wild-type and mutant constructs for the *Plasmodium* BEM46-like protein (PBLP).
- 2017 Scholars' Week, Western Washington University, Bellingham WA.
- **Michael Anderson (Primary) & Akashdeep Malhi** - Structural analysis of the catalytic domain for the *Plasmodium* BEM46-like protein.
- 2017 Undergraduate Research Symposium, Loyola Marymount University, Los Angeles CA.
- **Kendall Johnson** – *Principal Investigator*: Dr. V. Carmona Galindo, Ecological dynamics of *Mycobacterium* phage assemblages.

SPEAKING INVITATIONS

- 2021 Math Science Upward Bound Summer Academy Seminar Series (**Virtual Presentation**): The Power of (Gene) Expression: Characterizing Infection-Related Proteins during the Mosquito-Stage of the Malaria Life Cycle, University of Washington, Seattle WA.
- 2021 University of Washington Tacoma Environmental Science Division Seminar (**Virtual Presentation**): The Role of Age-Dependent Maturation in the Generation of Infectious *Plasmodium* Sporozoites, University of Washington Tacoma, Tacoma WA.
- 2020 Math Science Upward Bound Summer Academy Seminar Series (**Virtual Presentation**): A Tale of Two Plagues: The 1918 Flu Pandemic and the COVID-19 Pandemic of 2020, University of Washington, Seattle WA.
- 2019 3rd Annual John A. McLean, Jr. Lecture Series: Discerning the Biochemical Function of the Catalytic Domain for the *Plasmodium* BEM46-Like Protein (PBLP), University of Detroit Mercy, Detroit MI.
- 2018 HOSA – Future Health Professionals (Grover Cleveland High School Chapter): The Importance of Global Health: Developing New Strategies for Combating Malaria, Grover Cleveland High School, Seattle WA.
- 2018 University of Detroit Mercy Biology Department Seminar (**Virtual Presentation**): Ecological Dynamics of *Mycobacterium* Phage Assemblages, University of Detroit Mercy, Detroit MI.
- 2018 University of Puget Sound Biology Department Seminar: Biochemical Analysis of a *Plasmodium* α/β -Hydrolase that Modulates Parasite Invasive-Stage Morphogenesis, University of Puget Sound, Tacoma WA.
- 2017 Math Science Upward Bound Summer Academy Seminar Series: The Importance of Global Health: Developing New Strategies to Combat Malaria, University of Washington, Seattle WA.

- 2017 University of El Salvador Center for Global Health Research Seminar (**Virtual Presentation**): Ecological Dynamics of *Mycobacterium* Phage Assemblages, University of El Salvador, San Salvador, El Salvador.
- 2017 3rd Annual OSU Microbiology Student Association Symposium: Biochemical Analysis of a *Plasmodium* α/β -Hydrolase that Modulates Parasite Invasive-Stage Morphogenesis, Oregon State University, Corvallis WA.
- 2016 Loyola Marymount University Biology Department Seminar (**Virtual Presentation**): Ecological Dynamics of *Mycobacterium* Phage Assemblages, Loyola Marymount University, Los Angeles CA.
- 2016 10th Annual American Society for Microbiology NW Branch Meeting: Biochemical Analysis of a *Plasmodium* α/β -Hydrolase that Modulates Parasite Invasive-Stage Morphogenesis, University of Washington & Seattle Pacific University, Seattle WA.
- 2014 Seattle Youth Empowerment Day: Understanding Our Role in Promoting Global Health: HIV Transmission, sponsored by Young Nonprofit Leaders Organization, Seattle WA.
- 2013 BioQuest Summer Academy: Malaria Pathogenesis and Transmission, Center for Infectious Disease Research, Seattle WA.
- 2010 Loyola Marymount University Biology Department Seminar: A New Coding Region Regulatory RNA Element that Modulates the Dengue Viral Life Cycle, Loyola Marymount University, Los Angeles CA.
- 2009 Loyola Marymount University Biology Department Seminar: Coding Region Regulatory RNA Elements: Deciphering the Dengue Virus Life Cycle, Loyola Marymount University, Los Angeles CA.
- 2006 Reed College Board of Trustees: Understanding Virulence: *in vitro* Analysis of H-NS and Ler Mediated Regulation of the LEE Pathogenicity Island in Enteropathogenic *Escherichia coli*, Reed College, Portland OR.

PRESENTATIONS & POSTERS

- 2020 Grit City Think and Drink Series: **Virtual Presentation**, A Tale of Two Plagues: The 1918 Flu Pandemic and the COVID-19 Pandemic of 2020, University of Washington Tacoma, Tacoma WA.
- 2018 SIAS Brown Bag Series: **Oral Presentation**, Malaria Parasite Invasive-Stage Morphogenesis, University of Washington Tacoma, Tacoma WA.
- 2018 7th Annual Society for the Advancement of Biology Education Research Meeting: **Author Poster**, Seminars for Students from Under-Represented Populations Support Strong Science Identity and Motivation, University of Minnesota - Twin Cities, Minneapolis MN.
- 2018 Northwest Worm Meeting: **Oral Presentation (Author)**, Collaborative CRISPR: A Model for Including Undergraduate Students in the Scientific Process, Western Washington University, Bellingham WA.
- 2018 14th Annual Teaching & Learning Symposium: **Author Poster**, Students in Authentic Research Modules Demonstrate Deeper Thinking on Exams, University of Washington, Seattle WA.
- 2017 Mix It Up (Movers and Shakers in STEM): **Panelist**, Science that is Changing the World, Western Washington University, Bellingham WA.
- 2016 Minorities & Women in Science: **Panelist**, Focus on the Discouragements and Obstacles Facing Underrepresented Classes in Scientific Careers, Loyola Marymount University, Los Angeles CA.
- 2016 EmpowerHer Summit: **Mentor**, Breaking Down Imposter Syndrome and Building Professional Connections Among Women, sponsored by Washington State Opportunity Scholarship (WSOS), Seattle WA.
- 2015 27th Seattle Parasitology Conference: **Oral Presentation**, The Role of Age-Dependent Maturation in the Generation of Infectious *Plasmodium* Sporozoites, Center for Infectious Disease Research, Seattle WA.
- 2014 25th Molecular Parasitology Meeting: **Poster Presentation**, Identification of a Novel BEM46-like Protein in *Plasmodium yoelii* that Modulates Parasite-Specific Maturation of Infectious Forms, Marine Biological Laboratory, Woods Hole MA.
- 2012 6th Annual Viral Pathogenesis Program Retreat: **Poster Presentation**, Why Are HIV-1 Capsid Assembly Intermediates RNase-Sensitive?, University of Washington, Seattle WA.
- 2011 12th Annual Microbiology Student Symposium: **Oral Presentation**, Investigation of a Novel Coding-Region Regulatory RNA Element that Modulates the Dengue Viral Life Cycle, University of California Berkeley, Berkeley CA.

- 2011 14th Annual Bay Area Microbial Pathogenesis Symposium: **Poster Presentation**, Investigation of a Novel Coding-Region Regulatory RNA Element that Modulates the Dengue Viral Life Cycle, University of California San Francisco, San Francisco CA.
- 2010 29th Annual American Society of Virology Meeting: **Poster Presentation**, A Novel Coding Region RNA Element that Modulates the Dengue Viral Life Cycle, Montana State University, Bozeman MT.
- 2010 9th International Symposia on Positive-Strand RNA Viruses: **Poster Presentation (Author)**, A Novel Coding Region RNA Element that Modulates the Dengue Viral Life Cycle, Atlanta GA.
- 2008 27th Annual American Society of Virology Meeting: **Poster Presentation**, The Role of Coding Region RNA Secondary Structures in the Dengue Viral Life Cycle, Cornell University, Ithaca NY.
- 2008 9th Annual Microbiology Student Symposium: **Poster Presentation (Author)**, Humoral Response to *Mycobacterium tuberculosis* Lipids as Biomarker for Monitoring Treatment Response, University of California Berkeley, Berkeley CA.
- 2007 8th International Symposia on Positive-Strand RNA Viruses: **Poster Presentation (Author)**, Coding Region RNA Regulatory Elements in the Dengue Virus Genome, Washington DC.
- 2006 Reed College Students Talking About Research: **Oral Presentation**, Understanding Virulence: *in vitro* Analysis of H-NS and Ler Mediated Regulation of the LEE Pathogenicity Island in Enteropathogenic *Escherichia coli*, Reed College, Portland OR.
- 2006 1st Annual American Society for Microbiology NW Branch Meeting: **Poster Presentation**, Understanding Virulence: *in vitro* Analysis of Ler and H-NS Mediated Regulation of the *LEE5* Operon in Enteropathogenic *Escherichia coli*, University of Washington, Seattle WA.
- 2005 Merck Student Summer Research Poster Session: **Poster Presentation**, Molecular Mechanisms of *LEE5* Transcription in Enteropathogenic *Escherichia coli*: *in vitro* Analysis of H-NS and Ler Binding, Reed College, Portland OR.
- 2004 Howard Hughes Medical Institute Symposium: **Oral Presentation**, Translational Control of Dengue Viral Genome: Role of 3' Untranslated Region and Conserved Sequence 1, Oregon State University, Corvallis OR.

PROFESSIONAL DEVELOPMENT & AWARDS

- 2022 Social Justice Research and Scholarship Initiative (SJRSI), University of Washington Tacoma, Tacoma WA.
- 2022 RAINN Sexual Misconduct Prevention and Response Training, University of Washington Tacoma, Tacoma WA.
- 2021 How to be an Ally Training, University of Washington Tacoma, Tacoma WA.
- 2021 Gender Identity Training, University of Washington Tacoma, Tacoma WA.
- 2021 LGBTQ Core Competency Training, University of Washington Tacoma, Tacoma WA.
- 2021 Husky Prevention and Response (Title IX), University of Washington, Seattle WA.
- 2021 Lab Safety Award, University of Washington, Seattle WA.
- 2021 Planning for Faculty Hiring: A Webinar on Search Committees, Assessment Rubrics and Job Ads, University of Washington Tacoma, Tacoma WA.
- 2020 Strengthening Educational Excellence through Diversity (SEED) Fellow (Dr. J. Aguirre), University of Washington Tacoma, Tacoma WA.
- 2020 iTech Fellow (Dr. D. Janzen), University of Washington Tacoma, Tacoma WA.
- 2020 How to Use Zoom to Work with Your Pedagogy – Pro Tips Edition, University of Washington Tacoma, Tacoma WA.
- 2020 Planning and Designing an Online Class 101, University of Washington Bothell, Bothell WA.
- 2020 Double Check – Lets Make Sure Your Course is Ready for Spring, University of Washington Tacoma, Tacoma WA.
- 2019 Best Practices in Faculty Searches Workshop, University of Washington Tacoma, Tacoma WA.
- 2019 Pack Leader in Safety Award, University of Washington, Seattle WA.
- 2019 Project Biodiversify Workshop (Dr. J. Davis), University of Washington Tacoma, Tacoma WA.

2019	Exploratory Workshop: The Community Engagement Fellows Coalition (Dr. A. Groat Carmona), University of Washington Tacoma, Tacoma WA.
2019	Signaling Across the Membrane: G-protein Coupled Receptors (Dr. A. Groat Carmona , Session Chair), 33 rd Annual Symposium of The Protein Society, Seattle WA.
2018	High Impact Practices (HIPs): Undergraduate Research Community of Practice (Dr. E. Cline), University of Washington Tacoma, Tacoma WA.
2017 – 2018	Community Engagement Fellow (Dr. T. Tennessen), Western Washington University, Bellingham WA.
2017	Campus Equity and Inclusion Forum (Lifelong Learning Certificate), Western Washington University, Bellingham WA.
2008 & 2011	Infectious Diseases and Immunology Departmental Award for Best Graduate Student Instructor, University of California Berkeley, Berkeley CA.
2006	Award for Outstanding Student Poster Presentation, American Society for Microbiology NW Branch Meeting, University of Washington, Seattle WA.

SERVICE, MEMBERSHIP & COMMITTEES

2022 - 2023	Curriculum-to-Career Innovations Institute (C2CII), Association of American Colleges and Universities (AAC&U), University of Washington Tacoma, Tacoma WA.
2022	Teaching Faculty Mentor (Immunology Co-Instructor – Dr. S. Reeder), Math Science Upward Bound (MSUB), University of Washington, Seattle WA.
2022	Scientific Oversight Committee (Dr. S. Reeder), Center for Global Infectious Disease Research, Seattle Children’s Research Institute, Seattle WA.
2021 - 2022	Tenure Track Search Committee (Epidemiology), School of Interdisciplinary Arts and Sciences, University of Washington Tacoma, Tacoma WA.
2020 - Present	ACCESS in STEM Faculty Mentor, Sciences and Mathematics Division, University of Washington Tacoma, Tacoma WA.
2020 - Present	Dean’s Diversity Advisory Council (DAC), School of Interdisciplinary Arts and Sciences, University of Washington Tacoma, Tacoma WA.
2019 - Present	UW Graduate Faculty, School of Interdisciplinary Arts and Sciences, University of Washington Tacoma, Tacoma WA.
2019 - Present	Diversity Workgroup, Sciences and Mathematics Division, University of Washington Tacoma, Tacoma WA.
2019 - 2020	Tenure Track Search Committee (Ecotoxicology), School of Interdisciplinary Arts and Sciences, University of Washington Tacoma, Tacoma WA.
2019 - 2020	Faculty Mentor (MCAT Review Workshop), Sciences and Mathematics Division, University of Washington Tacoma, Tacoma WA.
2018 – Present	Faculty Advisor, Sciences and Mathematics Division, University of Washington Tacoma, Tacoma WA.
2018 – 2021	Outreach and Recruitment Workgroup, Sciences and Mathematics Division, University of Washington Tacoma, Tacoma WA.