

AMANDA J. MORRIS

Curriculum Vitae

Work Address: University of Texas Health Science Center at Tyler,
Biomedical Research Building
11937 U.S. Hwy. 271, Tyler, Texas, 75708
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amanda.morris@torontomu.ca

EDUCATION

2014 - 2019 **Ph.D.** Environmental Applied Science, Microbiology
Toronto Metropolitan University, Toronto, ON

2013 - 2014 **M.E.S.** Master of Environmental Sciences
University of Guelph, School of Environmental Sciences, Guelph, ON

2008 - 2012 **B.S.** Biology
Syracuse University, Department of Biology, Syracuse, NY

TRAINING

2019 - 2021 Postdoctoral Research Fellowship, Translational Medicine Department, The
Hospital for Sick Children, Toronto, ON

RESEARCH EXPERIENCE

University of Texas Health Science Center at Tyler

11937 U.S. Hwy. 271, Tyler, TX 75708

09.2025 - present **Assistant Professor** | Department of Cellular and Molecular Biology

Summary: Principal Investigator leading a research program focused on the role of bacterial biofilms in chronic respiratory infections caused by *Pseudomonas aeruginosa*, *Staphylococcus aureus*, and nontuberculous mycobacteria. Research integrates microbial pathogenesis, biofilm biology, and environmental microbiology to investigate mechanisms of infection persistence, host-pathogen interactions, and environmental reservoirs contributing to respiratory disease. Oversees all aspects of laboratory operations, including personnel, project management, and compliance with BSL-2 and BSL-3 biosafety protocols and institutional safety standards.

The Hospital for Sick Children

555 University Ave., Toronto, ON M5B 1X8

09.2026

Amanda J. Morris

1

03.2021 - 09.2025

Research Associate | Translational Medicine Department

Summary: Continued responsibilities from postdoctoral fellowship, focusing on *in vitro* and *ex vivo* biofilm-associated pulmonary infections in cystic fibrosis. Contributed to study design and protocol development, prepared grant applications, train and supervise students, fellows and research scholars, and established project goals and timelines.

05.2019 - 03.2021

Postdoctoral Research Fellow | Translational Medicine Department

Summary: Conducted *in vitro* antimicrobial susceptibility testing of cystic fibrosis biofilm-forming pathogens and evaluated treatment-induced changes in biofilm structure and spatial organization using microscopy and image analysis platforms. Processed and cryopreserved clinical specimens, including sputum, blood, and bacterial isolates. Collaborated with industry partners through regular teleconferences and participated in weekly Infectious Disease clinical rounds. Managed laboratory operations, including inventory control, procurement, equipment calibration, safety compliance inspections, training and supervision of students, trainees and staff, and maintenance of confidential patient data records. Maintained compliance with BSL 2 and 3 protocols and laboratory safety standards.

Toronto Metropolitan University

350 Victoria St., Toronto, ON M5B 2K3

09.2014 - 10.2015

Research Assistant, Environmental Microbiology | School of Occupational and Public Health

Summary: Analyzed archived membrane-filtered water samples using molecular techniques to identify parasitic and bacterial species and genotypes. Performed microbial source tracking using fecal indicator bacteria to assess water quality. Prepared technical reports summarizing analytical findings. Maintained compliance with BSL 2 protocols and laboratory safety standards.

Innovotech Inc.

2011 94 St. NW, Edmonton, AB T6N 1H1

09.2012 - 08.2013

Microbiologist I. | Research and Development Department

Summary: Measured the antimicrobial activity of pathogenic biofilms in medical devices, including catheters, contact lenses, and bandages. Prepared laboratory reports and operated under strict Standard Operating Procedures (SOPs). Performed routine calibration of laboratory equipment and maintained compliance with BSL Level 2 protocols and laboratory safety standards.

09.2026

Amanda J. Morris

2

HONOURS AND AWARDS

2022 - 2025	Research Fellowship Award (w/ 1-year extension), Cystic Fibrosis Canada
2022 - 2024	Fusion Gala Fellowship Award, Cystic Fibrosis Canada
2023	North American Cystic Fibrosis Conference Honorarium, Workshop Session Chair
2022	Conference on Biofilms Travel Grant, American Society for Microbiology
2019	Doctoral Completion Award, Toronto Metropolitan University
2018	International Conference and Research Support Award, Toronto Metropolitan University
2016, 2017	Graduate Development Award, Toronto Metropolitan University
2016	Ontario Graduate Scholarship (OGS), Toronto Metropolitan University
2016	Faculty of Science Graduate Student Travel Grant, Toronto Metropolitan University
2016, 2017	Students' Union Travel Grant, Toronto Metropolitan University
2015	Lake Ontario Waterkeeper Award, Toronto Metropolitan University
2008 - 2012	Syracuse University Women's Varsity Soccer Scholarship

PUBLICATIONS

Manuscripts

1. **Morris A.J.**, Eisha S., Yau Y.C., Goel S., Shaw M., DePas W.H., Martin I., Selvarajah A., Gaudet M., Tullis E., Nguyen D. Persistence of large *P. aeruginosa* aggregates despite reduced airway burden in people with cystic fibrosis on CFTR modulator therapy. *Journal of Cystic Fibrosis*.
<https://doi.org/10.1016/j.jcf.2026.06.012>
2. **Morris A.J.**, Eisha S., Yau Y.C., DePas W.H., Fabiano G., Aberdein S., Faisal L., Martin I., Selvarajah A., Gaudet M., Tullis E., Nguyen, D. & Waters, V. (2026). The effect of *Staphylococcus aureus* on the persistence of *Pseudomonas aeruginosa* due to aggregation in cystic fibrosis airway infections. *iScience*.17;29(7). <https://doi.org/10.1016/j.isci.2026.116016>
3. Martin, I., Chung, J., Ruju, D., Yau, Y., **Morris, A.J.**, Eisha, S., Howell, P.L., & Waters, V.J. (2026). Glycoside hydrolases enhance antibiotic activity against *Pseudomonas aeruginosa* biofilms from cystic fibrosis airways. *Microbiology Spectrum*, 0:e01354-25. <https://doi.org/10.1128/spectrum.01354-25>
4. **Morris, A.J.**, Yau, Y.C.W., DePas, W.H. & Waters, V.J. (2024). Lack of correlation between *in vitro* and within patient measures of *P. aeruginosa* biofilms in cystic fibrosis. *Heliyon*,10(11).
<https://doi.org/10.1016/j.heliyon.2024.e32424>
5. Eisha, S., **Morris, A.J.**, Martin, I., Yau, Y.C.W., Grasemann, H., & Waters, V. (2024). Effect of L-arginine on cystic fibrosis *Pseudomonas aeruginosa* biofilms. *Antimicrob Agents Chemother*, e00336-24,
<https://doi.org/10.1128/aac.00336-24>

6. Chung, J., Eisha, S., Park, S., **Morris, A.J.**, & Martin, I. (2023). How Three Self-Secreted Biofilm Exopolysaccharides of *Pseudomonas aeruginosa*, Psl, Pel, and Alginate, Can Each Be Exploited for Antibiotic Adjuvant Effects in Cystic Fibrosis Lung Infection. *International Journal of Molecular Sciences*, 24(10), <https://doi.org/10.3390/ijms24108709>
7. **Morris, A.J.**, Yau, Y.C.W., Park, S., Eisha, S., McDonald, N., Parsek, M., Howell, L., Hoffman, L., Nguyen, D., DiGiandomenico, A., Rooney, A. M., Coburn, B., Grana, L., Wang, P., Guttman, D., Wozniak, D., & Waters, V. (2022). *Pseudomonas aeruginosa* aggregation and Psl expression in sputum is associated with antibiotic eradication failure in children with cystic fibrosis. *Scientific Reports*, 12(1), 21444. <https://doi.org/10.1038/s41598-022-25889-6>
8. **Morris, A.J.**, Jackson, L., Yau, Y.C.W., Beaudoin, T., Uwumarenogie, S., Guttman, K., Howell, L., Parsek, M., Hoffman, L., Nguyen, D., DiGiandomenico, A., Guttman, D., Wozniak, D., & Waters, V. (2021). The role of Psl in the failure to eradicate *Pseudomonas aeruginosa* from the airways of children with cystic fibrosis. *npj Biofilms and Microbiomes*, 7(1). <https://doi.org/10.1038/s41522-021-00234-3>
9. Guttman, K., Wang, P., Jackson, L., **Morris, A.J.**, Yau, Y.C.W., Waters, V. (2021). Isolation of total RNA from *Pseudomonas aeruginosa* within biofilms for measuring gene expression. *Journal of Visualized Experiments*, (175), <https://doi.org/10.3791/62755>
10. **Morris, A.J.**, Li, A., Jackson, L., Yau, Y.C.W., & Waters, V. (2020). Quantifying the Effects of Antimicrobials on *In Vitro* Biofilm Architecture using COMSTAT Software. *Journal of Visualized Experiments*, (166), <https://doi.org/10.3791/61759>
11. Jackson, L., DePas, W., **Morris, A.J.**, Guttman, K., Yau, Y.C.W., & Waters, V. (2020). Visualization of *Pseudomonas aeruginosa* within the Sputum of Cystic Fibrosis Patients. *Journal of Visualized Experiments*, (161), <https://doi.org/10.3791/61631>

In preparation

1. **Morris, A.J.**, Noble, S., Lindo, D., & Ong, C. (2026). Report of Zoonotic *Cryptosporidium* spp. Identified in calves from Jamaica. In preparation.
2. Noble, S.A.A, **Morris, A.J.**, Ong., C, Thompson, T., Roellig, D.M., & Lindo, J.F. (2026). *Cryptosporidium ducismarci* Infection in a Human, Jamaica. *Journal of Emerging Infectious Diseases*. Manuscript submitted and is currently under review.

Abstracts

1. **Morris, A.**, Eisha, S., Yau, DePas, W., Nguyen, D., Waters, V. 22 Spatio-temporal association of *Pseudomonas aeruginosa* and *Staphylococcus aureus* in CF sputum during pulmonary exacerbation, , *Journal of Cystic Fibrosis*, Volume 23, Supplement 2, 2024, Pages S11-S12, [https://doi.org/10.1016/S1569-1993\(24\)00865-8](https://doi.org/10.1016/S1569-1993(24)00865-8).
2. **Morris, A.**, Eisha, S., Yau, DePas, W., Gaudet, M., Nguyen, D., Waters, V. 68 *Pseudomonas aeruginosa* and *Staphylococcus aureus* interactions in people with cystic fibrosis with chronic infection, *Journal of*

3. **Morris, A.**, Yau, Y., Howell, P., Parsek, M., Hoffman, L., Nguyen, D., Rooney, A., Coburn, B., McDonald, N., DiGiandomenico, A., Wozniak, D., Waters, V. 570 Visualization of *Pseudomonas aeruginosa* biofilms in sputum of children with cystic fibrosis who fail eradication therapy, *Journal of Cystic Fibrosis*, Volume 21, Supplement 2, 2022, Page S317, [https://doi.org/10.1016/S1569-1993\(22\)01260-7](https://doi.org/10.1016/S1569-1993(22)01260-7).
4. Martin, I., Chung, J., **Morris, A.**, Eisha, S., Raju, D., Vargas, M., Howell, L., Yau, Y., Waters, V. 463 Psl glycosyl hydrolase improves eradication of cystic fibrosis *Pseudomonas aeruginosa* biofilms when combined with antibiotics. *Journal of Cystic Fibrosis*. Volume 21. Supplement 2, 2022, Pages S265. [https://doi.org/10.1016/S1569-1993\(22\)01153-5](https://doi.org/10.1016/S1569-1993(22)01153-5).

RESEARCH FUNDING

04.2025 - 09.2025	Program: Research Fellowship Award (1-year extension) Cystic Fibrosis Canada Grant ID: 1351023 Project Title: <i>In vivo</i> exploration of <i>Pseudomonas aeruginosa</i> and <i>Staphylococcus aureus</i> interactions within sputum of cystic fibrosis patients with pulmonary exacerbations Role: Recipient Host Institution: The Hospital for Sick Children Supervising Principal Investigator: Dr. Valerie Waters Amount: \$48,000 CAD
05.2022 - 04.2024	Program: Research Fellowship Award (2-year) Cystic Fibrosis Canada Grant ID: 929327 Project Title: <i>In vivo</i> exploration of <i>Pseudomonas aeruginosa</i> and <i>Staphylococcus aureus</i> interactions within sputum of cystic fibrosis patients with pulmonary exacerbations Role: Recipient Host Institution: The Hospital for Sick Children Supervising Principal Investigator: Dr. Valerie Waters Amount: \$83,000 CAD
12.2022 - 11.2024	Program: Clinical Pilot and Feasibility Award (2-year) Cystic Fibrosis Foundation Grant ID: WATERS19A0-I Project Title: <i>Pseudomonas aeruginosa</i> and <i>Staphylococcus aureus</i> interactions and antimicrobial tolerance in patients with cystic fibrosis Role: Trainee and Grant Co-author (with PI) Host Institution: The Hospital for Sick Children Supervising Principal Investigator: Dr. Valerie Waters Amount: \$111,940 USD

COMMITTEE INVOLVEMENT

2026 - present	North American Cystic Fibrosis Conference, Atlanta, Georgia Session: Microbial ecology and polymicrobial interactions [Co-Chair]
2026 - present	Texas Branch American Society for Microbiology [Active branch member]

- 2025 **Texas Branch American Society for Microbiology Fall Meeting**, Tyler, Texas
Session: General Microbiology - THEME: Environmental [\[Co-Chair\]](#)
- 2023 **North American Cystic Fibrosis Conference**, Phoenix, Arizona
Session: Pathogenesis of infection [\[Co-Chair\]](#)
- 2015 **6th annual Environmental Applied Science and Management Symposium**,
Toronto Metropolitan University
Session: Environmental optimism and pessimism: finding a balance in our future
[\[Co-chair\]](#)

SELECTED PRESENTATIONS AND CONFERENCES

- 11.2025 **The American Society for Microbiology Conference on Biofilms**, Portland
Marriott Downtown Waterfront, Portland, Oregon | Title: Spatial and structural
association of *Pseudomonas aeruginosa* and *Staphylococcus aureus* in CF
sputum during chronic infection [\[poster\]](#)
- 09.2024 **North American Cystic Fibrosis Conference**, Boston Convention and
Exhibition Center, Boston, Massachusetts Session: Rapid Fire Talk | Title:
Spatio-temporal association of *Pseudomonas aeruginosa* and *Staphylococcus*
aureus in CF sputum during pulmonary exacerbation [\[oral presentation and](#)
[poster\]](#)
- 04.2024 **British Society for Parasitology Spring Meeting**, University of Liverpool,
Liverpool, UK | Title: *Cryptosporidium spp.* in Cattle in a Jamaican Watershed
[\[poster\]](#)
- 11.2023 **North American Cystic Fibrosis Conference**, Phoenix Convention Center,
Phoenix, Arizona | Title: *Pseudomonas aeruginosa* and *Staphylococcus aureus*
interactions in CF patients with chronic infection [\[poster\]](#)
- 05.2023 **GlycoNet Annual General Meeting**, JW Marriott Edmonton ICE District,
Edmonton, Alberta | Title: Improving the success of *Pseudomonas aeruginosa*
eradication therapy in CF [\[poster\]](#)
- 11.2022 **The American Society for Microbiology Conference on Biofilms**,
Sheraton Le-Meridien Hotel, Charlotte, North Carolina Session: Susceptibility
and Tolerance: Antimicrobials and Biofilms | Title: *Pseudomonas aeruginosa*
aggregation and Psl expression in sputum is associated with antibiotic
eradication failure in children with cystic fibrosis [\[oral presentation\]](#)
- 11.2022 **North American Cystic Fibrosis Conference**, Pennsylvania Convention
Center, Philadelphia, Pennsylvania. Session: Rapid Fire Poster Talk 6 - Infection,
Microbiology, & Immunity | Title: Visualization of *Pseudomonas*
aeruginosa biofilms in sputum of children with cystic fibrosis who fail eradication
therapy [\[oral presentation\]](#)
- 06.2022 **71st Annual Conference of the Canadian Society of Microbiologists**,
University of Guelph, Guelph, Ontario | Title: Eradication failure of *Pseudomonas*
aeruginosa in children with cystic fibrosis due to the exopolysaccharide, Psl,
visualized within sputum [\[poster\]](#)

10.2020	North American Cystic Fibrosis Conference , virtual Title: Differences in biofilm growth characteristics between persistent and eradicated early <i>Pseudomonas aeruginosa</i> infections in children with CF [poster]
10.2019	North American Cystic Fibrosis Conference , virtual Title: Differential Psl binding in eradicated and persistent <i>Pseudomonas aeruginosa</i> isolates from children with cystic fibrosis [poster]
10.2017	One Health: One Global Environment Conference , Rose Hall Main Road, Montego Bay, Jamaica Title: Detection and genotyping <i>Cryptosporidium</i> spp. entrapped by aquatic biofilms to source track fecal contamination [oral presentation]
08.2016	Water Initiative for the Future (WatIF) International Graduate Student Conference , Queens University, Kingston, Ontario Title: <i>Cryptosporidium</i> oocysts captured by biofilms in Alder creek, Wilmot Ontario [oral presentation]
02.2016	51st Central Canadian Symposium on Water Quality Research , Toronto Metropolitan University, Toronto, Ontario Title: Surveillance of <i>Cryptosporidium</i> oocysts entrapped by aquatic biofilms from agricultural watersheds [poster]

INVITED LECTURES

02.24.2026	School of Occupational and Public Health Seminar , Toronto Metropolitan University, Toronto, ON Title: Identification of <i>Cryptosporidium</i> spp. in cattle and surface water biofilms from a Jamaican Watershed
01.17.2025	Paediatric Respiriology & Experimental Medicine Meeting National Heart and Lung Institute, Imperial College London, London UK Title: Spatial and structural organization of <i>Pseudomonas aeruginosa</i> and <i>Staphylococcus aureus</i> in CF sputum during stages of pulmonary exacerbation

TEACHING EXPERIENCE

Toronto Metropolitan University 350 Victoria St., Toronto, ON M5B 2K3

07.2025 - present	Writing Skills Initiative, Program Lead (virtual) Faculty of Community Services Summary: Lead program orientation and supervise WSI instructors across faculty departments. Develop and deliver training and professional development sessions and oversee the facilitation of writing workshops and instructional support initiatives.
08.2017- present	Writing Skills Initiative, Instructor (virtual) Faculty of Community Services

Summary: Design and deliver weekly lectures and workshops focused on academic writing and communication skills for undergraduate students. Provide individualized writing support and constructive feedback through one-on-one consultations and office hours

08.2016 - 04.2021

Graduate Student Support, Writing Consultant

Student Life and Learning Support

Summary: Provided individualized writing support to undergraduate and graduate students. Developed and facilitated workshops to strengthen academic writing and communication skills.

09. 2014 - 12.2021

Teaching Assistant

School of Occupational and Public Health

Courses: Parasitology, Entomology, and Rodent Control, ENH 610; Epidemiology: Communicable Disease I & 2, ENH 322/422; Applied Ecology, ENH 617; Seminars, ENH 809; Agents of Communicable Diseases, PUB 301; Water Quality, PUB 409

09.2014 - 08.2017

Teaching Assistant

Department of Chemistry and Biology

Courses: Anatomy, BLG 700; Human Physiology, BLG 600; Zoology, BLG 316

04.2016 - 08.2016

Instructor, Foundations of Aetiology, ENH 222

Chang School of Continuing Education; School of Occupational and Public Health

Summary: Instruct students in foundational microbiological techniques used in public health laboratories to analyze food, water, environmental, and clinical samples.

University of Guelph

50 Stone Road East Guelph, Ontario, Canada N1G 2W1

09.2013 - 08.2014

Teaching Assistant

School of Environmental Sciences

Courses: Waterborne Disease Ecology ENV5*3290; Plant Microbiology, MICR*3220

ADMINISTRATIVE AND MANAGEMENT EXPERIENCE

Toronto Metropolitan University

350 Victoria St., Toronto, ON M5B 2K3

05.2016 - 10.2016

Graduate Assistant, Periodic Program Review

Yeates School of Graduate Studies

09.2026

Amanda J. Morris

Summary: Wrote the *Environmental Applied Science and Management, 2008-2016 Periodic Program Review*. Collected over 100 CVs from faculty and extracted/performed statistical analyses on records of publications, funding/grants, and laboratory space. Participated in workshops with faculty and recorded minutes as part of the review process.

09.2014 - 04.2019

Administrative and Exam Invigilator

Test Centre, School of Occupational and Public Health, G. Raymond Change
School of Continuing Education, Ted Rogers School of Management

Summary: Coordinated large-scale examination sessions for approximately 500 students at a time, delivered exam policy announcements, and monitored midterm and final examinations to ensure academic integrity and compliance with university procedures. Supervised and assisted departmental invigilators, managed unexpected situations professionally, and prepared incident reports as required. Demonstrated strong knowledge of Accessibility for Ontarians with Disabilities Act (AODA) customer service standards and adaptive technologies, including JAWS and Dragon NaturallySpeaking.

Universal Exam Solutions

9707 Key West Avenue, Suite 110, Rockville, MD 20850

07.2017- 10.2019

Proctor and Service Provider (Private Contractor) - Greater Toronto and Hamilton Area

Summary: Provided invigilation and academic support services for students with disabilities, including reading examination questions aloud, describing visual materials, and serving as a scribe during examinations.

LABORATORY AND COMPUTATIONAL SKILLS

Microbiological laboratory techniques: fluorescence *in situ* hybridization (FISH); confocal microscopy, MALDI-TOF, gas chromatography, western/dot blot; colony forming unit (CFU) enumeration; minimum inhibitory concentration (MIC) assays; crystal violet and viability assays; selective/differential media diagnostic testing; flow cytometry, fluorescent antibody labelling and purification; DNA extraction and real-time/digital droplet polymerase chain reaction (RT/dd-PCR).

Software: Prism-GraphPad; confocal laser scanning microscopy (CLSM) and image processing software including ImageJ/Fiji-Comstat2 plugin, HALO, NIS Elements, Volocity and Imaris, R (programming language).