

PATRICIA MOWERY

Department of Biology
Hobart and William Smith Colleges
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PROFESSIONAL EXPERIENCE

Professor. Biology Department. Hobart and William Smith Colleges.	2020-present
Associate Professor. Biology Department. Hobart and William Smith Colleges.	2014-2020
Assistant Professor. Biology Department. Hobart and William Smith Colleges.	2007-2014
Postdoctoral Fellow. Biology Department. University of Utah. Advisor: Prof. J.S. Parkinson.	2003-2007

EDUCATION

Ph.D., Biochemistry, University of Wisconsin-Madison. Advisor: Prof. Laura L. Kiessling.	2003
B.S., Biochemistry, Indiana University.	1997
M.A., Sociology, Yale University.	1991
A.B., Sociology, University of Chicago.	1989

TEACHING

Hobart and William Smith Colleges.

- Nutrition (Biol160)
 - Introductory Biology: HIV and related topics (Biol167)
 - Introductory Biology: What does it mean to be human? (Biol167)
 - Microbiology (Biol222)
 - Immunology (Biol302)
 - Biology Senior Seminar: Viruses (Biol460)
 - Biochemistry Senior Seminar: Viruses (Bche460)
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PUBLICATIONS

- *Hurysz B, *Evans BA, *Laryea RN, *Boyer BE, *Coburn TE, *Dexter MS, *Edwards MA, *Faulkner GV, *Huss RL, *Lafferty MM, *Manning M, *McNulty M, *Melvin SJ, *Mitrow CM, *Patel RR, *Pierce K, *Russo J, *Seminer AM, *Sokkett KA, *Webster NR, Cole KE, Mowery P, Pelkey ET. 2023. Synthesis, Modeling, and Biological Evaluation of Anti-Tubulin Indole-Substituted Furanones. *Bioorg. Med. Chem. Lett.* 90: 129347.
- **Mowery P**, *Filkorn MM, *Hurysz B, *Kwansare DO, *Lafferty MM, *McFadden MA, *Neerukonda ND, *Patel RR, *Pierce K, *Sokkett KA, *Truax NJ, *Webster NR, Pelkey ET. 2021. Discovery of an Indole-Substituted Furanone with Tubulin Polymerization Inhibition Activity. *Bioorg. Med. Chem. Lett.* 41: 127991.
- Hao L, Johnson K, Cursino L, **Mowery P**, Burr TJ. 2017. Characterization of the *Xylella fastidiosa* PD1311 gene mutant and its suppression of Pierce's disease on grapevines. *Mol. Plant Path.* 18: 684-694.
- Hao L, Athinuwat D, Johnson K, Cursino L, Burr TJ, **Mowery P**. 2017. *Xylella fastidiosa* pil-chp operon is involved in regulating key structural genes of both type I and IV pili. *Vitis*. 56: 55-62.
- **Mowery P**, *Banales Mejia F, *Franceschi CL, *Kean MH, *Kwansare DO, *Lafferty MM, *Neerukonda ND, *Rolph CE, *Truax NJ, Pelkey ET. 2017. Synthesis and evaluation of the anti-proliferative activity of diaryl-3-pyrrolin-2-ones and fused analogs. *Bioorg. Med. Chem. Lett.* 27: 191-195.

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- Hao L, Zaini PA, Hoch HC, Burr TJ, **Mowery P**. 2016. Grape cultivar and sap culture conditions affect the development of *Xylella fastidiosa* phenotypes associated with Pierce's disease. *PlosOne*. 11(8): e0160978.
- **Mowery P**, Ames P, Reiser RH, Parkinson JS. 2015. Chemotactic signaling by single-chain chemoreceptors. *PlosOne*. 10:e0145267.
- Johnson KL, Cursino L, Athinuwat D, Burr TJ, **Mowery P**. 2015. Potential complications when developing gene deletion clones in *Xylella fastidiosa*. *BMC Res. Notes*. 8: 155.
- Cursino L, Athinuwat D, *Patel K, Galvani CD, Zaini PA, Li Y, De La Fuente L, Hoch HC, Burr TJ, **Mowery P**. 2015. Characterization of the *Xylella fastidiosa* PD1671 gene encoding degenerate c-di-GMP GGDEF/EAL domains, and its role in the development of Pierce's disease. *Plos One*. 10: e0121851.
- Cursino L, Galvani CD, Athinuwat D, Zaini PA, Li Y, De La Fuente L, Hoch HC, Burr TJ, **Mowery P**. 2011. Identification of an operon, Pil-Chp, that controls twitching motility and virulence in *Xylella fastidiosa*. *Mol. Plant Microbe Interact*. 24: 1198-1206.
- **Mowery P**, *Ostler JB, Parkinson JS. 2008. Different signaling roles of two conserved residues in the cytoplasmic hairpin tip of Tsr, the *Escherichia coli* serine chemoreceptor. *J. Bacteriol*. 190: 8065-8074.
- Carlson CB, **Mowery P**, Owen RM, Dykhuizen EC, Kiessling LL. 2007. Selective tumor cell targeting using low-affinity multivalent interactions. *ACS Chemical Biology* 2: A-I.
- Owen RM, Carlson CB, Xu J, **Mowery P**, Fasella E, Kiessling LL. 2007. Bifunctional ligands that target cells displaying the $\alpha_v\beta_3$ integrin. *ChemBioChem* 8: 68-82.
- **Mowery P**, Yang ZQ, Gordon EJ, Dwir O, Spencer AG, Alon R, Kiessling L. 2004. Synthetic glycoprotein mimics inhibit L-selectin-mediated rolling and promote L-selectin shedding. *Chem. Biol*. 11: 725-732.
- Warren, RF, Henk A, ***Mowery P**, Holub E, Innes RW. 1998. A mutation within the leucine-rich repeat domain of the Arabidopsis disease resistance gene *RPS5* partially suppresses multiple bacterial and downy mildew resistance genes. *Plant Cell* 10: 1439-1452.

*Undergraduate author

EXTERNAL GRANTS

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|---|-----------|-----------|
| • NIH R15 #1R15CA274493-01A1
“Multidisciplinary Investigation of Antitubulin Heterocycles using Synthesis, Biology, and Structural Analysis ” | \$386,781 | 2024-2027 |
| • USDA CDFA Pierce’s Disease Program #15-0138-SA
“Development of a Biological Control for Pierce’s Disease” | \$160,332 | 2015-2017 |
| • USDA CDFA Pierce’s Disease Program #13-0096-SA
“Development of a Biological Control for Pierce’s Disease” | \$124,738 | 2013-2015 |
| • NSF-TUES #1044396
“Transforming Cell Biology and Organic Chemistry through Incorporation of the HDACi Cancer Therapeutic Laboratory Project” | \$180,000 | 2011-2014 |
| • USDA NIFA Pierce’s Disease Program #2010-287
“Exploiting a chemosensory signal transduction system that controls twitching motility and virulence in <i>Xylella fastidiosa</i> ” | \$242,990 | 2010-2012 |
| • USDA/CREES Pierce’s Disease Program SA7465
“Exploiting a Chemosensory Signal Transduction System that Controls Twitching Motility and Virulence in <i>Xylella fastidiosa</i> ” | \$109,970 | 2008-2010 |

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PRESENTATIONS

- Ithaca College. Department of Biology. Ithaca, NY. 2022. Invited Presentation.
- American Society for Biochemistry and Molecular Biology (ASBMB). Philadelphia, PA. 2022. Poster.
- American Society for Biochemistry and Molecular Biology (ASBMB). Orlando, FL. 2019. Poster.
- Keuka College. Department of Natural Sciences and Mathematics. Keuka, NY. 2017. Invited Presentation.
- American Society for Biochemistry and Molecular Biology (ASBMB). Chicago, IL. 2017. Poster.
- American Society of Phytopathology (APS). Pasadena, CA. 2015. Presentation.
- PKAL Upstate New York Regional meeting. Fredonia, NY. 2015. Poster.
- American Society of Phytopathology (APS). Pasadena, CA. 2015. Poster.
- American Society for Biochemistry and Molecular Biology (ASBMB). Boston, MA. 2015. Poster.
- Bacterial Locomotion and Signal Transduction (BLAST). Tuscon, AZ. 2015. Poster.
- Ithaca College. Department of Biology. Ithaca, NY. 2013. Invited Presentation.
- Pierce's Disease Research Symposium. Sacramento, CA. 2013. Poster.
- American Society of Phytopathology-Mycological Society of America (APS-MSA). Austin, TX. 2013. Poster.
- Receptor Fest Meeting. Salt Lake City, UT. 2011. Presentation.
- Cornell University. Ithaca, NY. 2011. Invited Presentation.
- American Society for Enology and Viticulture. Geneva, NY. 2010. Presentation.
- New York State Agricultural Experiment Station. Geneva, NY. 2010. Invited Presentation.
- Receptor Fest Meeting. Boulder, CO. 2009. Presentation.
- Pierce's Disease Research Symposium. Sacramento, CA. 2009. Poster.
- Receptor Fest Meeting. Salt Lake City, UT. 2008. Presentation.
- Sensory Transduction in Microorganisms. Gordon Conference. Ventura, CA. 2008. Poster.
- New York State Agricultural Experiment Station. Geneva, NY. 2007. Invited Presentation.
- Cornell University. Ithaca, NY. 2007. Invited Presentation.

STUDENT ACCOMPLISHMENTS

- Marcella Venettozzi and Delaney Williams. HWS Biology Department Student Presentation Session. Poster. Spring 2024.
- Maegan Manning. HWS Biology Department Student Presentation Session. Poster. Spring 2022.
- Matthew McNulty. HWS Biology Department Student Presentation Session. Poster. Spring 2022.
- Maegan Manning. American Society for Biochemistry and Molecular Biology (ASBMB), Philadelphia, PA. Poster. Spring 2022.
- Matthew McNulty. American Society for Biochemistry and Molecular Biology (ASBMB), Philadelphia, PA. Poster. Spring 2022.
- Matthew McNulty. American Society for Biochemistry and Molecular Biology (ASBMB), Philadelphia, PA. Poster. Spring 2022.
- Molly Dexter. HWS Summer Student Poster Session. Poster. Fall 2021.
- Maegan Manning. HWS Summer Student Poster Session. Poster. Fall 2021.
- Matthew McNulty. HWS Summer Student Poster Session. Poster. Fall 2021.
- Mackenzie Howie. HWS Biology Department Student Presentation Session. Presentation. Spring 2021.
- Brianna Hurysz. HWS honors. 2020.
- Brianna Hurysz. HWS Biology Department Student Presentation & Poster Session. Presentation. Spring 2020.
- Brianna Hurysz. American Society for Biochemistry and Molecular Biology (ASBMB), Orlando, Fl. Poster. Spring 2019.

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- Kelsey Pierce. HWS Summer Student Poster Session. Poster. Fall 2019.
- Andrew Herman. HWS Biology Department Student Presentation & Poster Session. Poster. Fall 2018.
- Andrew Herman. HWS Summer Student Poster Session. Poster. Fall 2018.
- Alvin Randal. HWS Biology Department Student Presentation & Poster Session. Poster. Spring 2018.
- Brianna Hurysz. HWS Biology Department Student Presentation & Poster Session. Poster. Spring 2018.
- Megan Lafferty. HWS Biology Department Student Presentation & Poster Session. Poster. Fall 2017.
- Jerlin Garo. HWS Biology Department Student Presentation & Poster Session. Poster. Fall 2017.
- Megan Lafferty. HWS Summer Student Poster Session. Poster. Fall 2017.
- Namita Neerukonda. HWS Biology Department Student Presentation & Poster Session. Presentation. Spring 2017.
- Dignarius Garcia. HWS Biology Department Student Presentation & Poster Session. Poster. Spring 2017.
- Namita Neerukonda. HWS honors. 2017.
- Namita Neerukonda. American Society for Biochemistry and Molecular Biology (ASBMB), Chicago, IL. Poster. Spring 2017.
- Namita Neerukonda and Caraly E. Rolph. Co-authors on Mowery et al. *Bioorg. Med. Chem. Lett.* 2017. 27: 191-195.
- Namita Neerukonda. HWS Biology Department Student Presentation & Poster Session. Presentation. Fall 2016.
- Namita Neerukonda. HWS Summer Student Poster Session. Poster. Fall 2016.
- Namita Neerukonda. Summer Organic Research Symposium (SmORS). Geneva, NY. Presentation. Summer 2016.
- Namita Neerukonda. HWS Summer Student Poster Session. Poster. Spring 2016.
- Fatima Saravia. HWS Summer Student Poster Session. Poster. Fall 2015.
- Stephanie L. Cramer. HWS honors. Fall 2015.
- Carly E. Rolph. HWS honors. 2015.
- Kaitley Wozer. HWS honors. 2015.
- Stephanie L. Cramer. Bacterial Locomotion and Signal Transduction (BLAST). Tuscon, AZ. Poster. Spring 2015.
- Stephanie L. Cramer. HWS Biology Department Student Presentation & Poster Session. Poster. Spring 2015.
- Carly E. Rolph. HWS Senior Symposium. Presentation. Spring 2015.
- Carly Rolph. HWS Biology Department Student Presentation & Poster Session. Poster. Spring 2015.
- Carly Rolph. American Society for Biochemistry and Molecular Biology (ASBMB), Boston, MA. Poster. Spring 2015.
- Steffi Cramer. HWS Biology Department Student Presentation & Poster Session. Presentation. Fall 2014.
- Carly E. Rolph. HWS Biology Department Student Presentation & Poster Session. Presentation. Fall 2014.
- Carly E. Rolph. New York Six Liberal Arts Consortium Upstate New York Undergraduate Research Conference, Geneva, NY. Poster. Spring 2014.
- Carly E. Rolph. HWS Biology Department Student Presentation & Poster Session. Poster. Spring 2014.
- Wendi Bacon. HWS honors. Spring 2012.
- Wendi Bacon. HWS Senior Symposium. Presentation. Spring 2012.
- Ranada DeGannaro. HWS Biology Department Student Presentation & Poster Session. Poster. Fall 2012.
- Ranada DeGannaro. HWS Summer Student Poster Session. Poster. Fall 2012.
- Kaitley Wozer. HWS Biology Department Student Presentation & Poster Session. Poster. Fall 2012.
- Kaitley Wozer. HWS Summer Student Poster Session. Poster. Fall 2012.
- Ranada DeGannaro. Cornell University / New York State Agricultural Experimental Station Summer Research Poster Session. Geneva, NY. Poster. Summer 2012.
- Amanda Schenk. HWS Biology Department Student Presentation & Poster Session. Poster. Spring 2012.
- Amanda Schenk. Pierce's Disease Research Symposium, Sacramento, CA. Poster. Spring 2011.
- Lis Losito. HWS honors. Spring 2010.

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- Lis Losito. HWS Senior Symposium. Presentation. Spring 2010.
 - Lis Losito. HWS Biology Department Student Presentation & Poster Session. Presentation. Spring 2010.
 - Lis Losito. Cornell University / New York State Agricultural Experimental Station Summer Research Poster Session. Geneva, NY. Poster. Summer 2010.
 - Lis Losito. Pierce's Disease Research Symposium, Sacramento, CA, Poster. Spring 2009.
 - Heather Nihart. HWS Biology Department Student Presentation & Poster Session. Presentation. Spring 2009.
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HONORS AND AWARDS

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|--|-----------|
| • Adjunct Faculty and Field Member. SIPS Plant Pathology and Plant-Microbe Biology Department, Cornell University | 2011-2024 |
| • National Institute of Health Ruth L. Kirschstein Postdoctoral Research Fellowship Grant | 2004-2007 |
| • National Institute of Health Molecular Biosciences Graduate Student Training Grant, University of Wisconsin, Madison | 1997-2000 |
| • Biology Undergraduate Initiative Summer Research Internship Grant, Indiana University | 1996 |
| • Chemistry Department Merck Index Award, Indiana University | 1996 |
| • Undergraduate Research and Creative Activity Partnership Scholarship, Indiana University | 1995 |
| • R.J. Grim Chemistry Scholarship, Indiana University | 1995 |
| • Departmental Scholarship, Yale University | 1989-1991 |
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SELECTED SERVICE ACTIVITIES

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|---|--------------------------|
| • HWS Committee on the Faculty (COFAC). Member. | 2008- 2009, 2024-present |
| • HWS Biochemistry Program. Member. | 2007-present |
| • HWS liaison to the Cornell AgriTech/USDA. | 2011-2024 |
| • HWS Biochemistry Program. Co-chair. | 2017-2024 |
| • HWS Public Health Program. Co-created. | 2022-2023 |
| • HWS Biology Department. Chair. | 2018-2021 |
| • HWS Institutional Biosafety Committee. Chair. | 2012-2021 |
| • HWS Grievance Committee. Chair. | 2018 |
| • Reviewer NIFA and NSF grant panels. | 2015, 2016 |
| • HWS Grievance Committee. Member. | 2013, 2016 |
| • HWS Faculty Grants Committee. Member | 2008- 2009 |