

AISLING S. DUGAN

Curriculum Vitae

Home address: 12 Longmeadow Road, Lincoln, Rhode Island 02865

Tel. 401.447.3861

Email: aisling_dugan@brown.edu
<https://vivo.brown.edu/display/adugan>

EDUCATION & TRAINING

- 2009-2010 **Postdoctoral Research Associate**
 Tufts University, Boston, MA
 Department of Microbiology
 Mentor Ralph R. Isberg, Ph.D.
- 2003 - 2008 **Doctor of Philosophy in Biology and Medicine**
 Brown University, Providence, RI
 Pathobiology Graduate Program
 Mentor: Walter J. Atwood, Ph.D.
- 1996 - 2000 **Bachelor of Arts in Biological Science; Minor in Chemistry**
 Smith College, Northampton, MA

FACULTY POSITIONS & TEACHING EXPERIENCE

- 2022 – present **Senior Lecturer**
Brown University, Providence, RI
Biology Education, Dept. of Molecular Microbiology and Immunology
 BIOL 0510 – Introductory Microbiology
 BIOL 0530 – Principles of Immunology
 BIO1945 – Outbreak & Infections
 BIOL2530 – Principles of Immunology (Brown/Pfizer graduate program)
 BIOL1960/1961–Independent Studies (3 students)
- 2021 **Lecturer**
Brown University, Providence, RI
Biology Education, Dept. of Molecular Microbiology and Immunology
 BIO0530 Principle of Immunology
- 2016 –2021 **Associate Professor**
Assumption University, Worcester, MA
Department of Biological and Physical Sciences
 Special Topics: Infectious and Epidemic Diseases
 Immunology lecture and laboratory (Community Service Learning)
 Microbiology lecture and laboratory
 Molecular and Cellular Biology Laboratory
 Concepts in Biology Laboratory
 Human Biology in Health and Disease Laboratory
 Honors Mentor (5 students)
 Independent Study in Biology (2 research students)
 Internship (Faculty mentor for 2 off-campus internships)
- Sept. 2010 – present **Assistant Professor**

Assumption College, Worcester, MA

Department of Natural Sciences

Immunology lecture and Laboratory

Microbiology lecture and Laboratory

Concepts in Biology Laboratory

Human Biology in Health and Disease lecture and Laboratory

Guest Lecturer for Special Topics: Trees

Honors Mentor (3 students)

Independent Study in Biology (4 research students)

Internship Mentor (Faculty mentor for 2 off-campus internships)

Summer undergraduate research projects (6 students)

July 2007-08, 2013-24 **Instructor**

Brown University, Precollege Program, Providence, RI

Moral Medicine: Questions in Bioethics at the Cutting Edge

Psychopathology: Investigating the Biology and Psychology of Mental Illness

Bacteriology: The Good, the Bad, the Deadly with laboratory

The Great Diseases: Cancer, Heart Disease, Diabetes, and Epidemics

Brain and Behavior

Germs in the News with laboratory

2009-2010

Postdoctoral TEACR (Training in Education And Critical Research Skills) Fellow

Tufts University, Boston, MA

Institutional Research and Academic Career Development Award, NIH/NIGMS

2009-2010

Curriculum Developer & Content Specialist

Tufts University, Boston, MA

Great Diseases: A Collaborative Approach to Real World Science in the Classroom, NIH Research Education Grant (R25RR026012-01),

March 2010 & 2011

Guest Lecturer in Microbiology

Wellesley College, Wellesley, MA

Fall 2007

Mentored Co-Instructor

Rhode Island College, Providence, RI

Introductory Biology lecture and laboratory

2004-2005

Graduate Teaching Assistant and Lecturer

Brown University, Providence, RI

Medical Microbiology

Cancer Biology

RESEARCH EXPERIENCE

2016 – 2021

Associate Professor

Dept. of Biological and Physical Sciences,

Assumption University, Worcester, MA

Research program: Pathogen and host interactions

2016 - 2017

Visiting Research Professor – Sabbatical

Dept. of Molecular Biology, Cell Biology, and Biochemistry,

Brown University, Providence, RI

Laboratory of Walter J. Atwood, PhD

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|-------------|--|
| | Research project: Role of exosomes in human JC polyomavirus infection |
| 2010 – 2016 | Assistant Professor Dept. of Natural Sciences, Assumption College, Worcester, MA Research program: The relationship between the human BK virus and its host cell |
| 2009 – 2010 | Howard Hughes Postdoctoral Research Associate Dept. of Microbiology, Tufts University, Boston, MA Laboratory of Ralph R. Isberg, Ph.D. Research project: The role of host cell kinases and phosphatases in <i>Legionella pneumophila</i> infection |
| 2007 – 2008 | Postdoctoral Research Associate Dept. of Molecular Biology, Cell Biology, and Biochemistry, Brown University, Providence, RI Laboratory of Walter J. Atwood, PhD Research project: The effect of innate antimicrobial peptides on polyomavirus infection |
| 2003 – 2007 | Graduate Student Pathobiology Graduate Program, Brown University, Providence, RI Laboratory of Walter J. Atwood, Ph.D. Research project: Interactions between the human pathogen, BK Virus, and sialic acid receptors of kidney host cells |
| 2001- 2003 | Research Assistant and Laboratory Manager Dept. of Pathology, Beth Israel Deaconess Medical Center, Boston, MA Laboratory of Arthur Mercurio, Ph.D. Research project: siRNA knockdown of integrins and Rho GTPases to study the effect of these proteins on breast cancer cells <i>in vitro</i> and <i>in vivo</i> |
| 2000 - 2001 | Antibody Research Associate BioSource International, Hopkinton, MA Duties: Conjugated peptides, affinity-purified antibodies from serum, conducted ELISAs to assay antibody titer |
| Summer 1999 | Intern Dept. of Microbiology, University of Michigan, Ann Arbor, MI Laboratory of Don Clewell, Ph.D. Research project: The exchange of plasmids carrying antibiotic resistance genes in the bacterial species, <i>Enterococcus faecalis</i> |

PUBLICATIONS

Note about publications below:

- **First author** position is assigned to the researcher who contributed the most intellectually and experimentally toward the publication of the work. This author organized and wrote most of the publication.
- **Middle authors** contributed some time, provided intellectual interpretation, conducted at least one experiment (and often many), and either wrote some sections of the publication and/or provided feedback during publication drafts. The contributions are organized such that second author contributed more than third author, the third author contributed more than fourth author, etc.
- **Last author** (corresponding author) is the head of the lab who mentors researchers, reviews manuscript, and funds most of the project.

1. Hershkovitz D, Chem EJ, Ensminger AW, **Dugan AS**, Conway KT, Joyce AC, Segal G, Isberg RR. Genetic evidence for a regulated cysteine protease catalytic triad in LegA7, a *Legionella pneumophila* protein that impinges on a stress response pathway. *mSphere*. 2024. DOI: <https://doi.org/10.1128/msphere.00222-24>.
Contribution: Built a plasmid library used to screen *Legionella pneumophila* effector proteins for induction of host MAPK proteins in mammalian cells. Review and revision of manuscript
2. Love-Morris J, Gee GV, O'Hara BA, Assetta B, Armstead B, Dugan AS, Haley SA, Atwood WJ. Biogenesis of JC polyomavirus associated extracellular vesicles. *Journal of Extracellular Biology*. 2022. 1(5): e43.
Contribution: Designed, developed, and validated a new SVG-A cell line that was genetically depleted of nSMase2 by either shRNA or CRISPR/Cas9
3. Love-Morris J, Gee GV, O'Hara BA, Assetta B, Atkinson AL, **Dugan AS**, Haley SA, Atwood WJ. JC polyomavirus uses extracellular vesicles to infect target cells. *mBio*. 2019. 10 (2): e00379-19. *editor's pick
Contribution: Data from multiple experiments, designed an experimental system and protocols that were useful throughout the paper, intellectual contribution, interpretation of results, wrote some sections of the paper, and revision of manuscript
4. Stroh LJ, Gee GV, Blaum BS, **Dugan AS**, Feltkamp MCW, Atwood WJ. Trichodysplasia Spinulosa-associated polyomavirus employs a displayed binding site on VP1 to engage sialylated glycolipids. *Plos Pathogen*. 2015. 11 (8): e1005112.
Contribution: Designed an experimental system (VP1, VP2, and VP3 pseudovirus particles) that was useful in this paper and revision of manuscript
5. Asrat S, **Dugan AS**, Isberg RR. The frustrated host response to *Legionella pneumophila* is bypassed by MyD88-dependent translation of pro-inflammatory cytokines. *Plos Pathogen*. 2014. 10 (7): e1004229.
Contribution: Data from multiple experiments, intellectual contribution, interpretation of results, wrote of some sections of the paper, and revision of manuscript
6. Bouley SJ, Maginnis MS, Derdowski A, Gee GV, O'Hara BA, Nelson CD, Bara AM, Atwood WJ, **Dugan AS**. Host cell autophagy promotes BK virus infection. *Virology*. 2014. 456-457: 87-95.
Corresponding author of this manuscript. Underlined authors were my undergraduate students
7. Barry KC, Fontana MF, Portman JL, **Dugan AS**, Vance RE. IL-1 α Signaling Initiates the Inflammatory Response to Virulent *Legionella pneumophila* In Vivo. *Journal of Immunology*. 2013. 190(12):6329-39.
Contribution: Intellectual contribution and revision of manuscript
8. Jordan JA, Manley K, **Dugan AS**, O'Hara BA, Atwood WJ. Transcriptional regulation of BK virus by nuclear factor of activated T cells. *Journal of Virology*. 2010. 84 (4): 1722-30.
Contribution: Data for one figure of this paper, intellectual contribution, interpretation of results, wrote one part within the results and methods sections of the paper, and revision of manuscript
9. Li Z, **Dugan AS**, Bloomfield G, Skelton J, Ivens A, Losick V, Isberg RR. The amoebal MAP kinase response to *Legionella pneumophila* is regulated by DupA. *Cell Host & Microbe*. 2009. 6 (3): 253-267.
Contribution: Data from multiple experiments, intellectual contribution, interpretation of results, wrote some sections of the paper, and revision of manuscript before publication

10. Gasparovic ML, Maginnis MS, O'Hara BA, **Dugan AS**, Atwood WJ. Modulation of PML protein expression regulates JCV infection. *Virology*. 2009. 390 (2): 279-288.
Contribution: Assistance with experiments, intellectual feedback, and revision of manuscript
11. **Dugan AS**, Maginnis MS, Jordan JA, Gasparovic ML, Manley K, Page R, Williams G, Porter E, O'Hara BA, Atwood WJ. Human alpha-defensins inhibit BK Virus by aggregating virions and blocking binding to host cells. *Journal of Biological Chemistry*. 2008. 283 (45): 31125-31132.
Primary contributor to experimental design, implementation, and authorship of the publication
12. **Dugan AS**, Gasparovic ML, Atwood WJ. Direct correlation between sialic acid binding and infection of cells by two human polyomaviruses (JCV and BKV). *Journal of Virology*. 2008. 82 (5): 2560-2564.
Primary contributor to experimental design, implementation, and authorship of the publication
13. **Dugan AS**, Gasparovic ML, Tsomaia N, Mierke DF, O'Hara BA, Manley K, Atwood WJ. Identification of amino acid residues in BK virus VP1 that are critical for viability and growth. *Journal of Virology*. 2007. 81 (21): 11798-11808.
Primary contributor to experimental design, implementation, and authorship of the publication
14. **Dugan AS**, Eash S, Atwood WJ. Update on BK Virus entry and intracellular trafficking. *Transplant Infectious Disease*. 2006. 8 (2): 62-67.
Primary contributor to experimental design, implementation, and authorship of the publication
15. Gee GV, **Dugan AS**, Tsomaia N, Meirke DF, Atwood WJ. The role of sialic acid in human polyomavirus infections. *Glycoconjugate Journal*. 2006. 23 (1-2): 19-26.
Contribution: Review of literature, intellectual interpretation, wrote a major section of this paper, and revision of manuscript before publication
16. Lipscomb EA, Simpson KJ, Lyle SR, Ring JE, **Dugan AS**, Mercurio AM. The alpha6beta4 integrin maintains the survival of human breast carcinoma cells in vivo. *Cancer Research*. 2005. 65 (23): 10970-10976.
Contribution: Data from multiple experiments, intellectual contribution, interpretation of results, and revision of manuscript before publication
17. **Dugan AS**, Eash S, Atwood W. An N-linked glycoprotein with alpha(2,3)-linked sialic acid is a receptor for BK virus. *Journal of Virology*. 2005. 79 (22): 14442-14445.
Primary contributor to experimental design, implementation, and authorship of the publication
18. Elphick GF, Querbes W, Jordan JA, Gee GV, Eash S, Manley K, **Dugan A**, Stanifer M, Bhatnagar A, Kroeze W, Roth BL, Atwood WJ. The human polyomavirus, JCV, uses serotonin receptors to infect cells. *Science*. 2004. 306 (5700): 1380-1383.
Contribution: Data from one experiment, intellectual feedback, and revision of the manuscript before publication
19. Simpson KJ, **Dugan AS**, Mercurio AM. Functional analysis of the contribution of RhoA and RhoC GTPases to invasive breast carcinoma. *Cancer Research*. 2004. 64 (23): 8694-8701.
Contribution: Generated the data from multiple experiments and revision of the manuscript before publication
20. Lipscomb EA, **Dugan AS**, Rabinovitz I, Mercurio AM. Use of RNA interference to inhibit integrin (alpha6beta4)-mediated invasion and migration of breast carcinoma cells. *Clinical & Experimental Metastasis*. 2003. 20 (6): 569-576.
Contribution: Generated the data from multiple experiments, intellectual feedback, and revision of manuscript before publication

INVITED RESEARCH TALKS & PEDAGOGY PRESENTATIONS

- November 2024 *Beyond the Bench: Integrating Bioethical Topics in Microbiology and Immunology Courses*
 Roundtable Discussion: *I don't want to be an AI plagiarism detector! Addressing Biology Teaching Challenges in the New AI Era*
 American Society of Microbiology Conference for Undergraduate Educators (ASMCUE), Pittsburgh, PA
- September 2022 *Innate Immunity to Viruses & Adaptive Immunity to Viruses*,
 Guest lectures BIO1560: Virology, Brown University
- April 2021 *Contact Tracing used in Infectious Disease Course*,
 Community Service Learning Celebration and Faculty Workshop, Assumption University
- June 2018 *Out of the Classroom and into the Community: Integrating a Service Learning Project to an Immunology Course*,
 Project Kaleidoscope (PKAL) Regional Summer Meeting, Salem State University, Salem, MA
- May 2018 *Integrating a Community Service Learning Component into BIO410: Immunology*,
 Community Service Learning Celebration and Faculty Workshop, Assumption College
- Nov. 2017 *A Virus in Cell Clothing: Mapping Viral Infection in Human Brain Cells*,
 Assumption College, Student Science Club Seminar Series, Worcester, MA
- Sept. 2017 *A Virus in Cell Clothing*, Assumption College, Provost office sponsored "Lunch and Learn" seminar series, Worcester, MA
- Sept. 2017 *A Virus in Cell Clothing*,
 Rhode Island College, Biology Dept. Colloquium Seminar Series, Providence, RI
- June 2017 *Extracellular Vesicle Involvement in JC Polyomavirus Infection*,
 ASM (American Society for Microbiology) Microbe Conference 2017, New Orleans, LA
- July 2014 *Host Cell Autophagy Promotes BK Virus Infection*,
 XIVth International Union of Microbial Sciences (IUMS), Montreal, Canada
- April 2014 *The Ins and Outs of BK Virus Infection*,
 Bryant University, Dept. of Science and Technology Seminar Series, Smithfield, RI
- Nov. 2012 *Virus vs. Host: Lessons Learned from BK Virus Infection*,
 Hamilton College, Biology Dept. Seminar Series, Clinton, NY
- Nov. 2011 *How Human Defensins Protect against Viral Infection*,
 Rhode Island College, Biology Dept. Seminar Series, Providence, RI
- June 2011 *Alpha-defensin 5, HD5, Inhibits BK Virus Infection*,
 Novartis Institutes for Biomedical Research, Cambridge, MA

- April 2011 *The Immune System Strikes Back: Human Defensins Protect against Viral Infection*, Assumption College, Natural Science Dept. Seminar Series, Worcester, MA
- July 2008 *Alpha-defensins, HNP-1 and HD5, Inhibit Primate Polyomavirus Infection of Host Cells*, American Society for Virology, Ithaca, NY
- Sept. 2007 *The Role of Charged Amino Acids in VP1 in BK Virus Lifecycle*, 4th International Conference on Polyomavirus and Human Disease, Barcelona, Spain
- Aug. 2007 *Identification of Amino Acid Residues in BK Virus VP1 Critical for Viability and Growth*, Brown University, Annual Retreat for Pathobiology Graduate Program, Bristol, RI
- July 2006 *BK Virus Interaction with Sialic Acid Receptors on Host Cells*, American Society for Virology, Madison, WI
- Sept. 2005 *An N-linked Glycoprotein with $\alpha(2,3)$ -linked Sialic Acid is a Receptor for BK Virus*, 3rd International Conference on Polyomavirus and Human Disease, Providence, RI

CONFERENCE ABSTRACTS - POSTER PRESENTATIONS

- June 2021 *Tracking an Outbreak: A Historic Biography & Contact Tracing Training to Study Infectious Disease*, American Society for Microbiology Conference for Undergraduate Educators, Online
- November 2019 *Using the Kitchen Sponge as a Pedagogical Tool to Investigate Bacterial Abundance, Composition, and Resistance*, * American Society Microbiology 54th Annual Regional I Meeting, Randolph, MA
- January 2019 *The Microbial Community of Kitchen Sponges: Experimental Study Investigating Bacterial Number, Composition, and Resistance*, * Pioneer Valley Microbe Symposium, Amherst, MA
- May 2017 *Exosome Involvement in JC Polyomavirus Infection*, 6th International Society for Extracellular Vesicles Conference, Toronto, Canada
- April 2017 *Exosome Involvement in JC Polyomavirus Infection*, 2nd Northeast Association for Clinical Microbiology and Infectious Disease & Northeast Branch of American Society for Microbiology (NACMID-NEB-ASM) Conference, Wakefield, MA
- May 2014 *Host Cell Autophagy Promotes BK Virus Infection*, American Society for Microbiology 114th General Meeting, Boston, MA
- Oct. 2013 *RAW264.7 Cellular Response to Dermacoccal and Staphylococcal Infection*, American Society for Microbiology: 48th Annual Regional Meeting, Storrs, CT
- June 2012 *The Role of Autophagy in BK Virus Infection of Host Cells*, * American Society for Microbiology 112th General Meeting, San Francisco, CA
Received Outstanding Student Poster Award
- April 2012 *The Role of Autophagy in BK Virus Infection of Host Cells*, * Council of Undergraduate Research Posters on the Hill, Washington, D.C.

76 of 850 abstracts accepted

- Oct. 2011 *The Role of Autophagy in BK virus Infection*,
American Society Microbiology 46th Annual Regional I Meeting, Brockton, MA
- Feb. 2006 *BK Virus Interaction with Sialic Acid on Receptors of Host Cells*,
Keystone Symposium: Cell Biology of Virus Entry, Replication and Pathogenesis,
Santa Fe, NM

*Undergraduate student presenters

PROFESSIONAL DEVELOPMENT, LEARNING COMMUNITIES & TEACHING ENRICHMENT

- Spring 2025 **Biologists and Graph Interpretation (BioGraphI) Faculty Mentoring Network**
9-part workshop series on integrating data literacy and graph interpretation while fostering diversity in undergraduate biology classrooms
- Fall 2024 **Learn How to Improve Your Classroom Teaching Through Universal Design for Learning**
American Society for Microbiology (ASM)
4-part seminar series with 3 interactive workshop sessions
- Summer 2024 **Getting Start in Biology Education Research**
SABER (Society for the Advancement of Biology Education Research) and ASM.
7-part seminar series with 5 interactive workshop sessions
- June 2024 **The Grading Conference 2024** – 3-day online conference
- February 2024 **Innovative Educators Virtual Summit** – 2-day online conference
- 2023-2024 **Inclusive Teaching Faculty Learning Community (FLC) Cohort**
HHMI and SEAS Inclusive Teaching MOOC to develop, practice, and apply evidence-based inclusive approaches for more effective teaching and learning
- Summer 2023 **Microbiology Learning & Teaching Committee: Assessment in Biology**
SABER (Society for the Advancement of Biology Education Research) and ASM.
7-part seminar series with 5 interactive workshop sessions
- 2023 **Journal of Microbiology Biology Education Live!** – ASM online community – Regular attendee
- 2022 - present **STEM Ed Friday**, Brown University – Regular attendee
- 2022- present **Large Class SIG**, Brown University – Regular attendee
- 2022-2024 [Teaching Seminars/Workshops](#)
- 2022 **American Society for Microbiology Conference for Undergraduates (ASM-CUE)**, Virtual conference, Attendee
- 2020 **Online Teaching Training**, D'Amour Center for Teaching Excellence
Assumption College, Worcester, MA

- 2020 **Reflections on Race**, Cross-Cultural Center
Assumption University, Worcester, MA
- 2019-2020 **Course Innovation Academy**, D'Amour Center for Teaching Excellence
Assumption College, Worcester, MA
- August 2019 **First-Year Dinner Conversation Workshop**
Assumption College, Worcester, MA
- May 2019 **Invitation to Learning: Emotions, Inclusivity, and Community Symposium**
Assumption College, Worcester, MA
- June 2018 **Project Kaleidoscope (PKAL) Regional Summer Meeting**
Salem State University, Salem, MA
- 2017-2019 **D'Amour Center for Teaching Excellence Interactive Workshops**
Assumption College, Worcester, MA
- Learning from Teaching Online
 - Student Perspectives on Teaching
 - Innovations in High Education: Teaching Distracted Minds
 - Meditation and Mindfulness
 - Making Your Scholarship Public
 - Food for Thought: Inspired by Index Cards: Low-Tech Tools for Teaching
- May 2017, '18, '19 **Community Service Learning Celebration and Faculty Workshop**
Assumption College
- May 2014 **Getting Started as a Microbiologist at a Primarily Undergraduate Institution (PUI) Workshop**
American Society for Microbiology 114th General Meeting, Boston, MA
- April 2014 **Teaching and Technology Mini-Conference**
D'Amour Center for Teaching Excellence and Information Technology,
Assumption College, Worcester, MA
- Jan. 2014 **Designing Scientific Teaching Tools for Biochemistry and Molecular Biology (BMB) Education**
American Society for Biochemistry and Molecular Biology,
Simmons College, Boston, MA
- Oct. 2010 **Microbial Genome Annotation Regional Training (IMG-ACT)**
Department of Energy Joint Genome Institute,
Worcester State University, Worcester, MA
- July 2010 **Graduate Institute for Teaching (GIFT)**
Summer 4-week Intensive Workshop on Teaching, Tufts University, Medford, MA
- April 2010 **Process Oriented Guided Inquiry Learning (POGIL) Training**
National Science Foundation (NSF) funded, Newport, RI
- 2005-2008 **Teaching Certificate I and III Program**
Sheridan Center for Teaching and Learning, Brown University

CONSULTANT WORK

May-Nov. 2023 **Expert Witness**, Bristows LLP. London, England

PRESS / MEDIA

2023

- Brown website. July 13, 2023 [“Opening up Horizons of Curiosity:” PreCollege Programs Offer a Taste of the Brown Experience.](#) Interviewed for this article
- The Brown Daily Herald. January 26, 2023 [“Students, faculty react to a return to in-person midterms.”](#) Interviewed for this article.

2021

- Boston 25 News. [“Assumption Students get Trained as Contact Tracers as Class Incorporate Pandemic Skills.”](#) March 16, 2021
- Spectrum News 1. [“Assumption University Students Training as Contact Tracers to Help During Pandemic.”](#) February 18, 2021
- WMPR FM NPR radio. [“Student spend spring semester studying to be contact tracers.”](#) February 18, 2021
- Assumption University News and Events. [“Assumption Students Training as Contact Tracers to Assist Worcester in Pandemic Response.”](#) February 16, 2021
- Worcester Business Journal [“Assumption Student Training to Conduct Contact Tracing.”](#) February 17, 2021
- Worcester Telegram and Gazette. [College Town: Assumption Students Training to Become Contact Tracers.”](#) February 17, 2021
- Mass Live [“Assumption University students spending spring training to be COVID Contact Tracers”](#) February 16, 2021

2020

- Lang, Jim. [Distracted](#). Basic Books. 2020. A few of my teaching practices are shared in this book.
- Spectrum News 1. [“Making Sense of New CDC Study on COVID-19.”](#) April 14, 2020

FELLOWSHIPS, AWARDS, AND GRANTS

| | |
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| 2025 | Brown University, UTRA funding Faculty Mentor to Kaitlin Dang ‘26 |
| 2022 | Brown University Faculty Mentor to Undergraduate Lab Media Co-Designer Fellowship (Student Claire Brown awarded \$1475) |
| 2019 | Assumption College Faculty Development Grant Title: You are what you Eat: Diet Affects Stable Isotope Ratios in Hair (Total Awarded \$3500) |
| 2018-2020 | Assumption College Course Load Reduction Grant Title: Investigating the Microbial World of the Household Sponge (Total Award: teaching course reduction in two courses over two years) |
| 2016 | Assumption College Faculty Development Grant Title: Secrets to Infection: Investigating how cell cycle influence susceptibility |

- to BK virus Infection
(Total Awarded \$3000)
- 2014 Assumption College Faculty Development Grant
Title: The role of cell cycle in BK virus infection of host Cells
(Total Awarded \$4000)
- 2013 Assumption College Honors Program Research Fellowship
Faculty mentor to Hieu Nguyen '15
Title: Human immune response to bacterial Infection
(Total awarded \$7000)
- 2011-2012 American Society for Microbiology Undergraduate Summer Fellowship
Faculty mentor to Stephanie Bouley '12
Title: Determining the role of host autophagy in BK virus infection at Brown University
(Student awarded \$4000 plus travel to conference)
*39 of 69 applications were funded
- 2011 Assumption College Honors Program Research Fellowship
Faculty mentor to Stephanie Bouley '12
Title: Determining the role of host autophagy in BK virus infection at Brown University
(Total awarded \$7000)
- 2009-2010 NRSA Postdoctoral Fellowship Grant (F32AI084202-01),
National Institute of Allergy and Infectious Disease/NIH, Tufts University
Primary Investigator
Title: Dissecting the role of ERK and DUSP on *Legionella pneumophila* Infection
(Awarded ~\$65,000 plus benefits)
- 2009-2010 TEACR (Training in Education And Critical Research Skills) Fellowship,
Institutional Research and Academic Career Development Award, NIH/NIGMS, Tufts University
Trainee
Title: Dissecting the Role of ERK and DUSP on *Legionella pneumophila* Infection
(Awarded full salary and trainings/workshops for 3 years, but because I received NRSA grant, I only accepted training)
- July 2008 Postdoctoral Travel Award, American Society for Virology
- Sept. 2007 Student Travel Award, 4th International Conference on Polyomavirus and Human Disease
- 2005-2007 GAANN Training Grant, Pathobiology Graduate Program, Brown University
Trainee
Title of Project: Dissecting BK virus receptor Interactions
(Awarded ~\$70,000 plus benefits)
- Aug. 2006 Charles Kuhn Graduate Award in Disease Pathogenesis, Pathobiology Graduate Program, Brown University

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| July 2006 | Student Travel Award, American Society for Virology |
| 2004-2006 | Frederic Poole Gorham Biological Fellowship, Brown University Trainee Title of Project: Dissecting BK virus receptor Interactions |
| Summer 1999 | Praxis summer fellowship funded through Smith College Dept. of Microbiology, University of Michigan Undergraduate Intern Title: Antibiotic resistance in <i>Enterococcus faecalis</i> (Awarded \$2000) |
| Summer 1998 | Summer Internship Funding Program (SIFP) fellowship through Smith College Dept. of Environmental Conservation Undergraduate Intern Title: Assessing wellness of fisheries in Central New York State (Awarded \$2000) |

COMMITTEE WORK & SERVICE

| | |
|---------------|---|
| 2025-present | Mentor, American Society for Microbiology Future Leaders Mentorship Fellowship (FLMF) |
| 2025-present | Vice Chair, American Society for Microbiology Conference for Undergraduate Educators (ASMCUE) Conference Planning Committee |
| 2025- present | Admission Committee Member, Masters Program in Biotechnology, Brown University |
| 2024-present | Member, Brown Pfizer Master's Program Review Committee, Brown University |
| 2024 | Steering Committee Member: Newcomer Representative, ASMCUE Conference Planning Committee <ul style="list-style-type: none">Monthly meetings to design conference offerings, reviewed conference abstracts, led orientation for newcomers, facilitated roundtable discussion, hosted affinity dinner for attendees |
| 2024 | Invited member, Community of ASM's Council on Microbial Sciences (COMs) Molecular Biology & Physiology 2024 Community Retreat |
| 2023- present | Member, Biology Undergraduate Education DIAP Committee, Brown University |
| 2023- present | Member, Biology Curriculum Committee, Brown University |
| 2022- present | Sheridan Center Departmental Liaison, Brown University |
| 2022-2025 | Peer Teaching Observer, Biology Education, Brown University – 4 faculty cases |
| 2022-2023 | Search Committee Member, Associate Dean for Medical Education, Program in Liberal Medical Education, Brown University |
| 2022 | Member, Committee for University Minors Protection Policy, Brown University |
| 2021 | Sponsor, Bachelor of Science in Biology Degree, Assumption University |

- Facilitated faculty conversations, compiled feedback, and wrote the application for a new Bachelor of Science in Biology degree program as previously we only offered a Bachelor of Arts in Biology
 - Wrote application for curricular changes in Bachelor of Arts in Biology Program
- 2021 Journal Club Facilitator, Biological and Physical Science Department, Assumption University
- 2020 - 2021 Committee Member, Curriculum Committee for College of Liberal Arts and Science, Assumption University
- 2020 Committee Member, *Ad Hoc* Mission Committee for the College of Liberal Arts and Sciences, Assumption University
- 2019 - 2020 Co-Chair, Biology Program Review Committee, Assumption University
- 2019 - 2020 Co-organizer, Life Science Seminar Series, Assumption University
Established this new interdisciplinary seminar series with colleagues in Nursing and Health Sciences with the goal of bringing dynamic researchers and health professionals to Assumption to share their expertise with our community
- 2019 - 2020 Committee Member, Continuing Education Committee, Assumption University
- 2019 - 2020 External Committee Member, Faculty Search for Health Sciences Position in Human Services and Rehabilitation Studies Department, Assumption University
- 2019 Bachelor of Arts / Bachelor of Science Committee, Member, Assumption University
- 2018 Committee Member, Faculty Search for Neuroscience Position in Biological and Physical Sciences Department, Assumption University *Successful Search
- 2017 – 2018 Chair, Nursing Committee, Assumption University
 - This was a new committee tasked with assisting the development of a new Bachelor of Science in Nursing (BSN) Program
 - Led the Search Committee for Dean of Nursing position *Successful Search
 - Worked closely with Dean to develop Assumption's nursing curriculum
- 2017- 2019 Chair, Admissions Committee, Assumption University
Developed and implemented faculty recruitment initiatives that:
 - Organized and implemented an initiative to have 68 faculty volunteers email high school students accepted at Assumption College (collectively 3500 emails sent in 2018)
 - Collected data from email initiative and assessed of effectiveness of the program
- 2017 - 2019 Faculty Senate Representative, Assumption College
- 2015 – 2016 Institutional Review Board (IRB) Committee, Assumption College
- 2014 - 2016 Committee Member, Undergraduate Symposium Committee, Assumption College
- 2013 - 2014 Committee Member, Faculty Search for Physics Position in Natural Sciences Department, Assumption College *Successful Search

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| 2013 – 2016 | Committee Member, Honors Program Council, Assumption College |
| 2013 - 2016 | Committee Member, Faculty Development Grant Committee, Assumption College |
| 2013 – 2015 | Organizer, Natural Science Departmental Seminar Series, Assumption College (5 semesters) |
| 2012 - 2014 | Committee Member, Undergraduate Symposium Committee, Assumption College |
| April 2011 | Judge, Undergraduate Research Symposium, Assumption College |
| 2011 - 2014 | Committee Member, College Conduct Board Committee, Assumption College |
| 2011 - 2012 | Member, Curriculum Committee, Assumption College |
| 2011 - 2012 | Committee Member, Faculty Search for Anatomy Position in Natural Sciences Department, Assumption College *Successful Search |

MENTORED STUDENTS AND THEIR ACCOMPLISHMENTS

Honors Students / Independent Studies

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| 2025 | Cameron Le '25 , Brown University Capstone Project: Clinical Allergy & Atopy: Pathophysiology, Therapy, and Burden of Disease |
| 2024 | Cagn Walker '24.5 , Brown University <u>Capstone Project</u> : Limits of the extremophile <i>Deinococcus radiodurans</i> in single and combined stress conditions |
| 2024 | Jeremy Kwon '24 , Brown University <u>Honor Thesis</u> : Endogenous ROS Levels in Clinical Isolates of MRSA Fulbright US - Korea Presidential STEM Initiative Award |
| 2021 | Rebecca Chioniere '22 , Assumption University <u>Honors Thesis Proposal</u> : Prion disease in animals and interspecies transmission |
| 2021 | Lauren Jakobs '22 , Assumption University <u>Honors Thesis Proposal</u> : The Leaky Pipeline of Women in Biological Science |
| 2020-2021 | Evan Kessinger '21 , Assumption University <u>Honor Thesis</u> : Investigating COVID-19 Disease Current position: Manufacturing Associate, Bristol Myers Squibb, Greater Boston, MA |
| 2020 | Nicole Bramlitt '21 , Assumption University <u>Honors Thesis</u> : Using RAW264.7 cells as a model for bacterial phagocytosis Current position: Medical Student, University of Central Florida College of Medicine, Orlando, FL |
| 2018-2019 | Sydney Knoll '19 , Assumption College <u>Honors Thesis</u> : Analysis of bacteria from the common kitchen sponge |
| 2017-2018 | Devon Joyce '19 , Assumption College <u>Honors Thesis</u> : Investigating opioid chemical structure and its prenatal and postnatal effects Current position: Physician Assistant, Family Medical & Maternity Care, P.C., Leominster, MA |
| 2015 | Hieu Nguyen '15 , Assumption College <u>Honors Thesis</u> : The Effect of Montamine Analogs on <i>E.coli</i> & <i>S. aureus</i> Growth |
| 2014 | Shannon (Martin) Paquette '15 , Assumption College |

Honors Thesis: Location of EFHC1 protein in *Tetrahymena thermophiles* axonemes using Cryo-ET

Graduate school: Ph.D. Pathobiology Program, Brown University

Current position: Postdoctoral Researcher, Dartmouth College

2011- 2012

Stephanie Bouley '12, Assumption College

Honors Thesis: Understanding the role of autophagy in BK Virus infection

Research Students

2025

Kaitlin Dang '27, Brown University

Research Project: Investigating student experience and learning outcomes in biology classrooms

Awarded UTRA funding

2018-2019

Sydney Knoll '19, Assumption College

Research Project: Analysis of bacteria from the common kitchen sponge

Current position: Doctor of Nursing, UMASS Medical School

2018

Nicholina Allain '19, Assumption College

Research Project: Investigating carbon and nitrogen isotope ratios in hair and meat samples

Current position: Process Development Associate, RoslinCT, Hopkinton, MA

2014-2015

Lauren Pepi '15, Assumption College

Research Project: Cell cycle inhibition influences BK virus infection

Graduate school: Ph.D. in Chemistry at the University of Georgia (2020)

Current position: Glycomics Core Director BIDMC/ Harvard Medical School, Boston, MA

Summer 2014

Sarah Williams '14, Assumption College

Research Project: The effect of Elafin on BK Virus infection

Graduate school: Masters of Public Health Program at Boston University (2017)

Current position: Lead Project Manager, Quality, Patient Safety, and Risk Management at Brigham and Women's Hospital, Boston, MA

2013-2015

Hieu Nguyen '15, Assumption College

Research Project: Effect of montamine analogs on *E.coli* & *S. aureus* growth

Pharm.D. at Massachusetts College of Pharmacy and Health Sciences, Worcester, MA (2019)

2013-2014

Maggie Bara '14, Assumption College

Research Project: Immune Response to *Demacoccus* Infection

Graduate school: Ph.D. in Biology at Duke University, Durham, NC (2023)

Current position: Scientist II, Genomics Technology Development, Watertown, MA

Fall 2013

Matt Cooke '13, Assumption College

Research Project: Testing for enteroviruses in Blackstone Valley wastewater treatment center

Current position: Director of Business Development, Foundation Medicine, Somerville, MA

2011- 2012

Stephanie Bouley '12, Assumption College

Research Project:: Understanding the role of autophagy in BK Virus infection

Awarded American Society for Microbiology Undergraduate Summer Fellowship *39 of 69 applications were funded (summer 2011)

Poster Presentation, Posters on the Hill, Washington, DC (April 2012)

Travel Award & Outstanding Poster Award, American Society for Microbiology, 112th General Meeting (June 2012)

Fulbright Scholarship, University of Tubingen, Germany (2012-2013)

Graduate school: Ph.D. in Experimental and Molecular Medicine at Dartmouth College, Hanover, NH (2019)

Current position: Postdoctoral Researcher, Massachusetts General Hospital,

Boston, MA (2019-present)

Faculty Mentor for Off-Campus Internships

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|-----------|--|
| Fall 2020 | Kennedy O'Hara '21 , Assumption University <u>Internship site</u> : Ascentria and through Academic Health Collaborative, Worcester, MA – Contact Tracing Training |
| Fall 2016 | Marielena Layuno Matos '17 , Assumption College <u>Internship site</u> : Oral Microbiology Laboratory, School of Biomedicine, University of São Paulo, São Paulo, Brazil |
| Fall 2014 | Joe Douglas '15 , Assumption College <u>Internship site</u> : Department of Pathology, Massachusetts General Hospital, Boston, MA |
| Fall 2013 | Julianne Elhoussan '14 , Assumption College <u>Internship site</u> : UMASS Advance Clinical Care Center |

Faculty Mentor for Student Presentations at Brown University's Research Poster Day2024 [3 Student Presentations](#) (Click hyperlink for details)**Faculty Mentor for Student Presentations at Assumption University's Undergraduate Symposium**2012-2021 [29 Student Presentations involving 46 students](#) (Click hyperlink for details)**Second Reader / Committee Member for Honor Theses**

| | |
|------|---|
| 2025 | Lucy-Ellen Brady (ScM degree '25), Brown University, The Liver-Brain Axis and Drug Induced Liver Injury (DILI): An assessment of Disease, DILI, 3D Microtissue Platform |
| 2025 | Selena Luong (ScM degree '25), Brown University, Characterizing the Impact of 5' PreS1 Deletion Hepatitis B Virus Mutants on Endoplasmic Reticulum Stress |
| 2025 | Dana Magana Miralles '25 , Brown University, TBD |
| 2025 | Sophie Marcus Wade '25 , Brown University, Characterization of metacyclogenesis-associated proteins in <i>Trypanosoma cruzi</i> |
| 2024 | Priyanka Bedi (ScM degree '24), Brown University, Master's Thesis title: The Role of Substance P in Immunomodulation of Wound Healing |
| 2023 | Manuella Talla Takoukam '23 , Brown University, Honors Thesis: The Effects of S.pneumoniae Coinfection on the Differential Expression of the IAV Transcriptome |
| 2022 | Zinab Eisa '22 , Brown University, Honors Thesis: The Kinetics of Inflammation and Immune Signaling in Acute Wound Healing |
| 2021 | Lauren Jakobs '22 , Assumption University, Honor Thesis: The Leaky Pipeline of Women in Biological Science |
| 2020 | Samantha Tepper '20 , Assumption University, Honors Thesis: The Characterization of Four Newly Discovered Halophilic Archaea Isolates |
| 2019 | Cameron Young '19 , Assumption University, Honors Thesis: The Role of Interferon- β in the Treatment of Multiple Sclerosis |
| 2019 | Adrienne Bertothy '19 , Assumption University, Honors Thesis: Characterization of the Exocyst Protein Complex in Fission Yeast <i>S. pombe</i> |
| 2019 | Thomas Barringer '19 , Assumption University, Honors Thesis: Seasonal prevalence of <i>Batrachochytrium dendrobatidis</i> in Central Massachusetts Lithobates catesbeianus tadpoles |
| 2016 | Anna Canavan '15 , Assumption College, Honors Thesis: A Comparison of Infection Control between the Central African and West African Outbreaks of Ebola Virus |
| 2016 | Ann-Marie Idusuyi '16 , Assumption College, Honors Thesis: Community-associated Methicillin Resistance Staphylococcus aureus: Early indicators and preventative techniques for collegiate student athletes in the U.S. |
| 2015 | Elise Prayson '15 , Assumption College, Honors Thesis: Crabp1 regulates lipid accumulation in mammary gland fat cells |

2015

Kaitlin Poirier '15, Assumption College, Honors Thesis: Cooking with Crohn's Disease- Microbiota in the Mix

2013

Jenna Garozzo '13, Assumption College, Honors Thesis: Molecular mechanisms of axon guidance: A study of integrins and netrin-1

PROFESSIONAL SOCIETIES

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|----------------|--|
| 2024 – present | Society for the Advancement of Biology Education (SABER) |
| 2024 – present | American Association for the Advancement of Science (AAAS) |
| 2008 – present | American Society for Microbiology |
| 2004 - 2014 | American Society for Virology - Associate member |

CAREER PRESENTATIONS & COMMUNITY INVOLVEMENT

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|---------------------|--|
| April 2024 | Presenter, “Microbiology: A Career with Many Opportunities,” Staff of Asclepius Career Series |
| Fall 2020 | Faculty Mentor, “Exploring Wellness” Interest Circle, semester-long program, Living Learning Center, Assumption University |
| April 2020 | Panelist, Assumption College of Liberal Arts and Sciences (CLAS) Dinner and Discussion: Developing a mission statement for CLAS |
| 2011-2019 | Organizer & Presenter, “How to get a Summer Research Internship!” Natural Science Dept. Seminar Series, Assumption College |
| May 2017 | Panelist, “Career Opportunities in the Sciences,” Worcester State University |
| Aug. 2016 | Presenter, “Teaching at a Primarily Undergraduate Institute: Career Paths after Graduate School” Brown University, Office of Graduate and Postdoctoral Studies |
| Feb. 2015 | Faculty Participant, Exploring Majors Fair, Assumption College |
| Jan. 2015 | International Travel Group Leader – 9-day trip to Costa Rica Organized and led an environmental and cultural student trip to Costa Rica |
| March 2014 | International Travel Group Leader – 7-day trip to Belize Organized and led biodiversity and cultural student trip to Belize |
| 2014 - present | Reviewer for scientific journals: <i>Microbiology Spectrum</i> <i>Microbial Pathogenesis</i> <i>Journal of Molecular and Genetic Medicine</i> |
| April 2012 | Presenter, “Landing the Perfect Internship,” Student organized event in residential hall, Assumption College |
| Feb. 2011, '13, '14 | Presenter, “How BK virus infects host cells”, Faculty Showcase: Assumption College, Natural Science Dept. Seminar Series, Worcester, MA. (Highlighting faculty research to recruit students for summer research projects.) |

Oct. 2011

Presenter, "How to reduce stress!" Student organized event in residential hall, Assumption College

May 2011

Panelist, "Career Panel: A Career at a Liberal Arts College," Tufts University, Department of Microbiology, Boston, MA

March 2008

Presenter, Microbiology and Disease Workshop for Accelerated Learning Activities Program (ALAP), Warwick, RI

COMMUNITY SERVICE

2023

Head Coach and Site Liaison, Girls of the Run program for grades 4-5
Lincoln Central Elementary School, Lincoln, RI

2019 – 2020

Co-Organizer, STEM Nights for grades K-2 and 3-5
Lincoln Central Elementary School, Lincoln, RI

2019 – present

Secretary, Board of Directors
Friends of Lincoln, RI Public Library