

Holly Ahern

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Education

MASTER OF SCIENCE | AUGUST 1994 | UNIVERSITY AT ALBANY, ALBANY NY

- Major: Molecular Biology
- Thesis Research: Structure and function of the *Escherichia coli* DNA repair enzyme endonuclease III

BACHELOR OF SCIENCE | MAY 1980 | UNIVERSITY AT ALBANY, ALBANY, NY

- Major: Medical Technology
- Related coursework: Biology, Chemistry, and Clinical Laboratory courses (Hematology and Serology, Clinical Chemistry, Clinical Microbiology)

Experience

PROFESSOR EMERITA | SUNY ADIRONDACK |

JANUARY 2026 TO PRESENT

- Teach courses in Microbiology and Human Anatomy and Physiology on an adjunct basis.
- Serve on college committees and other college service as needed.

ASSOCIATE PROFESSOR, TENURE-TRACK | SUNY ADIRONDACK |

SEPTEMBER 1994 TO SEPTEMBER 2025

- Teaching load included Microbiology lecture/laboratory (in person and online), Human Anatomy and Physiology laboratory, and Forensic Science lecture and laboratory. Previous courses taught include Biology, Genetics, and Molecular Biology lecture/laboratory courses.
- Designed and developed curricular materials including a course YouTube channel for Microbiology lecture/laboratory course offered in the online asynchronous modality.
- Authored and published the first Microbiology laboratory textbook available online as an OER.
- Directed an ongoing, externally funded program of research involving student researchers that focuses on detection of non-point source (NPS) pollution in small Adirondack lakes.

SUPERVISOR AND INSTRUCTOR OF UNDERGRADUATE LABORATORIES | UNIVERSITY AT ALBANY | SEPTEMBER 1984 TO AUGUST 1994

- Developed and instructed laboratory courses in Bacteriology, Immunology, Molecular Biology and Cell Biology.
- Authored nationally-published laboratory textbooks on cell biology and molecular biology, and test banks to accompany courses in Biology and Genetics
- Ordered and maintained laboratory supplies and equipment.
- Supervised graduate student TAs and mentored undergraduate research students

MEDICAL TECHNOLOGIST | HISTOCOMPATIBILITY LAB | ALBANY MEDICAL CENTER | SEPTEMBER 1982 TO AUGUST 1984

- Performed serological and other blood and tissue testing procedures on potential kidney transplant recipients and donors.

MEDICAL TECHNOLOGIST | GENERALIST | ST. MARY'S HOSPITAL | AUGUST 1980 TO AUGUST 1982

- Performed general laboratory tests in the areas of hematology and clinical chemistry.

Professional Profile

PROFESSIONAL ORGANIZATION MEMBERSHIPS

- American Society for Microbiology (ASM)
- American Society of Clinical Pathology (ASCP Board Certification in Medical Technology)
- Association of Diagnostic and Laboratory Medicine (ADLM)

AWARDS

- Distinguished Abstract Award, Academy of Diagnostics and Laboratory Medicine (ADLM), 2025
- SUNY Online Ambassador, SUNY Online 2025
- Glens Falls Rotary Citizen of the Year, 2018
- Excellence in Science Award, Focus on Lyme, 2016
- Biology Scholars Fellowship, American Society for Microbiology/NSF, 2012, 2010
- Walker Research Fellowship, 2006
- SUNY Chancellor's Award for Excellence in Scholarship, 2004
- SUNY Adirondack President's Award for Excellence in Teaching, 2000

COLLEGE SERVICE

- Co-Chair, Academic Master Plan Steering Committee 2021-2023
- Faculty Co-Chair, MSCHE Self-Study and Reaccreditation Steering Committee, 2017-2020
- Workshop Leader, Let's Go STEM Program, "Biology Meets Chemistry" attended by middle school girls as an introduction to biological sciences. This program is organized by the Adirondack Branch of the American Association of University Women (AAUW). May 2016 to present
- Vice-chair, College Assembly, 2014-2018
- Chair, College Assembly 1998-2000

EXTERNAL PROFESSIONAL SERVICE

- Chief Scientific Officer and co-founder, Aces Diagnostics, a start-up company created to develop, gain regulatory approval, and commercialize LymeSeek, a clinically accurate diagnostic test for Lyme disease. March 2024.
- Invited participant to the Public Engagement Roundtable on the Vector-Borne Disease National Strategy, U.S. Department of Health and Human Services Hubert H. Humphrey Building, Washington DC. This roundtable connected members of the public health, research, and patient communities to help shape the future of VBD National Strategy through shared priorities. May 2024
<https://www.cdc.gov/ncezid/dvbd/framework.html>
- Judge, LymeX Diagnostic Prize Competition. The LymeX Diagnostic Prize is a multiphase competition established to accelerate the development of diagnostics for Lyme disease by the LymeX Innovation Accelerator (LymeX), a public-private partnership between the U.S. Department of Health and Human Services (HHS) and the Steven & Alexandra Cohen Foundation. 2022 to present <https://www.lymexdiagnosticsprize.com/judging/>
- U.S. Department of Health and Human Services Tick-borne Disease Working Group (TBDWG). Appointed in 2018 to serve on the Diagnostics and Testing Subcommittee, and in 2022 to the Subcommittee on Patient Access to Care. Subcommittee reports and the final Reports to Congress are available at: <https://www.hhs.gov/ash/advisory-committees/tickbornedisease/reports/index.html>

- New York State Lyme and Tickborne Diseases Working Group, convened to review current best practices for the diagnosis, treatment and prevention of Lyme and tick-borne diseases in New York State and provide recommendations to improve health equity for Lyme disease patients and promote collaborations among state government agencies. 2018, 2023
- Banbury Conference on Perinatal Lyme Disease, Diagnostics Subcommittee Chair, Cold Spring Harbor, NY, June 2022
- Consumer (Peer) Reviewer for the US Department of Defense Congressionally-Directed Medical Research Program (CDMRP) for Tick-Borne Disease Research Program (2018 and 2019).
- Co-founder and Vice President, Lyme Action Network, a NYS 501-c-3 with a mission to increased public awareness of Lyme and other tick-borne diseases, and advocate for health equity for Lyme disease patients. 2012 to present
- Scientific Advisor, Focus on Lyme Foundation, an Arizona 501-c-3. Oversee research to develop and commercialize a clinically accurate diagnostic test for Lyme disease. 2016 to present.

PUBLICATIONS

- Faber S, Mao C, Darling E, Ahern H, Brissette C, Gardner TD, Weis JJ, Bergström S, Breitschwerdt EB, Coyne CB, Fallon BA, Goodreau H, Lambert JS, Lloyd V, Luchini A, Mulkey SB, Nagel K, Nemser B, Rudenko N, Shan J, Tal MC and Embers ME (2026) Perinatal transmission of *Borrelia burgdorferi*: advancing scientific and clinical understanding of Lyme disease in pregnancy. *Front. Med.* 13:1794120. doi: 10.3389/fmed.2026.1794120
- Ahern H, Aucott J, Stafford P, Embers M (Oct 2025) A-256 Multiplexed serologic test with advanced machine learning classifier for single-tier diagnosis of Lyme disease, *Clinical Chemistry*, Volume 71, Issue Supplement_1, hvaf086.245. <https://doi.org/10.1093/clinchem/hvaf086.245>
- Ahern, H. (2022). Confronting mid-career faculty challenges in community colleges. *New Directions for Higher Education*, 1–8. <https://doi.org/10.1002/he.20404>
- Ahern, H. (2018) *Microbiology, A Laboratory Experience*. Open SUNY Textbooks, Creative Commons License Attribution-Non-Commercial-ShareAlike CC BY-NC-SA. <https://milnepublishing.geneseo.edu/suny-microbiology-lab/>
- Ahern, H. (2013) Comparison of Lyme disease prevalence and disease reporting in an endemic area. *Journal of Microbiology Research*, 3(6): 261-265.
- Browne, M., Foley, S., Babck, N., Olshefsky, S., Holland, A., and Ahern, H. Non-thermal inhibition of antibiotic resistant bacteria by oscillating, pulsed electric fields (OPEF). Poster session presented at: 113th General Meeting, American Society for Microbiology. 2013, May 19-23, 2013.
- Ahern, H. Prevalence of Lyme Disease in an Endemic Area. Poster session presented at: 111th General Meeting, American Society for Microbiology. 2011, May 21-24, New Orleans, LA.
- Ahern, H. (2010) Rethinking the prerequisite paradigm. *Microbiology Australia*, March, 17-19.
- Ahern, H. and Holzworth, C. (2006) A Case Study: Small Lake Model Sampling Program to Test for Failing Septic Systems. In *Detecting Failing Septic Systems on Your Lake: A Cost-Effective Methodology*. Warren County Soil and Water Conservation District, Warrensburg, NY.
- Ahern, H. and Schwab, M. (2001) Environmental Assessment of Cossayuna Lake. In *Cossayuna Lake Watershed Plan*. Washington County Soil and Water Conservation District, Greenwich, NY.
- Ahern, H. *Principles of Biology Laboratory Manual*. SUNY Adirondack, Queensbury, NY (ed. 2004; 2010; 2014; 2016; 2020)
- Ahern, H. *Instructor's Manual and electronic Test Bank to accompany iGenetics*, by P. Russell. Addison, Wesley, Longman, CA (2001).

- Ahern, H. Instructor's Manual and Test Bank to accompany Human Genetics, by R. Lewis. Wm. C. Brown Publishers. Dubuque, IA (1993; 1996).
- Ahern, H. Introduction to Experimental Molecular Biology. Wm. C. Brown Publishers. Dubuque, IA (1991).
- Ahern, H. Introduction to Experimental Cell Biology. Wm. C. Brown Publishers. Dubuque, IA (1991).
- Thayer, M.M., H. Ahern, D. Xing, R.P. Cunningham, and J.A. Tainer (1995) Novel DNA binding motif in the DNA repair enzyme endonuclease III crystal structure. *The EMBO Journal* 14:4108-4120.
- Cunningham, R.P., H. Ahern, D. Xing, M. Thayer, J.A. Tainer. (1994) Structure and function of *Escherichia coli* endonuclease III. *Annals of the New York Academy of Sciences*.
- Ahern, H. and Cunningham, R.P. (1994) Genetic Regulation of Antioxidant Defenses in *Escherichia coli* and *Salmonella typhimurium*. In *Oxidative Stress and Antioxidant Defenses in Biology*. Ahmad, S.(ed), Chapman and Hall, NY.
- Cunningham, RP, and Ahern, H (1994) Antioxidant Defenses of *Escherichia coli* and *Salmonella typhimurium*. In *Oxidative Stress and Antioxidant Defenses in Biology*. Ahmad, S.(ed), Chapman and Hall, NY.
- Harrison, L., M. Skorvaga, A.J. Watson, H. Ahern, R.P. Cunningham, J.H. Hendry, and G.P. Margison (1990) Transfection and expression of the *E. coli* nth gene in mammalian cells and its effect on radiosensitivity. *Journal of Cellular Biochemistry*, 14A:66.