

Melissa S. Maginnis, Ph.D.

Assistant Professor of Microbiology
The University of Maine
Department of Molecular and Biomedical Sciences
5735 Hitchner Hall
Orono, Maine 04469
Phone: (207) 581-2806
Email: melissa.maginnis@maine.edu
website: <https://umaine.edu/maginnislab/>

Faculty Appointments

- 2014 - present Assistant Professor of Microbiology
Department of Molecular and Biomedical Sciences (MBS)
The University of Maine, Orono, ME
- 2013 - 2014 Investigator
Brown University, Providence, RI
Research area: JC Polyomavirus Attachment and Entry
Research Advisor: Walter J. Atwood, Ph.D.

Education and Research Training

- 2007 - 2013 Postdoctoral Research Fellow/Associate
Brown University, Providence, RI
Research area: JC Polyomavirus Attachment and Entry
Research Advisor: Walter J. Atwood, Ph.D.
- 2001 - 2007 Doctor of Philosophy, Microbiology and Immunology
Vanderbilt University, Nashville, TN
Research area: Cellular Determinants of Reovirus Cell Entry
Research Advisor: Terence S. Dermody, M.D.
- 1997 - 2001 Bachelor of Science, *summa cum laude*
Neumann College, Aston, PA
Major: Biological Sciences

External Grant Awards

- 2019 - 2022 Academic Research Enhancement Award
NIH/NIAID R15 AI144686
Role: Principal Investigator
Total funding: \$435,438
- 2014 - 2019 Comparative Functional Genomics INBRE in Maine
NIH/NIGMS P20 GM103423 (PI: J. Coffman)
Role: Project leader/Investigator
Total funding: \$598,000
- 2009 - 2012 Ruth L. Kirschstein National Research Service Award

NIH/NINDS F32NS064870

2003 - 2005 Molecular Microbial Pathogenesis Training Program
NIH/NIAID T32AI007281

Internal Grant Awards

2019 - 2021 Biomedical Sciences Accelerator Fund Award, Cluster Funding, College of Natural Sciences, Forestry, and Agriculture, The University of Maine, Orono, ME
Role: Co-Principal Investigator
Total Funding: \$30,000

2018 NIH Incentive Grant, Office of the Vice President for Research, The University of Maine, Orono, ME
Role: Principal Investigator
Total funding: \$5,000

Publications

1. Wilczek, M.P., DuShane, J.K., Armstrong, F.A., and **Maginnis, M.S.**⁺ (2020). JC Polyomavirus Infection Reveals Delayed Progression of the Infectious Cycle in Normal Human Astrocytes. *Journal of Virology*, 94(5): e01331-19. **[Cover Illustration]**. ⁺, **Corresponding author.**
2. DuShane, J.K., Mayberry, C.L., Wilczek, M.P., Nichols, S.L., and **Maginnis, M.S.**⁺ (2019). JCPyV-Induced MAPK Signaling Activates Transcription Factors during Infection. *International Journal of Molecular Sciences*, 20(19):4779. ⁺, **Corresponding author.**
3. DuShane, J.K. and **Maginnis, M.S.**⁺ (2019). DNA Virus Exploitation of the MAPK-ERK Cascade. *International Journal of Molecular Sciences*, 20(14):3427. **[Invited Review]**. ⁺, **Corresponding author.**
4. Assetta, B., Morris-Love, J., Gee, G.V., Atkinson, A., O'Hara, B.A., **Maginnis, M.S.**, Haley, S.A., and Atwood, W.J. (2019). Genetic and Functional Dissection of the Role of Individual 5-HT₂ Receptors as Entry Receptors for JC Polyomavirus. *Cell Reports*, 27(7):1960-1966.e6.
5. DuShane, J.K., Wilczek, M.P., Crocker, M.A., **Maginnis, M.S.**⁺ (2019). High-Throughput Characterization of Viral and Cellular Protein Expression Patterns during JC Polyomavirus Infection. *Frontiers in Microbiology*, 10:783. ⁺, **Corresponding author.**
6. Curthoys, N.M., Mlodzianoski, M.J., Parent, M., Butler, M.B., Raut, P., Wallace, J., Lilieholm, J., Mehmood, K., **Maginnis, M.S.**, Waters, H., Busse, B., Zimmerberg, J., and Hess ST. (2019). Influenza Hemagglutinin Modulates Phosphatidylinositol 4,5-Bisphosphate Membrane Clustering. *Biophysical Journal*, 116(5):893-909.
7. Mayberry, C.L., Soucy, A.N., Lajoie, C.R., DuShane, J.K., and **Maginnis, M.S.**⁺ (2019). JC Polyomavirus Entry by Clathrin-Mediated Endocytosis is Driven by β -arrestin. *Journal of Virology*, 93(8):e01948-18. **[Spotlight Article]**. ⁺, **Corresponding author.**

8. **Maginnis, M.S.**⁺ (2018). Virus-Receptor Interactions: The Key to Cellular Invasion. *Journal of Molecular Biology*, 430(17):2590-2611. [**Invited Review**]. ⁺, **Corresponding author**.
9. DuShane, J.K., Wilczek, M.P., Mayberry, C.L., and **Maginnis, M.S.**⁺ (2018). ERK is a Critical Regulator of JCPyV Infection. *Journal of Virology*, 92(7):e01529-17. ⁺, **Corresponding author**.
10. Mayberry, C.L., Nelson, C.D.S., and **Maginnis, M.S.**⁺ (2017). JC Polyomavirus Attachment and Entry: Potential Sites for PML Therapeutics. *Current Clinical Microbiology Reports*, 4(3):132-141. [**Invited Review**]. ⁺, **Corresponding author**.
11. Dimitriadi, M., Derdowski, A., Kalloo, G., **Maginnis, M.S.**, Bliska, B., O' Hern, P., Nguyen, K.C.Q., Cook, S.J., Poulogiannis, G., Atwood, W.J., Hall, D.H., and Hart, A.C. (2016). Decreased Function of Survival Motor Neuron Protein Impairs Endocytic Pathways. *PNAS*, 113(30):E4377-86.
12. Ströh, L.J.*^{*}, **Maginnis, M.S.**^{*}, Blaum, B.S., Nelson, C.D., Neu, U., Gee, G.V., O'Hara, B.A., Motamedi, N., DiMaio, D., Atwood, W.J., and Stehle, T. (2015). The Greater Affinity of JC Polyomavirus Capsid for α 2,6-Linked Lactoseries Tetrasaccharide c than for Other Sialylated Glycans Is a Major Determinant of Infectivity. *Journal of Virology*, 89(12):6364-75. ^{*}, **Denotes equal contribution**.
13. **Maginnis, M.S.**, Nelson, C.D.S., and Atwood, W.J. (2014). JC Polyomavirus Attachment, Entry, and Trafficking: Unlocking the Keys to a Fatal Infection. *Journal of Neurovirology*, 21(6):601-13.
14. Bouley, S.J., **Maginnis, M.S.**, Derdowski, A., Gee, G.V., O'Hara, B.A., Nelson, C.D., Bara, A.M, Atwood W.J., and Dugan, A.S. (2014). Host Cell Autophagy Promotes BK Virus Infection. *Virology*, 456–457:87-95.
15. Zins, S.R., Nelson, C.D., **Maginnis, M.S.**, Banerjee, R., O'Hara, B.A., and Atwood, W.J. (2014). The Human Alpha Defensin HD5 Neutralizes JC Polyomavirus Infection by Reducing ER Traffic and Stabilizing the Viral Capsid. *Journal of Virology*, 88(2):948-60.
16. Assetta, B., **Maginnis, M.S.**, Gracia Ahufinger, I., Haley, S.A., Gee, G.V., Nelson, C.D., O'Hara, B.A., Allen-Ramdial, S.A., and Atwood, W.J. (2013). 5-HT₂ Receptors Facilitate JC Polyomavirus Entry. *Journal of Virology*, 87(24):13490-8.
17. **Maginnis, M.S.**, Ströh, L.J., Gee, G.V., O'Hara, B.A., Derdowski, A., Stehle, T., and Atwood, W.J. (2013). PML-associated Mutations in the JC Polyomavirus Capsid Disrupt LSTc Binding. *mBio*, 4(3):e00247-13.
18. Nelson, C.D., Derdowski, A., **Maginnis, M.S.**, O'Hara, B., and Atwood, W.J. (2012). The VP1 Subunit of JC Polyomavirus Recapitulates Early Events in Viral Trafficking and is a Novel Tool to Study Polyomavirus Entry. *Virology*, 428(1):30-40.
19. Neu, U.*^{*}, **Maginnis, M.S.**^{*}, Palma, A.S., Ströh, L.J., Nelson, C.D., Feizi, T., Atwood, W.J., and Stehle, T. (2010). Structure-Function Analysis of the Human JC Polyomavirus Establishes the LSTc Pentasaccharide as a Functional Receptor Motif. *Cell Host & Microbe*, 8(4):309-19. [**Feature Article, Cover Illustration**]. ^{*}, **Denotes equal contribution**.

20. **Maginnis, M.S.**, Haley S.A., Gee, G.V., and Atwood, W.J. (2010). Role of N-linked Glycosylation of the 5-HT_{2A} Receptor in JC Virus Infection. *Journal of Virology*, 84(19):9677-84.
21. Gasparovic, M.L., **Maginnis, M.S.**, O'Hara, B.A., Dugan, A.S., and Atwood, W.J. (2009). Modulation of PML Protein Expression Regulates JCV Infection. *Virology*, 390(2):279-88.
22. **Maginnis, M.S.** and Atwood, W.J. (2009). JC Virus: An Oncogenic Virus in Animals and Humans? *Seminars in Cancer Biology*, 19(4):261-9.
23. Cseke, G.*, **Maginnis, M.S.***, Cox, R.G.*, Tollefson, S.J., Podsiad, A.B., Wright, D.W., Dermody, T.S., and Williams, J.W. (2009). Integrin $\alpha v \beta 1$ Promotes Infection by Human Metapneumovirus. *PNAS*, 106(5):1566-71.*, **Denotes equal contribution.**
24. Dugan, A.S., **Maginnis, M.S.**, Jordan, J.A., Gasparovic, M.L., Manley, K., Page, R., Williams, G., Porter, E., O'Hara, B.A., and Atwood, W.J. (2008). Human α -Defensins Inhibit BK Virus Infection by Aggregating Virions and Blocking Binding to Host Cells. *The Journal of Biological Chemistry*, 283(45):31125-32.
25. **Maginnis, M.S.**, Mainou, B.A., Derdowski, A., Johnson, E.M., Zent, R., and Dermody, T.S. (2008). NPXY Motifs in the $\beta 1$ Integrin Cytoplasmic Domain Are Required for Functional Reovirus Entry. *Journal of Virology*, 82:3181-3191.
26. Kobayashi, T., Antar, A.A.R., Boehme, K.W., Danthi, P., Eby, E.A., Guglielmi, K.M., Holm, G.H., Johnson, E.M., **Maginnis, M.S.**, Naik, S., Skelton, W.B., Wetzel, J.D., Wilson, G.J., Chappell, J.D., and Dermody, T.S. (2007). A Plasmid-Based Reverse Genetics for Animal Double-Stranded RNA Viruses. *Cell Host & Microbe*, 1:147-157.
27. **Maginnis, M.S.**, Forrest, J.C., Dickeson, S.K., Santoro, S.A., Zutter, M.M., Nemerow, G.R., Bergelson, J.M., and Dermody, T.S. (2006). $\beta 1$ Integrin Mediates Internalization of Mammalian Reovirus. *Journal of Virology*, 80:2760-2770. **[Cover Illustration]**.

Other Scholarly Work

Chapter: Human Polyomaviruses. Author: Melissa S. Maginnis. *Encyclopedia of Virology*, 4th edition (Elsevier), edited by Dennis Bamford and Mark Zuckerman, Section: Human and Animal Viruses, (Section Editor: Eric Hunter, Ph.D.), *In press, Elsevier.*

Invited Presentations

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| 2020 | <i>Going Viral: Stealthy but deadly virus with a serious sweet tooth</i> , Science Lecture Series, Emera Astronomy Center and M.F. Jordan Planetarium in partnership with the Maine Science Festival. |
| 2019 | <i>Microscopy-based Approaches to Define the Cellular and Molecular Basis of Viral Disease</i> , Biological Imaging and Microscopy Symposium, UMaine Medicine, The University of Maine, Orono, ME. |

Cellular and Molecular Determinants of a Fatal Viral Infection, Wake Forest University, Department of Biology Seminar Series, Winston-Salem, NC.

Cellular and Molecular Determinants of a Fatal Viral Infection, Maine Medical Center Research Institute Career Development Association Seminar Series, Scarborough, ME.

Unlocking the Keys to JC Polyomavirus Infection, Colgate University, Biology Department Seminar Series, Hamilton, NY.

2016 *JC Polyomavirus and PML – a Concern with Immunosuppressants*, Husson University, School of Pharmacy Seminar Series, Bangor, ME.

How a Virus Invades Host Cells, Colby College, Biology Seminar Series, Waterville, ME.

Cellular Determinants of Viral Infection: Proper ID Required, Bowdoin College, Department of Biology Seminar Series, Brunswick, ME.

Cellular Determinants of Viral Infection: Proper ID Required, University of New England, Department of Biology Seminar Series, Biddeford, ME.

2015 *Cellular Determinants of Viral Infection: Proper ID Required*, Bates College, Department of Biological Chemistry Seminar Series. Lewiston, ME.

2014 *Cellular Determinants of Viral Attachment: Proper ID Required*, MDIBL Seminar Series, Mount Desert Island Biological Laboratory, Bar Harbor, ME.

Zebrafish Model of JCPyV Infection, Zebrafish Club Symposium, University of Maine.

2013 *Determinants of JC Polyomavirus Infection*, Department of Molecular & Biomedical Sciences, University of Maine, Orono, ME.

Virus Cell Entry: Proper ID Required, Natural Sciences Department Seminar Series, Assumption College, Worcester, MA.

Molecular Determinants of JC Polyomavirus Infection, Department of Pathology, Microbiology, and Immunology, Vanderbilt University, Nashville, TN.

2012 *Molecular Determinants of JC Polyomavirus Infection*, Virginia Tech Research Institute, Roanoke, VA.

Molecular Determinants of JC Polyomavirus Infection, Baker Institute, Cornell University, Ithaca, NY.

- 2011 *Molecular Mechanisms of JC Virus Attachment and Entry*, Department of Medical Microbiology and Immunology, University of Wisconsin, Madison, WI.
- 2010 *Molecular Mechanisms of JC Virus Attachment*, 25th Anniversary of The Lamb Center for Pediatric Research, Vanderbilt University, Nashville, TN.

Invited Professional Development Seminars

- 2019 *Imposter Syndrome in Graduate School and Career Achievement*, Wake Forest University, Winston-Salem, NC.
- 2016 *My Career in Virology*, Special Seminar: Department of Biological Sciences, Neumann University, Aston, PA.
- 2015 *Careers in Virology*, Health Professions Club, The University of Maine, Orono, ME

Conference Presentations (Presenting author only, full list includes >70 senior-author presentations)

1. **Maginnis, M.S.**, Mayberry, C.L., Mehmood, K., Parent, M., Hess, S. Characterization of JC Polyomavirus Entry by Serotonin Receptors. *Viruses 2020: Novel Concepts in Virology*, Barcelona, Spain. 2020.
2. **Maginnis, M.S.**, Mayberry, C.L., and DuShane, J.K. Characterization of Cellular Factors Required for JC Polyomavirus Invasion of Host Cells. The 7th Northeast Regional IDeA Conference, Burlington, VT, 2017.
3. **Maginnis, M.S.**, DuShane, J., Mayberry, C., and Soucy, A.N. Cellular and Molecular Determinants of JC Polyomavirus Entry and Infection. 6th Biennial National IDeA Symposium of Biomedical Research Excellence. Washington, D.C, 2016.
4. **Maginnis, M.S.**, DuShane, J.K., Soucy, A.N., and Mayberry, C.L. Molecular Determinants of JC Polyomavirus Entry and Infection. 35th Annual American Society for Virology Conference. Virginia Tech, Blacksburg, VA, 2016.
5. **Maginnis, M.S.**, Simard, A.R., Soucy, A.N., and Price, J.K. Defining the Host-Pathogen Interactions of JC Polyomavirus Infection. The 6th Northeast Regional IDeA Conference, Bar Harbor, ME, 2015.
6. **Maginnis, M.S.**, Ströh, L.J., Neu, L., Stehle, T. and Atwood, W.J. Molecular Determinants of JC Polyomavirus Attachment and Entry. 42nd Maine Biological and Medical Sciences Symposium. Mount Desert Island Biological Laboratory, Bar Harbor, ME, 2015.
7. **Maginnis, M.S.**, Ströh, L.J., Blaum, B.S., Nelson, C.D.S., Neu, U., Gee, G.V., Stehle, T., and Atwood, W.J. Structure-function analysis of human JC polyomavirus attachment to sialic-acid containing receptors. XVIth International Congress of Virology Conference. Montreal, Quebec, Canada, 2014. **State of the Art Lecture.**

8. **Maginnis, M.S.**, Ströh, L., Gee, G.V., O'Hara, B.A., Derdowski, A., Stehle, T., and Atwood, W.J. PML-Associated Mutations in the JC Polyomavirus Capsid Disrupt LSTc Binding. Progressive Multifocal Leukoencephalopathy Conference, NYAS, New York, NY, 2013.
9. **Maginnis, M.S.**, Ströh, L., Neu, U., Stehle, T., and Atwood, W.J. Structure-function Analysis of the Human JC Polyomavirus with Sialic Acid-Containing Receptors. ASV 31st Annual Meeting, University of Wisconsin Madison, Madison, WI, 2012.
10. **Maginnis, M.S.** and Atwood, W.J. Serotonin Receptor Signaling in JC Virus Infection. Annual Meeting of the American Society for Cell Biology. Denver, CO, 2011.
11. **Maginnis, M.S.**, Neu, U., Palma, A.S., Ströh, L.J., Feizi, T., Stehle, T., and Atwood, W.J. Structure-Function Analysis of the Human JC Polyomavirus with the LSTc Pentasaccharide. FASEB Summer Research Conference: Virus Structure and Assembly. Saxtons River, VT, 2010.
12. **Maginnis, M.S.**, Haley, S.A., and Atwood, W.J. The Role of 5-HT_{2A}R N-linked Glycosylation Sites in JC Virus Infection. The DNA Tumor Virus Meeting, St. Catherine's College, Oxford, England, UK, 2009.
13. **Maginnis, M.S.**, Haley, S.A., Dugan, A.S., Gasparovic, M.L., and Atwood, W.J. Molecular Mechanisms of JC Virus Entry. ASV 27th Annual Meeting, Cornell University, Ithaca, NY, 2008.
14. **Maginnis, M.S.**, Derdowski, A.M., Johnson, E.M., and Dermody, T.S. Tyrosine-Based Signaling Motifs in the β 1 Integrin Cytoplasmic Tail Are Required for Functional Reovirus Entry. Gordon Research Conference: Viruses and Cells, Tilton, NH, 2007.
15. **Maginnis, M.S.**, Forrest, J.C., Santoro, S.A., Zutter, M.M., Nemerow, G.R., Bergelson, J.M., and Dermody, T.S. β 1 Integrin Mediates Internalization of Reovirus. 9th Southeast Regional Virology Conference, Atlanta, GA, 2006.
16. **Maginnis, M.S.**, Forrest, J.C., Santoro, S.A., Zutter, M.M., Nemerow, G.R., Bergelson, J.M., and Dermody, T.S. α 2 β 1 Integrin Mediates Reovirus Entry. ASV 23rd Annual Meeting, McGill University, Montreal, Canada, 2004.
17. **Maginnis, M.S.**, Forrest, J.C., Santoro, S.A., Zutter, M.M., Nemerow, G.R., Bergelson, J.M., and Dermody, T.S. α 2 β 1 Integrin Mediates Reovirus Entry. 8th Southeast Regional Virology Conference, Atlanta, GA, 2004.
18. **Maginnis, M.S.**, Forrest, J.C., Santoro, S.A., Zutter, M.M., Nemerow, G.R., Bergelson, J.M., and Dermody, T.S. α 2 β 1 Integrin Mediates Reovirus Entry. 8th International Symposium on dsRNA Viruses, Lucca, Italy, 2003.

Honors and Awards

- 2019 American Society for Virology (ASV) Teacher of Undergraduate Students Travel Award
- The Bangor Savings Bank Faculty Development Fund and The Lyndon

- Paul LoRusso Memorial Faculty Development Fund Faculty Travel Award
- 2018 Graduate Mentor Award, Graduate Student Government, The University of Maine, Orono, ME
- 2016 John Neumann Alumni Award, Alumni Association, Neumann (College) University, Aston, PA
- 2013 Early Career Investigator Travel Fellowship
Progressive Multifocal Leukoencephalopathy Conference, New York Academy of Sciences, New York, NY
- 2008 Postdoctoral Fellow Travel Grant Award for Presentation, ASV 27th Annual Meeting, Cornell University, Ithaca, NY
- 2006 Dissertation Enhancement Grant, Graduate School, Vanderbilt University
- 2004 Student Travel Award, ASV 23rd Annual Meeting, McGill University, Montreal, Quebec, Canada
- Student Travel Grant Award for Presentation, Graduate School, Vanderbilt University, 8th Southeast Regional Virology Conference, Atlanta, GA
- 2003 Student Travel Grant Award for Presentation, Graduate School, Vanderbilt University, 8th International Symposium on dsRNA Viruses, Lucca, Italy
- Outstanding Poster Presentation, Vanderbilt Ingram Cancer Center Retreat, Vanderbilt University
- 2003 Travel Award for Presentation, 8th International Symposium on dsRNA Viruses, Lucca, Italy
- 2001 Camin Award for Excellence in Biology, Neumann College
- 1998 International Studies Association Scholarship
- 1998 - 2001 Neumann College Honors Program
- Ursula Herring Memorial Scholarship
- 1997 - 2001 National Dean's List
- Neumann College Merit Scholarship
- Neumann College Vice-President's List
- 1997 Ridley Township Business Association Scholarship

Professional Service

- 2020 Grant Reviewer for Rhode Island IDeA Network of Biomedical Research Excellence (RI-INBRE) Program
- 2019 ASV Education and Career Development Workshop Organizer and Convener: "I Don't Belong Here: Understanding the Role of Imposter Syndrome in Career Development," 38th Annual American Society for Virology (ASV) Conference. University of Minnesota, Minneapolis, MN.
- Session Chair, Gene Networks and Regulation/Data Science Workshop, 46th Annual Maine Biological and Medical Sciences Symposium. Mount Desert Island Biological Laboratory, Salisbury Cove, ME.
- American Society for Virology, Latin American Scholar Travel Award Reviewer
- 2018 - 2021 American Society for Virology Education and Career Development Committee
- 2018 Session Chair, Neuroscience, Physiology, & Immunology Workshop, 45th Annual MBMSS Conference
- 2017 Grant Reviewer for Instituto Pasteur Italia, Rome, Italy
- Session Chair, Virus Receptors and Entry I Workshop, 36th Annual American Society for Virology Conference, University of Wisconsin-Madison, Madison, WI.
- 2016 Session Chair, Virus Receptors and Entry I Workshop, 35th Annual American Society for Virology Conference, Virginia Tech, Blacksburg, VA.
- 2014 Session Chair, Small DNA Viruses Workshop, XVIth International Congress of Virology Conference. Montreal, Quebec, Canada.

Ad hoc Reviewer for Journals:

- *Critical Reviews in Microbiology*
- *Frontiers in Cellular and Infection Microbiology*
- *Frontiers in Microbiology (Virology)*
- *Journal of General Virology*
- *Journal of Virology*
- *Journal of Virological Methods*
- *PLoS ONE*
- *PLoS Pathogens*
- *Scientific Reports*
- *Viruses*

Professional Organizations

- 2018 World Society for Virology, Full Member

2015 - present	American Society for Microbiology
2009 - 2013	National Postdoctoral Association
2003 - present	American Society for Virology (Full Member since 2015)
2002 - 2007	Vanderbilt University Microbes and Defense Academic Society
1999	Delta Epsilon Sigma Honor Society

Professional Development

2019	Advancing Women in Academia: 8 th Annual Networking Conference, ADVANCE Rising Tide, Bangor, ME.
2018	Career Development Workshop: "The Importance of Critical Thinking in Research", Dr. Arturo Casadevall, 37 th Annual American Society for Virology Conference. University of Maryland, College Park, MD. Advancing Women in Academia: 7 th Annual Networking Conference, ADVANCE Rising Tide, Bangor, ME. Safe Zone Training, The University of Maine, Orono ME
2017	Advancing Women in Academia: 6 th Annual Networking Conference, ADVANCE Rising Tide, The University of Maine, Bangor, ME
2016	Mentoring Practices for Junior Faculty Workshop, 6 th Annual National IDeA Symposium of Biomedical Research Excellence Conference, Washington, D.C. Advancing Women in Academia: 5 th Annual Networking Conference, ADVANCE Rising Tide, The University of Maine, Bangor, ME
2015	New Research Investigator Orientation, Office of Research and Sponsored Programs, The University of Maine Women in Leadership Panel, Discussion on "Centered Leadership". The University of Maine Advancing Women in Academia: 4 th Annual Networking Conference, ADVANCE Rising Tide, The University of Maine, Bangor, ME Laboratory Management Workshop, Maine INBRE, University of Maine
2014	Advancing Women in Academia: 3 rd Annual Networking Conference, ADVANCE Rising Tide, The University of Maine, Bangor, ME SACNAS Inspiring Women in STEM, Brown University

2013 Best Practices for Careers in Academic Medicine and Science,
Professional Development Conference, Office of Women in Medicine and
Science, Brown University

2009 National Postdoctoral Association Conference, Houston, TX

Teaching Experience

The University of Maine, Orono, ME

2020 Course Instructor, Undergraduate Seminar in Microbiology (BMB580)

2017 - present Course Instructor, Undergraduate Virology (BMB455), redesigned and
taught an undergraduate-level course in human molecular virology and
viral pathogenesis focused on virologic concepts, methods, and scientific
communication

2016 - present Course Instructor, Genome Discovery I (BMB150), taught an inquiry-
based research-intensive laboratory for first-year undergraduates,
Sponsored by HHMI SEA-PHAGES

Course Instructor, Graduate Virology (BMB598), designed and executed
new graduate-level course in human molecular virology and viral
pathogenesis with a focus on critical discussion of peer-reviewed
literature

Guest Lecturer, Microbiology (BMB300)

Honors Research Advisor (HON498, HON499)

2015 - present Course Instructor, Graduate Seminar in Microbiology (BMB580)

2015 Curriculum development of inquiry-based laboratory course in Cell
Culture, Virology, and Immunology

Guest Lecturer, Virology (BMB455), 2 lectures

2014 - present Capstone Undergraduate Research Advisor (BMB491)

Graduate Thesis Research Advisor (BMB699)

Teaching Experience, Other Institutions

2013 Lecturer and Laboratory Preceptor
Viruses: Ancient Machines in a Modern World
Brown University Summer @ Brown Pre-College Program

2012 Lecturer, Virology
Salve Regina University, Newport, RI

Lecturer, Microbiology

- Assumption College, Worcester, MA
- 2009 Course Instructor, Infectious Diseases
Brown University Summer @ Brown Pre-College Program
- 2005 Course Director, Methodology
Vanderbilt University Interdisciplinary Graduate Program
- Discussion Leader, Virology Group
Vanderbilt University Interdisciplinary Graduate Program
- Workshop Instructor
Vanderbilt University Center for Teaching
- 2005 - 2006 Lecturer, Molecular Virology
Vanderbilt University
- 2004 - 2006 Lecturer, Methodology
Vanderbilt University Interdisciplinary Graduate Program
- 2004 - 2005 Laboratory Preceptor, Medical Microbiology and Immunology
Vanderbilt University Medical School
- 2002 - 2004 Instructor, AIDS Outreach Educational Program
Vanderbilt University
- 1998 Undergraduate Teaching Assistant, Ecology Laboratory
Neumann College

Teaching and Faculty Development

The University of Maine, Orono, ME

- 2018 Building Reflection into your Teaching Practice, Center for Innovation in Teaching and Learning
- Using Zoom in your Classroom, Center for Innovation in Teaching and Learning
- Seeing your Syllabus through your Students' Eyes: Shaping your Syllabus to Improve Student Performance and Engagement, Center for Innovation in Teaching and Learning
- 2017 G-Suite for Education Training, Center for Innovation in Teaching and Learning
- STEM University Classroom Observation Program, The University of Maine, The Maine Center for Research in STEM Education (RiSE Center)
- 2015 Faculty Development session, "Supporting In-class Group Work", The Maine Center for Research in STEM Education (RiSE Center)

- 2014 Faculty Development session, "Using Peer Discussion to Promote Student Participation", The Maine Center for Research in STEM Education (RiSE Center)
- Faculty Development session "Active Learning Strategies for Large Enrollment STEM Courses", The Maine Center for Research in STEM Education (RiSE Center)
- Blackboard for Beginners Workshop, Faculty Development Center

Other Teaching and Faculty Development

- 2019 Virology Teaching Workshop, "Effective Team Projects and Student Teams: Why, What, and How," 38th Annual American Society for Virology Conference. University of Minnesota, Minneapolis, MN.
- 2018 Virology Teaching Workshop, "A Learner-Centered Course Design to Enhance Significant Learning," 37th Annual American Society for Virology Conference. University of Maryland, College Park, MD.
- 2017 Virology Teaching Workshop, "Enhancing Learning in Virology Through Better Assessments," 36th Annual American Society for Virology Conference. University of Wisconsin-Madison, Madison, WI.
- 2016 Interdisciplinary STEM Undergraduate Research Curricula, 6th Annual National IDeA Symposium of Biomedical Research Excellence Conference, Washington, D.C.
- Virology Teaching Workshop, "Transforming How We Teach is Good but Transforming What We Expect Students to Learn is Better," 35th Annual American Society for Virology Conference. Virginia Tech, Blacksburg, VA.
- 2004 - 2006 Future Faculty Preparation Program (F2P2)
Vanderbilt University Center for Teaching, Nashville, TN

Laboratory Student Advisees

Current Graduate Students:

- 2015 - present Colleen Mayberry, M.S./Ph.D. student, Microbiology, Molecular and Biomedical Sciences
- 2016 - present Kashif Mehmood, Ph.D. student, Microbiology, Molecular and Biomedical Sciences, Fulbright Scholar
- Michael Wilzcek, Ph.D. student, Microbiology, Molecular and Biomedical Sciences
- 2018 - present Mason Crocker, M.S. student, Microbiology, Molecular and Biomedical Sciences

Previous Graduate Students:

2014 - 2019 Jeanne (Price) DuShane, Ph.D., Biochemistry, Molecular and Biomedical Sciences
Thesis defended: August 7, 2019, Current position: Xcerpta Medica
Outcomes: Graduate Research Excellence Award, College of Natural Sciences, Forestry and Agriculture and Outstanding Graduate Student Award, Department of Molecular and Biomedical Sciences

Current Undergraduate Research Students:

2020 - present Paige Giffault, UMaine Honors College, '21
Aiden Pike, UMaine, '24
Stephen Rezack, UMaine, '24

2019 - present Remi Geohegan, UMaine, '22
François Levasseur, UMaine, '20

2018 - present Tristan Fong, UMaine, '20

2017 - present Francesca Armstrong, UMaine, '20
Sarah Nichols, UMaine, '20

Previous Undergraduate Research Students:

2017 - 2018 Mason Crocker, UMaine, '18, *Current position: Master's in Microbiology Program, Molecular and Biomedical Sciences, UMaine*

2016 - 2017 Laura Horowitz, UMaine, '17, *Current position: Medical Student, University of New England College of Osteopathic Medicine (UNECOM)*

Will Petterson, UMaine, '20

2016 summer Trevor Lyford, Brown University, summer intern, *Current position: Medical scribe at a medical ophthalmology clinic in Norfolk, VA*

2015 - 2016 Tyler Lang, UMaine, '18, MBS, Microbiology major, *Current position: Medical Student, Tufts University School of Medicine*

2015 - 2017 Conner Lajoie, UMaine '17, Honors College, *Previous position: Broad Institute of MIT and Harvard, admitted to UNECOM (beginning Fall 2020)*

2014 - 2018 Ashley Soucy, UMaine '18, Honors College, Biochemistry major
Current position: GSBSE Ph.D. Program, The University of Maine

2014 - 2015 Adam Simard, UMaine '15, *Current position: Ph.D. program in Cellular and Molecular Biology at Dartmouth College*

2014 summer Kyle Holyoke, UMaine, Summer Work-study Program

Thesis Committees**Graduate Students:****Ph.D. Candidates:**

2014 - 2019	Erin Carter, GSBSE (Henry Laboratory)
2014 - 2019	Jeanne DuShane, MBS (Maginnis Laboratory), Advisor/Chair
2015	Linda Archambault, MBS (Wheeler Laboratory) (for qualifying exam only)
2015 - present	Colleen Mayberry, MBS (Maginnis Laboratory), Advisor/Chair
2015 - present	Kashif Mehmood, MBS (Maginnis Laboratory), Advisor/Chair
2015 - present	Michael Wilczek, MBS (Maginnis Laboratory), Advisor/Chair
2016 - present	Ethel Champaco, SBE (de los Reyes Laboratory)
2017 - present	Sarah Alrowaished, SBE (Henry Laboratory), Qualifying Exam Chair
2018 - present	Atefeh Rajaei, MBS (Neely Laboratory)
2018 - present	Bailey Blair, MBS (Wheeler Laboratory)
2019 - present	Siham Hattab, MBS (Wheeler Laboratory)
2019 - present	Sari Mayhue, MBS (Kelley Laboratory)
2019 - present	Brandy Soos, MBS (King Laboratory)
2019 - present	Prakash Raut, Physics (Hess Laboratory)
2020 - present	Matthew Parent, Physics (Hess Laboratory)

Master's Candidates:

2014 - 2016	Denise Jurczynszak, MBS (Kim Laboratory)
2014 - 2016	Tyler McGathey, MBS (Sher Laboratory)
2014 - 2016	Campbell Miller, MBS (Kim Laboratory), <i>graduated with MPS</i>
2014 - 2017	Jacob Longfellow, MBS (Kim Laboratory)
2017 - 2019	Sari Mayhue, MBS (Sullivan Laboratory)
2018 - present	Mason Crocker, MBS (Maginnis Laboratory), Advisor/Chair

Undergraduate Honors Students:**The University of Maine, Honors College:**

2019 - 2020	Alan Baez, MBS, (Gosse Laboratory)
2018 - 2019	Fazeel Hashmi, MBS (Neely Laboratory) Klarissa Klier, SBE (Neely Laboratory) Anna Struba, MBS (Neely Laboratory) Ben Tero, MBS (Neely laboratory)
2017 - 2018	Audrey Hoyle, MBS (Sullivan Laboratory) Taanial Kiidli, MBS (Neely Laboratory) Ashley Soucy, MBS (Maginnis Laboratory), Advisor/Chair
2016 - 2017	Conner Lajoie, MBS (Maginnis Laboratory), Advisor/Chair Erica Sewell, MBS (Hutchison Laboratory)
2015 - 2016	Campbell Belisle Haley, MBS (Molloy Laboratory) Elizabeth Pflugradt, MBS (Sher Lab) Spencer Traxler, COE (Kim Laboratory)

Outside Expert Examiner:

2015 Joshua Zimmer, Bates College, T. Glen Lawson Laboratory, *Evaluation of the ubiquitin-protein ligases UBE3A and DTX3L as mediators of EMCV 3C protease concentration.*

Top Scholars Mentor:

2017 - present Bailey West (MBS, Honors College)
2018 - present Jacob Cote (MBS)
2019 - present Marcus Ratz (MBS, Honors College)

Service

The University of Maine, Orono, ME

2020 - present College of NSFA, Committee on Diversity, Inclusion, and Equity

2020 - present Co-founder and member, WiSTEMM Parent Network

2020 Search Committee for Microscopy Laboratory Manager

2019 - present Institutional Biosafety Committee

2019 Presenter for NIH/NIGMS site visit, Maine INBRE grant, Mount Desert Island Biological Laboratory, Salisbury Cove, ME

Led tour and discussion for Research and Development, Workforce and Economic Development Tour for UMaine Board of Trustees, President of UMaine, and staff

Led tour and discussion for R&D Tour for newly-appointed Chancellor of the UMS, President and VPR of UMaine, and staff

Representative for Biomedical Sciences and GSBSE Graduate Program for Institute for Digital Engineering and Life Sciences (IDEALS) visit to UMaine

UMaine Medicine Seed Grant Review Panel, Grant Reviewer

Presenter for College of Natural Sciences, Forestry, and Agriculture Presidential Showcase, Biomedical Disease Investigations

2018 Natural Sciences, Forestry, and Agriculture Research Mission and Vision Statement Writing Committee (**Co-chair**)

Career Perspectives Panel Chair, WiSTEMM Days

2018 - present Churchill Scholarship Committee, Office of Major Scholarships

2017 - present Office of Major Scholarships Advisory Council

2017 - present Maine State Science Fair, Scholarship Selection Committee for UMaine STEM Top Scholars Program

2017 - present	WiSTEMM Oversight Committee
2016 - present	Student-Invited Speaker Committee, Faculty Advisor
2016 - 2018	Geddes Simpson Memorial Lecture Committee (Chair, 2018)
2016 - 2018	Hitchner Hall Shared Resource Committee
2016 - 2017	GSBSE 4 th Student Rotation Committee
2016	Committee for Life Sciences Building: Teaching Labs Working Group
2015 - 2019	UMaine Student Research Symposium Judge
2015 - 2019	GSBSE Annual Meeting Poster and Oral Presentation Judge
2014 - present	ADVANCE Rising Tide Annual Networking Conference Planning Committee, University of Maine
2014 - present	Frederick Radke Undergraduate Research Fellowship Committee
2014 - 2017	Honors College INBRE Fellowship Review Committee
2014 - 2016	MBS Graduate Admissions Committee
2014 - 2015	Undergraduate Program Assessment, Office of Assessment
2014 - 2015	MBS New Laboratory Course Design Committee
2014 - 2015	MBS Undergraduate Curriculum Change Committee

Other Institutions

2013	Panel member, "The Making of Scientist", Women in Science and Engineering (WISE), Brown University
2012 - 2013	Provost's Childcare Committee, Brown University
2008 - 2014	Graduate Student and Postdoc Parent Network, cofounder, Brown University
2007 - 2012	BioMed Postdoc Advisory Panel, Brown University

Outreach and Professional Service to the Community

2020	Co-led, UMaine COVID-19 Science and Medicine Task Force to communicate COVID-19 updates to Bangor Public Health
	Podcast Presenter on COVID-19 and Virus Research, The Maine Question

- 2019 Invited Presenter, Maine Science Festival, "Viruses and Bacteria, Oh My!", Pop-up Event, Science on Tap Hits the Road, Lewiston Maine
- Video-conferenced with two AP Biology classes at Chuckey-Doak High School in Tusculum, TN
- 2018 Presenter for Maine Bioscience Day 2018, visited James F. Doughty middle school and presented to two middle school classes
- 2018 Participated in Skype a Scientist Program with two 10th Grade AP Biology classes at Chuckey-Doak High School in Tusculum, TN
- Maine Career Connect Workforce Development, Connector
- 2017 Mentor for two Upward Bound High School Summer Research Students, Upward Bound Math/Science Program, The University of Maine
- Visited Old Town High School and presented to high school students in the STEM Leaders Diploma Program
- 2016 Maine Career Connect Workforce Development Summit Panel Presenter
- 2015 Hosted Maine School of Science and Mathematics High School students for tour of laboratory
- Lead and organized a department-wide partnership with Leonard Middle School (Old Town) 6th grade class for a lab tour of 90 people in 4 labs in Hitchner Hall, UMaine