# John J. Dennehy

Queens College and The Graduate Center of The City University of New York <u>john.dennehy@qc.cuny.edu</u> <u>https://dennehylab.org</u>

# Education

- 1997–2003 PhD, Clark University, Biology
- 1995–1997 MA, University of Idaho, Zoology
- 1991–1995 BA, Merrimack College, Biology

## Academic Appointments

- 2023–Pres. Deputy Chair of Biology
- 2023 Chair of Biology
- 2023–Pres. Investigator, The CUNY Institute for Implementation Science in Population Health
- 2022–Pres. President and Co-Founder, Sentinel Biotech LLC.
- 2020–2022 Deputy Chair of Biology
- 2018–Pres. Professor of Biology with Tenure, Queens College CUNY
- 2017–Pres. Deputy Executive Officer, Biology Doctoral Program, The Graduate Center CUNY
- 2013–2018 Founding Director of Undergraduate Research, Queens College CUNY
- 2013–2018 Associate Professor of Biology with Tenure, Queens College CUNY
- 2007–2013 Assistant Professor of Biology, Queens College CUNY
- 2006–2007 Postdoctoral Associate, University at Albany SUNY
- 2003–2006 NSF Postdoctoral Fellow, Yale University

# Honors and Awards

- 2025 Elected Fellow of the American Academy of Microbiology
- 2022 Distinguished Service Award, American Society for Microbiology
- 2012 Faculty Early Career Award, National Science Foundation

# External Funding

- 2024 NYC Pandemic Response Institute: Innovative Tools and Solutions to Address Public Health Emergencies: Genome Language Models for Pandemic Surveillance (Co-PI, \$16,315).
- 2023 **NSF HSI Implementation and Evaluation Project** Award # <u>2318300</u>: Developing a Wastewater-based Epidemiology Student Training and Education Program at CUNY (PI, \$699,469).

**NSF Innovation Corps - National Innovation Network Teams Program** Award# <u>2048498</u> — *I-Corps: Passive in situ pathogen concentration device for wastewater-based epidemiology* (PI, \$50,000).

2022 **NSF 18-513 Major Research Instrumentation Program** Award # <u>2215946</u> — *MRI: Acquisition* of a Zeiss LSM900 Confocal Microscope with Airyscan 2 to Accelerate Multidisciplinary Research and Training (Co-PI, \$573,147).

**United States Government Community Project Funding** — *Wastewater Epidemiology Training Laboratory (WETLAB)* (PI, \$1,850,000).

2020 National Institutes of Health National Institute of Allergy and Infectious Diseases Award #<u>1R21AI156798</u> — Novel Strategies for Treating Biofilm-Forming Pathogens with Phage Therapy (PI, \$423,500).

**QIAGEN:** NGS Research Grant Award — *Phylodynamics of SARS-CoV-2 Isolated from NYC Wastewater* (PI, \$20,000).

**NSF Division of Environmental Biology** Award #<u>2032634</u> — *RAPID: Collaborative Research: Metapopulation Modeling to Develop Strategies to Reduce COVID-19 Transmission in Public Spaces* (PI, \$200,000).

**New York City Department of Environmental Protection** Project #17-2273 — Wastewaterbased Epidemiology of COVID-19 Transmission in NYC (PI, \$865,172).

- 2017 National Institutes of Health National Institute of General Medical Sciences Award #<u>1R01GM124446</u> — Consequences and Control of Randomness in the Timing of Intracellular Events (Co-PI, \$430,004).
- 2012 **National Science Foundation Faculty Early Career** Award #<u>1148879</u> CAREER: *Population Dynamics and Evolutionary Ecology of Virus Emergence* (PI, \$713,900).
- 2009 **National Science Foundation Division of Molecular and Cellular Biosciences** Award #0918199 Genetic and Molecular Basis of Bacteriophage Life History Variation (PI, \$174,155).

**National Science Foundation Division of Environmental Biology** Award #<u>0804039</u> *Research Assistantships for High School Students Supplement* (PI, \$17,848).

2008 Howard Hughes Medical Institute, Science Education Alliance, <u>SEA PHAGES program</u>

**National Science Foundation Division of Environmental Biology** Award #<u>0804039</u> — *Population Dynamics and Evolution of Emerging Viruses* (PI, \$50,000).

2003 **National Science Foundation Division of Biological Infrastructure** Award #<u>0310205</u> — *Adaptive Landscapes and the Evolution of Cooperation in RNA Viruses* (PI, \$160,000).

# Internal Funding

- 2024 **CUNY CUNY Innovation and Entrepreneurship Prototype Fund, Transformational Initiative Funding**: Development of a Passive *In Situ* Pathogen Concentration Device (PI, \$30,000).
- 2023 **Professional Staff Congress-CUNY** Award # 66684-00-54 Developing New Strategies for Treating Biofilm-Forming Pathogens with Phage Therapy (PI, \$12,000).

**Queens College Research Enhancement Award** — Development of a Passive *In Situ* Pathogen Concentration Device (PI, \$7,500).

**CUNY Planning Grant Program** — Predicting Transformation of Living Systems in Evolving Environments (Co-PI; \$20,000).

- 2022 **CUNY Interdisciplinary Research Grant Program** Trapping and Concentrating Viruses from Wastewater (PI, \$40,000).
- 2019 **Professional Staff Congress-CUNY** Award # 62323-00-50 Evolutionary Consequences of Coinfection in a Segmented Virus (PI, \$3,500).

2017 **CUNY Summer Advanced Grantwriting Award** — Topologies of Adaptive Landscapes in Influenza Virus Emergence (PI, \$5,000).

**CUNY Interdisciplinary Research Grant Program** — Impact of Urbanization on Soil Microbiomes and Viromes (Co-PI, \$40,000).

**CUNY Advanced Science Center Seed Program** — Does a Host-Acquired Factor Impact Fitness on Subsequent Hosts in an RNA Virus? (PI, \$10,000).

**Queens College Research Enhancement Award** — Impact of Urbanization on Soil Microbial Communities (Co-PI, \$8,000).

- 2011 **Professional Staff Congress-CUNY** Award # 64621-00-42 Determination of Structural Changes in Bacteriophage φ6 Host Attachment Protein P3 on Adaptation to a Novel Host (PI, \$5,995).
- 2010 **Queens College Undergraduate Research/Mentoring Education Award** funding to support undergraduate research project, Host-Induced Variation among Bacteriophages (PI, \$1,250).
- 2009 **Queens College Undergraduate Research/Mentoring Education Award** funding to support Genomics Research Experience I & II courses (PI, \$3,000).

**Queens College Research Enhancement Award** — funding for teaching release time for a graduate student to focus on research for one year (PI, \$16,380).

**Integrated Research Strategy Award from New York City Louis Stokes Alliance for Minority Participation in Science Technology, Engineering and Mathematics** — funding for development of Genomics Research Experience I & II course (PI, \$3,000).

**Professional Staff Congress-CUNY** Award #62886-00-40 — Viral Emergence in Multihost Habitats (PI, \$2,900).

**Queens College Research Enhancement Award** — funding to obtain preliminary data for an NSF Division of Molecular and Cellular Biosciences grant proposal (PI, \$10,000).

- 2008 **Professional Staff Congress-CUNY** Award #61034-00-39 Population Dynamics and Evolution of Viral Emergence (PI, \$6,000).
  - Publications (View in <u>Google Scholar</u>, <u>ORCID iD</u>, <sup>D,M,U,H</sup> = doctoral, masters, undergraduate, high school student author)
- 55. Kannoly S, Singh K<sup>U</sup>, Juman N<sup>U</sup>, Islam ZM<sup>D</sup>, Caballero-Quiroga I<sup>U</sup>, Singh A, **Dennehy JJ**. 2025. Translation efficiency impacts phage lysis timing and its precision in single cells. (In review, *mBio*).
- 54. Hamdani SDA<sup>D</sup>, Babar MM, Sajjad H, Gul A, Zahid M, Rajput TA, Noor A, Ahmed M, Dennehy JJ. 2025. Pharmacological evaluation of phage-antibiotic synergism against clinical isolates of multi-drug resistant *Staphylococcus aureus* in a burn-induced infection animal model. (In review, *International Journal of Antimicrobial Agents*).
- 53. <sup>U</sup>Goldblatt A, <sup>U</sup>Loccisano MJ, <sup>U</sup>Mahe MI, **Dennehy JJ** & Spagnolo F. 2024. Risk of infection due to airborne virus in classroom environments lacking mechanical ventilation. <u>*PLoS ONE*</u>.
- 52. Yang F, Labani-Motlagh A, Ansari D, Garzon JAB, Moreira JD, Patel S, Spagnolo F, Florence J, Vankayalapati A, Vankayalapati R, **Dennehy JJ**, Samten B, and Yi G. 2024. Bacteriophage

therapy for the treatment of *Mycobacterium tuberculosis* infections in humanized mice. <u>*Communications Biology*</u>.

- 51. Qasmieh S, Robertson M, Teasdale C, Kulkarni S, Larsen D, **Dennehy JJ**, McNairy M, Jones H, Borrell L, & Nash D. 2023. The prevalence of SARS-CoV-2 infection and other public health outcomes during the BA.2/BA.2.12.1 surge, New York City, April-May 2022. <u>*Communications Medicine*</u>.
- 50. Keshaviah A, Diamond M, Wade M, Scarpino S. on behalf of the **Global Wastewater Action Group.** 2023. Wastewater monitoring can anchor global disease surveillance systems. <u>Lancet</u> <u>Global Health</u>.
- 49. Kannoly S, <sup>U</sup>Oken G, <sup>U</sup>Shadan J, <sup>U</sup>Musheyev D, <sup>U</sup>Singh K, Singh A & **Dennehy JJ**. 2022. A singlecell approach reveals intercellular heterogeneity in phage production capacity. <u>*Microbiology*</u> <u>Spectrum</u>.
- 48. Gregory DA, Trujillo M, <sup>U</sup>Rushford C, <sup>D</sup>Fleury A, Kannoly S, <sup>M</sup>San K, Lyfoung D, Wiseman RW, Bromert K, Zhou M-Y, Kesler E, Bivens N, Hoskins J, Lin C-H, O'Connor DH, Wieberg C, Wenzel J, Kantor RS, **Dennehy JJ** (co-corresponding author) & Johnson MC (co-corresponding author). 2022. Genetic diversity and evolutionary convergence of cryptic SARS-CoV-2 lineages detected via wastewater sequencing. <u>*PLoS Pathogens*</u>.
- 47. Skanata A, Spagnolo F, <sup>U</sup>Metz M, Smyth DS & **Dennehy JJ.** 2022. Humidity reduces rapid and distant airborne travel of viable viral particles in classroom settings. *Environmental Science & Technology Letters*.
- 46. Kannoly S, Singh A & **Dennehy JJ.** 2022. An optimal lysis time maximizes bacteriophage fitness in quasi-continuous culture. <u>*mBio*</u>.
- 45. Smyth DS, Trujillo M, Gregory DA, <sup>U</sup>Cheung K, <sup>U</sup>Gao A, <sup>U</sup>Graham M, Guan Y, <sup>D</sup>Hoxie I, Kannoly S, <sup>U</sup>Kubota N, Lyddon TD, <sup>U</sup>Markman M, <sup>U</sup>Rushford C, <sup>M</sup>San K, <sup>U</sup>Sompanya G, Spagnolo F, <sup>U</sup>Suarez R, Daniels M, Johnson MC & **Dennehy JJ**. 2022. Tracking cryptic SARS-CoV-2 lineages detected in NYC wastewater. *Nature Communications*.
- 44. Hoar C, Chauvin F, Katehis D, Clare A, McGibbon H, Castro E, Patinella S, **Dennehy JJ**, Trujillo M, Smyth DS, Silverman A. 2022. Monitoring SARS-CoV-2 in wastewater during New York City's second wave of COVID-19: Sewershed-level trends and relationships to publicly available clinical testing data. <u>Environmental Science: Water Research & Technology</u>.
- 43. Kirby AE, Welsh R, Marsh Z, Yu AT, Vugia DJ, Boehm AB, Wolfe MK, White BJ, Matzinger S, Wheeler A, Bankers L, Andresen K, Slatas C, New York City Department of Environmental Protection, Gregory DA, Johnson MC, Trujillo M, Kannoly S, Smyth DS, Dennehy JJ, Hopkins L, Stadler L, Ensor K, Penn R, Brown P & Treangen T. 2021. E Early evidence of the SARS-CoV-2 B.1.1.529 (Omicron) variant in community wastewater United States, November–December 2021. Morbidity and Mortality Weekly Report.
- 42. Burkhardt R, **Dennehy JJ**, Poon LLM, Saif LW, & Enquist LJ. 2021. Are COVID-19 vaccine boosters needed: the science behind boosters. *Journal of Virology*.
- 41. Spagnolo F, Trujillo M & **Dennehy JJ.** 2021. Why do antibiotics exist? <u>*mBio*</u>.
- 40. Smyth DS, Trujillo M, <sup>U</sup>Cheung K, <sup>U</sup>Gao A, <sup>D</sup>Hoxie I, Kannoly S, <sup>U</sup>Kubota K, <sup>U</sup>Markman M, <sup>M</sup>San KM, <sup>U</sup>Sompanya G & **Dennehy JJ.** 2021. Detection of mutations associated with variants of concern via high throughput sequencing of SARS-CoV-2 isolated from NYC Wastewater <u>medRxiv</u>.
- 39. <sup>D</sup>Hoxie I & **Dennehy JJ.** 2021. Rotavirus A genome segments show distinct segregation and codon usage patterns. <u>Viruses</u>.

- Trujillo M, <sup>U</sup>Cheung K, <sup>U</sup>Gao A, <sup>D</sup>Hoxie I, Kannoly S, <sup>U</sup>Kubota N, <sup>M</sup>San KM, Smyth DS & Dennehy JJ. 2021. Protocol for safe, affordable, and reproducible isolation and quantitation of SARS-CoV-2 RNA from wastewater. <u>PLOS ONE</u>.
- 37. Pecson BM, Darby E, Haas CN, Amha Y, Bartolo M, Danielson R, Dearborn Y, Di Giovanni G, Ferguson C, Fevig S, Gaddis E, Gray D, Lukasik G, Mull B, Olivas L, Olivieri A, Qu Y, SARS-CoV-2 Interlaboratory Consortium. 2021. Reproducibility and sensitivity of 36 methods to quantify the SARS-CoV-2 genetic signal in raw wastewater: findings from an interlaboratory methods evaluation in the U.S. <u>Environmental Science: Water Research & Technology</u>.
- 36. Dunning-Hotopp JC, Baltrus DA, Bruno VM, Dennehy JJ, Gill SR, Maresca JA, Matthijnssens J, Newton ILG, Putonti C, Rasko DA, Rokas A, Roux S, Stajich JE, Stedman KM, Stewart FJ, & Thrash JC. 2020. Best practices for successfully writing and publishing a genome announcement in Microbial Resource Announcements. <u>Microbiology Resource</u> <u>Announcements</u>.
- 35. Kannoly S, <sup>U</sup>Gao T, Dey S, Wang I-N, Singh A & **Dennehy JJ**. 2020. Optimum threshold minimizes noise in timing of intracellular events. <u>*iScience*</u>.
- 34. <sup>D</sup>Hoxie I & **Dennehy JJ**. 2020. Intragenic recombination influences rotavirus diversity and evolution. <u>Virus Evolution</u>.
- 33. Baltrus DA, Cuomo CA, **Dennehy JJ**, Dunning-Hotopp JC, Maresca JA, Newton ILG, Rasko D, Rokas A, Roux S & Stajich JE. 2019. Future-proofing your Microbiology Resource Announcements genome assembly for reproducibility and clarity. <u>Microbiology Resource</u> <u>Announcements</u>.
- 32. <sup>D</sup>Ghusinga K, **Dennehy JJ** & Singh A. 2017. First-passage time approach to controlling noise in timing of intra-cellular events. *Proceedings of the National Academy of Sciences USA*.
- 31. **Dennehy JJ.** 2016. Evolutionary ecology of virus emergence. <u>Annals of the New York Academy</u> of Sciences: The Year in Evolutionary Biology.
- 30. <sup>M</sup>Esposito LA, <sup>U</sup>Gupta S, <sup>U</sup>Prasad A, <sup>U</sup>Streiter F & **Dennehy JJ**. 2016. Evolutionary interpretations of mycobacteriophage biodiversity and host-range through the analysis of codon usage bias. <u>*Microbial Genomics.*</u>
- 29. <sup>D</sup>Ahmadi M, Torshizi MAK, Rahimi S & **Dennehy JJ**. 2016. Prophylactic bacteriophage administration more effective than post-infection administration in reducing Salmonella enteritidis shedding in quails. *Frontiers in Microbiology*.
- 28. Pope WH, Bowman CA, Russell DA, Jacobs-Sera D, Science Education Alliance Phage Hunters Advancing Genomics and Evolutionary Science (SEA PHAGES), Phage Hunters Integrating Research and Education (PHIRE), Mycobacterial Genetics Course (MGC), Cresawn SG, Jacobs WR Jr, Hendrix RW, Lawrence JG & Hatfull GF. 2015. Whole genome comparison of a large collection of mycobacteriophages reveals a continuum of phage genetic diversity. <u>eLife.</u>
- 27. <sup>D</sup>Ford BE, <sup>U</sup>Sun B, <sup>D</sup>Carpino J, <sup>U</sup>Chapler ES, <sup>U</sup>Ching J, <sup>U</sup>Choi Y, <sup>U</sup>Jhun K, <sup>U</sup>Kim JD, <sup>U</sup>Lallos GG, <sup>U</sup>Morgenstern R, <sup>U</sup>Singh S, <sup>U</sup>Theja S & **Dennehy JJ**. 2014. Frequency and fitness consequences of bacteriophage φ6 host range mutations. <u>*PLoS ONE*</u>.
- 26. Dennehy JJ. 2014. What ecologists can tell virologists. <u>Annual Review of Microbiology</u>.
- 25. Singh A & **Dennehy JJ.** 2014. Stochastic holin expression can account for lysis time variation in the bacteriophage  $\lambda$ . *Journal of the Royal Society Interface*.
- 24. Jordan TC, Burnett SH, Carson S, Caruso SM, Clase K, DeJong RJ, **Dennehy JJ**, Denver DR, Dunbar D, Elgin SCR, Findley AM, Gissendanner CR, Golebiewska UP, Guild N, Hartzog GA, Grillo WH, Hollowell GP, Hughes LE, Johnson A, King RA, Lewis LO, Li W, Rosenzweig F, Rubin

MR, Saha MS, Sandoz J, Shaffer CD, Taylor B, Temple T, Vazquez E, Ware VC, Barker LP, Bradley KW, Jacobs-Sera D, Pope WH, Russell DA, Cresawn SG, Lopatto D, Bailey CB & Hatfull, GF. 2014. A broadly implementable research course for first-year undergraduate students. <u>mBio.</u>

- Hatfull GF, Science Education Alliance Phage Hunters Advancing Genomics and Evolutionary Science (SEA-PHAGES) Program, KwaZulu-Natal Research Institute for Tuberculosis and HIV (K- RITH) Mycobacterial Genetics Course, University of California Los Angeles Research Immersion Laboratory in Virology, Phage Hunters Integrating Research and Education (PHIRE) program. (2013). The complete genome sequences of 63 mycobacteriophages. <u>Genome Announcements.</u>
- 22. **Dennehy JJ**, <sup>D</sup>Duffy S, O'Keefe KJ, Edwards SV & Turner PE. 2013. Frequent coinfection reduces RNA virus population genetic diversity. *Journal of Heredity.*
- 21. **Dennehy JJ.** 2012. What can bacteriophages tell us about host-parasite coevolution? International Journal of Evolutionary Biology.
- 20. Hatfull GF, Science Education Alliance Phage Hunters Advancing Genomics and Evolutionary Science Program, the KwaZulu-Natal Research Institute for Tuberculosis and HIV Mycobacterial Genetics Course Students, and the Phage Hunters Integrating Research and Education Program. 2012. The complete genome sequences of 138 mycobacteriophages. *Journal of Virology*.
- 19. <sup>U</sup>Ching J, <sup>U</sup>Musheyev SA, <sup>H</sup>Chowdhury D, <sup>H</sup>Kim JA, <sup>U</sup>Choi Y & **Dennehy JJ**. 2012. Migration enhances adaptation in bacteriophage populations evolving in ecological sinks. <u>Evolution</u>.
- 18. <sup>U</sup>Li J & **Dennehy JJ.** 2011. Differential bacteriophage mortality on exposure to copper. <u>Applied</u> <u>and Environmental Microbiology.</u>
- Dennehy JJ & Wang I-N. 2011. Factors influencing lysis time stochasticity in bacteriophage λ. <u>BMC Microbiology.</u>
- 16. **Dennehy JJ,** Friedenberg NA, McBride RC, Holt RD & Turner PE. 2010. Experimental evidence that source genetic variation drives pathogen emergence. <u>Proceedings of the Royal Society, B</u> <u>- Biological Sciences.</u>
- 15. <sup>D</sup>Khatchikian CE, **Dennehy JJ**, Vitek CJ & Livdahl TP. 2010. Environmental effects on bet hedging in Aedes mosquito egg hatch. *Evolutionary Ecology.*
- 14. Marshall JC, <sup>U</sup>Buttars PR, <sup>U</sup>Callahan T, **Dennehy JJ**, <sup>D</sup>Harris DJ, <sup>U</sup>Lunt B & <sup>U</sup>Shupe R. 2009. In the academic job market, will you be competitive? A case study in ecology and evolutionary biology. <u>Israel Journal of Ecology & Evolution</u>.
- 13. **Dennehy JJ**. 2009. Bacteriophages as model organisms for virus emergence research. <u>*Trends*</u> <u>*in Microbiology*</u>.
- 12. <sup>D</sup>Katchikian CE, **Dennehy JJ**, Vitek CJ & Livdahl TP. 2009. Climate and geographic trends in hatch delay of the treehole mosquito, *Aedes triseriatus* Say (Diptera: Culicidae). <u>Journal of Vector Ecology</u>.
- 11. **Dennehy JJ**, Abedon ST & Turner PE. 2007. Host density impacts relative fitness of bacteriophageΦ6 genotypes in structured habitats. *Evolution*.
- 10. **Dennehy JJ**, Friedenberg N, <sup>U</sup>Yang Y & Turner PE. 2007. Virus population extinction via ecological traps. <u>Ecology Letters.</u>
- <sup>D</sup>Monello RJ, Dennehy JJ, <sup>U</sup>Wirsing AJ & Murray D. 2006. Growth and behavioral responses of tadpoles of two native frogs to an exotic competitor, *Rana catesbeiana*. <u>Journal of</u> <u>Herpetology</u>.

- 8. **Dennehy JJ**, Friedenberg N, <sup>U</sup>Yang Y & Turner PE. 2006. Bacteriophage migration via nematode vectors: host-parasite-consumer interactions in laboratory microcosms. <u>Applied</u> <u>and Environmental Microbiology</u>.
- 7. **Dennehy JJ**, Friedenberg N, Holt RD & Turner PE. 2006. Viral ecology and the maintenance of novel host use. <u>*The American Naturalist.*</u>
- 6. Evans MEK & **Dennehy JJ**. 2005. Germ banking: bet hedging and variable release from egg and seed dormancy. <u>*Quarterly Review of Biology.*</u>
- 5. **Dennehy JJ** & Turner PE. 2004. Reduced fecundity is the cost of cheating in RNA virus Φ6. *Proceedings of the Royal Society, B - Biological Sciences.*
- 4. **Dennehy** JJ & Livdahl TP. 2004. Polymorphic foraging behavior among Caenorhabditis elegans. Frequency- and density-dependent selection. *Journal of Nematology*.
- 3. **Dennehy JJ**, Robakiewicz P & Livdahl TP. 2001. Larval rearing conditions affect kin-mediated cannibalism in a treehole mosquito. <u>*Oikos*</u>.
- 2. **Dennehy JJ.** 2001. Influence of social dominance rank on diet quality of pronghorn females. <u>Behavioral Ecology.</u>
- 1. **Dennehy JJ** & Livdahl TP. 1999. First record of *Toxorhynchites rutilus* (Diptera: Culicidae) in Massachusetts. *Journal of the American Mosquito Control Association*.

Conference Papers (Peer Reviewed)

- 4. Dey S, Kannoly S, Bokes P, **Dennehy JJ** & Singh A. 2021. Feedforward genetic circuits regulate the precision of event timing. <u>IEEE 2021 European Control Conference</u>.
- <sup>U</sup>Blotnick JA, <sup>D</sup>Vargas CA, **Dennehy JJ**, Zurakowski R & Singh A. 2017. The effect of multiplicity of infection on the temperateness of a bacteriophage: implications for viral fitness. <u>56th IEEE</u> <u>Conference on Decision and Control, Melbourne, Australia.</u>
- 2. Conway JE, **Dennehy JJ** & Singh A. 2016. Optimizing phage  $\lambda$  survival in a changing environment: stochastic model predictions. <u>55th IEEE Conference on Decision and Control, Las Vegas, NV.</u>
- 1. <sup>D</sup>Ghusinga KR, **Dennehy JJ** & Singh A. 2014. First passage time stochasticity in a gene network with feedback regulation. <u>Northeast Bioengineering Conference (NEBEC), Boston, MA.</u>

Book Chapters

- 4. **Dennehy JJ** & Abedon ST. 2021. Bacteriophage ecology. In *Bacteriophages: Biology, Technology, Therapy.* Harper DR, Abedon ST, Burrowes B & McConville M (eds). <u>Springer Publishing.</u>
- 3. **Dennehy JJ** & Abedon ST. 2021. Phage infection and lysis. In *Bacteriophages: Biology, Technology, Therapy.* Harper DR, Abedon ST, Burrowes B & McConville M (eds). <u>Springer</u> <u>Publishing</u>.
- Dennehy JJ & Abedon ST. 2021. Adsorption: phage acquisition of bacteria. In *Bacteriophages: Biology, Technology, Therapy*. Harper DR, Abedon ST, Burrowes B & McConville M (eds). <u>Springer Publishing.</u>
- <sup>D</sup>Ford BE, <sup>U</sup>Baloh M & **Dennehy JJ**. 2018. Evolutionary ecology of the viruses of microorganisms. In *Viruses of Microorganisms: Diversity, Molecular Biology and Applications*. Hyman P & Abedon ST (eds). <u>Caister Academic Press.</u>

#### Book Reviews

- 2. **Dennehy JJ.** 2018. Review of *Thinking Like a Phage: The Genius of the Viruses That Infect Bacteria and Archaea*, Merry Youle, Wholon Press, 2018. Appearing in <u>Quarterly Review of Biology</u>.
- 1. **Dennehy JJ.** 2008. Review of *Bacteriophage Ecology: Population Growth, Evolution, and Impact of Bacterial Viruses*. Abedon ST (ed.) Advances in Molecular and Cellular Microbiology, Vol. 15. Cambridge University Press, 2008. Appearing in *Quarterly Review of Biology*.

# Editorials

- 1. Nash, D, **Dennehy JJ**, Trujillo M & Silvera L. 2024. From sewage to safety: Hospital wastewater surveillance as a beacon for defense against H5N1 bird flu. Appearing in <u>STAT News</u>.
- 2. **Dennehy JJ.** 2023. Equity, Diversity and Inclusion: When communication all changed. Appearing in <u>eLife</u>.
- 3. **Dennehy JJ.** 2022. Commentary on Ballering et al., "Persistence of somatic symptoms after COVID-19 in the Netherlands: an observational cohort study." Appearing in <u>American Society for Microbiology COVID-19 Research Registry Editorial Volume 3</u>.
- 4. Dennehy JJ. 2022. Supporting scientists who are deaf or hard of hearing. *Nature Microbiology*.
- Dennehy JJ. 2022. Commentary on Elliott et al., "Rapid increase in Omicron infections in England during December 2021: REACT-1 study", Appearing in <u>American Society for Microbiology</u> <u>COVID-19 Research Registry Editorial Volume 3</u>.
- 6. **Dennehy JJ.** 2020. Commentary on Wyllie et al., "Saliva is more sensitive for SARS-CoV-2 detection in COVID-19 patients than nasopharyngeal swabs", Appearing in <u>American Society for</u> <u>Microbiology COVID-19 Research Registry Editorial Volume 1</u>

# Invited Talks (Past Five Years)

2025 Genetic Diversity and Evolutionary Convergence of Cryptic SARS-Cov-2 Lineages Detected Via Wastewater Sequencing. Lehman Chapter of Sigma Xi Annual Lecture, Lehman College, NYC, NY.

*Genetic Diversity and Evolutionary Convergence of Cryptic SARS-Cov-2 Lineages Detected Via Wastewater Sequencing.* Biology Department, Brooklyn College, NYC, NY.

2024 Genetic Diversity and Evolutionary Convergence of Cryptic SARS-Cov-2 Lineages Detected Via Wastewater Sequencing. 43rd Annual Meeting of the American Society for Virology, Columbus, OH.

*Genetic Diversity and Evolutionary Convergence of Cryptic SARS-Cov-2 Lineages Detected Via Wastewater Sequencing.* Department of Biological Sciences, University at Albany, Albany, NY.

2023 *How I Became an Evangelist for Wastewater-Based Epidemiology.* Gordon Research Conference: Microbial Population Biology, Andover, NH.

*Genetic Diversity and Evolutionary Convergence of Cryptic SARS-Cov-2 Lineages Detected Via Wastewater Sequencing.* Session: Expanding the rules of life for viruses of microorganisms, American Society for Microbiology Microbe 2023, Houston, TX.

*Future Development of Wastewater-based Epidemiology.* American Society for Microbiology Corporate Council Convening 2, American Society for Microbiology Microbe 2023, Houston, TX.

*Tracking Cryptic SARS-CoV-2 Lineages Detected in NYC Wastewater,* Annual Meeting of the Queens College Retirees Association, CUNY, NYC, NY.

*Wastewater Surveillance for COVID-19 and Beyond,* American Society for Microbiology COVID-19 Research Registry Special Session. (Virtual).

*Tracking Cryptic SARS-CoV-2 Lineages Detected in NYC Wastewater*, CCNY Biology Colloquium, CUNY, NYC, NY.

2022 *Navigating a Career as a Deaf Scientist,* U-Rise Program, Rochester Institute of Technology, U-RISE Scientists in Training Series. (Virtual).

*Tracking Cryptic SARS-CoV-2 Lineages Detected in NYC Wastewater,* School of Earth and Environmental Sciences, CUNY, Queens, NY.

*Tracking Cryptic SARS-CoV-2 Lineages Detected in NYC Wastewater,* Environmental Surveillance for Public Health Impact, Bill and Melinda Gates Foundation Environmental Surveillance for Public Health Impact Convening, London, UK.

*Wastewater-based Epidemiology as a Tool for Public Health,* NSF Reimagining Science & Technology Education Conference. (Virtual).

*Tracking Cryptic SARS-CoV-2 Lineages Detected in NYC Wastewater*, COVID-19 Surveillance Workgroup at NYC Health + Hospitals. (Virtual).

*Tracking Cryptic SARS-CoV-2 Lineages Detected in NYC Wastewater,* 8th Call of the World Organization for Animal Health (OIE) and Food and Agriculture Organization of the United Nations (FAO) Advisory Group on SARS-CoV-2 Evolution in Animals. (Virtual).

2021 Environmental Protection & Disease Surveillance -The Emerging Field of Wastewater Epidemiology, NSF Advanced Technological Education Conference. (Virtual).

*Keynote: Control of Bacteriophage Lysis Timing*, 2<sup>nd</sup> International Conference on Bacteriophage Research, Society for Bacteriophage Research and Therapy. (Virtual).

*Evolution and Epidemiology of SARS-CoV-2*. COVID-19 Research Registry – A Year of Progress, American Society for Microbiology's World Microbe Forum. (Virtual).

2020 *Analyzing Virus Population Genetic Diversity Through Deep Sequencing*. Bioinformatics Boot Camp for Ecology and Evolution, CUNY. (Virtual).

*Inclusion for Scientists with Disabilities*. NYU Neuroscience Trainee Event, Neuroscience Graduate Program, New York University. (Virtual).

A SARS-Cov-2 Vaccine Candidate Would Likely Match All Currently Circulating Variants. <u>American Society for Microbiology's Virtual Journal Club</u>. (Virtual).

What does SARS-CoV-2 Evolution Mean for the Future of the Pandemic? <u>At Home with</u> <u>Queens College Presents.</u> (Virtual).

# Media Coverage

#### News Articles About Research

- <u>Mini-Dune! Soil viruses hitchhike on tiny worms to infect new victims</u>, Elizabeth Pennisi, *Science*, 2024/08/23
- <u>Advocating for Deaf Scientists: Spotlight on John Dennehy</u>, Ashley Hagen, American Society for Microbiology Microcosm, 2022/12/05
- <u>COVID, Flu, Monkeypox: NYC Predicts Some Outbreaks Weeks Early and You're Helping</u>, Linda Gaudino, NBC New York, 2022/11/01
- <u>Where Did Omicron Come From? Maybe Its First Host Was Mice</u>, Maryn Mckenna, *Wired*, 2022/10/27
- <u>Meng Secures Nearly \$2 Million In Funding to Support Queens College Project</u>, Carlotta Mohamed, *Qns.com*, 2022/10/05

- <u>New York to Ramp Up Polio Vaccinations After Virus Found in Wastewater</u>, *Voice of America*, 2022/09/09
- Wastewater Surveillance Becomes More Targeted in Search for Poliovirus, Monkeypox and Coronavirus, Jacqueline Howard, CNN, 2022/09/05
- <u>Polio case stirs fear in New York, accelerates vaccine push in Jewish community</u>, Peter Hutchison and Celine Gesret, *The Times of Israel*, 2022/09/03
- Down and Dirty in Virus-Laden Sewage, for Journalism, Aliza Aufrichtig, New York Times, 2022/08/23
- <u>Tracking Viruses Can Be Tricky</u>, Aliza Aufrichtig and Emily Anthes, New York Times, 2022/08/17
- Polio May Have Been Spreading in New York Since April, Emily Anthes, New York Times, 2022/08/16
- <u>Covid-19: Unexpected Mutations In SARS-Cov-2 Variants Continue to Surprise Virologists</u>, Catherine Mary, *Le Monde*, 2022/05/04
- <u>The Secrets Hidden in Sewage</u>, Dylan Scott, *Vox*, 2022/04/13
- <u>Coronavirus Rates Jump at Some Wastewater Testing Sites—Even as Case Counts Decline</u>, Zachary Snowdon Smith, *Forbes*, 2022/03/14
- <u>Can We Use the Sewers to Track COVID-19? NYC Is Still Figuring It Out,</u> Caroline Lewis, *Gothamist*, 2022/03/13
- <u>Signals From the Sewer</u>, Gretchen Vogel, *Science*, 2022/03/09
- <u>Wastewater Samples Show Rise in Virus CDC Says</u>, Belinda Robinson, *China Daily*, 2022/03/09
- <u>Wastewater Monitoring Offers Powerful Tool for Tracking COVID and Other Diseases</u>, Sara Reardon, *Scientific American*, 2022/03/03
- Early Omicron Find in US Raises Doubts, Belinda Robinson, China Daily, 2022/02/22
- <u>'Cryptic' COVID Variant Found in NYC Sewers May Be from Rats: Study</u>, Hannah Frishberg, NY Post, 2022/02/10
- New York City Might Have Rat COVID, But It's Probably Fine, Caroline Spivak, Curbed, 2022/02/09
- <u>Mystery Lineages of Coronavirus Are Popping Up in NYC Sewage</u>, Stephanie Pappas, *Live Science*, 2022/02/07
- Four 'Cryptic' Sars-Cov-2 Variants Lurk in NYC Sewers, Eric Stann, Futurity, 2022/02/04
- <u>The US Is Expanding Its Hunt for Early Warnings of COVID in Sewage</u>, Drew Armstrong, *The Boston Globe*, 2022/02/04
- New York City's Rats Could Have Their Own Strain of COVID-19, Chris Mench, Thrillist, 2022/02/04
- <u>Mystery COVID 'Lineages' Found in Viral Fragments in Wastewater In California and New York</u>, Jay Barmann, *SFist*, 2022/02/04
- <u>Scientists Detect Novel SARS-CoV-2 Variants in NYC Wastewater</u>, Eric Stann, *Science Daily*, 2022/02/03
- <u>In New York City Sewage, a Mysterious Coronavirus Signal</u>, Emily Anthes, *New York Times*, 2022/02/03
- Omicron Was Probably in N.Y.C. Well Before the First U.S. Case Was Detected, Wastewater Data Suggest, Emily Anthes, New York Times, 2022/01/20
- <u>How Omicron Upended What We Thought We Knew About Natural Immunity</u>, Maggie Koerth, *FiveThirtyEight.com*, 2022/01/19
- In Sewage, Clues to Omicron's Surge, Emily Anthes, New York Times, 2022/01/19
- Antimicrobial Resistance: The Silent Pandemic, Danielle Gerhard, Drug Discovery News, 2021/10/06
- <u>Animal Reservoirs of Covid-19 May Trigger New Rounds of Human Disease</u>, William Haseltine, Forbes, 2021/09/13
- <u>Researchers Find Signs of COVID-19 Mutations in NYC Sewage, Pointing to Possible Dog and Rat</u> <u>Infections</u>, Jacob Geanous and Derek Kravitz, *The City*, 2021/07/29
- For the Delta Variant and Future Threats Scientists Eye the Toilet, Adam Smith, TheStreet.com, 2021/06/27
- From the Wastewater Drain, Solid Pandemic Data, Emily Anthes, New York Times, 2021/05/07

- <u>Coronavirus May Be the Perfect Pathogen. Are Humans the Perfect Host?</u>, Christopher Maag, *NorthJersey.com*, 2020/03/13
- <u>Viruses Would Rather Jump to New Hosts than Evolve with Them</u>, Mallory Locklear, *Quanta* magazine, 2017/09/23; republished by <u>Wired</u>.
- What kind of attraction is most important in your research? *Nautilus* magazine, January 2016.
- <u>Cancer, the Consummate Traveler</u>, Catherine Gammon, *Nautilus* magazine, 2013/12/12
- <u>Virus Traps: Weapons of Mass Deception</u>, Janet Ginsberg, *New Scientist*, 2007/10/27
- <u>Scientists Explore Ways to Lure Viruses to Their Death</u>, Carl Zimmer, New York Times, 2007/03/27

## TV, Podcast, and Video Appearances

- The Key to Stopping Future Epidemics? It's in Your Toilet, <u>NBC News, 2022/10/27</u>.
- The Wharton Moneyball Post Game Podcast, <u>SiriusXM, 2022/10/12.</u>
- Scientists Take To The Sewers To Track Down Worrisome Coronavirus Variants, KBIA Radio, 2022/05/22.
- Monologue, <u>Colbert Show, 2022/02/03.</u>
- TWiV 864: A Game of Thrones, This Week in Virology, 2022/02/10
- COVID Mystery Found in NYC Wastewater, Fox5 10:00 Nightly News, 2022/02/03.
- TWiV 737: SARS-CoV-2 in NYC Wastewater, This Week in Virology, 2021/04/01.
- Waste, Not: Sewage Holds Evidence of COVID-19, <u>QC Big Ideas</u>, 2021/02/18.
- Learning About COVID-19 with John Dennehy, <u>QC Podcast Lab</u>, 2020/12/03.
- Testing for COVID-19, Simply Science program, CUNY TV, 2020/10/07.
- Coronavirus: Are We Back Where We Started? <u>Science Vs podcast, 2020/07/02</u>
- Experimental Evolution, <u>Science Forward video series</u>, 2014/05/01.

# Courses Taught

Ecology and Evolution of Infectious Disease (2009, 2012, 2014, 2016, 2021, 2024) Evolutionary Biology (2019) Genomics Research Experience I: Phage Hunters (2009-2013) Genomics Research Experience II: Phage Hunters (2010-2014) General Microbiology (2008-2015, 2017-2022, 2024-2025) Introduction to Biology (2003)

# University Service

#### Graduate Center, CUNY

Ecology and Evolutionary Biology Subprogram Advisory Committee (2019) Graduate Center Biology Doctoral Program Executive Committee (2017–Pres.) Deputy Executive Officer, Biology Doctoral Program (2017–Pres.) Doctoral Program Faculty Review Committee (2015 – 2016, 2024) Molecular, Cellular and Developmental Biology Subprogram Advisory Committee (2010, 2019–2022) Dissertation Fellowship Reviewer (2009, 2013, 2018) Appointed, Molecular, Cellular and Developmental Biology Subprogram (2008) Appointed, Ecology Evolutionary Biology and Behavior Subprogram (2007)

#### **Queens College, CUNY**

U-RISE Steering Committee (2023-Pres.) NIH SCORE Coordination Committee (Chair, 2020–2021) Graduate Advisory Committee (Member, 2009–2015; Chair, 2017–Pres.) Maximizing Access to Research Careers (MARC) Steering Committee (2015–2020) Dean of Math and Natural Sciences Search Committee (2015, 2019) Founding Director of Undergraduate Research (2013–2018)

## **Biology Department, Queens College, CUNY**

Chair (2023) Deputy Chair (2020-2022; 2023-Pres.) Personnel and Budget Committee (2014–Pres.) Biology Honors Society Advisor (2014–2019) Ecological Modeling Faculty Search Committee (2012–2013) Supervisor, Core Facility for Imaging, Cellular and Molecular Biology (2011–2021) Teaching Evaluation Committee - Adjunct and Graduate Student (2010–Pres.) Fogel Endowment Fund Advisory Committee (Chair, 2010–Pres.) Academic Advisement Committee (2008–2011) Alumni & Endowment Funds—Subcommittee on Alumni Funds (2008–2011) Core Facility Equipment Review Committee (2008–2022) Honors, Awards & Scholarships Committee (2008–2011) Evolutionary Developmental Biologist Faculty Search Committee (2008–2009) College Laboratory Technician Search Committee (2008) Biology Currents Editorial Board (2008–2011) Undergraduate Student Advisor (2007–2015

# Service to Profession

#### **Ad Hoc Manuscript Reviews**

American Naturalist (3), Animal Behavior, Antibiotics, Applied and Environmental Microbiology (3), Behavioral Ecology, Biological Journal of the Linnaean Society, BMC Evolutionary Biology (3), Communications Biology, Ecological Entomology, Ecology Letters, Emerging Infectious Diseases, Evolution (8), FEMS Microbiology Ecology, FEMS Microbiology Letters, FEMS Microbiology Reviews, Frontiers in Microbiology (3), Genetics, Genome Biology and Evolution, Journal of Bacteriology (3), Journal of Biomedicine and Biotechnology, Journal of Evolutionary Biology, Journal of Molecular Evolution (2), Journal of Physical Chemistry, Journal of Theoretical Biology, Journal of Virology, International Journal of Evolutionary Biology, International Society for Microbial Ecology Journal, mBio (3), Microbial Genomics, Microbial Informatics and Experimentation, Microbiology, Molecular Biology and Evolution, Nature, Nature Communications (2), Oikos, Peer J, PLoS Genetics (2), PLoS One (4), Science, Trends in Microbiology, Virologica Sinica, Viruses Basel (2), Virus Evolution

#### Ad Hoc Book Reviews

Cambridge University Press, CRC Press, Jones and Bartlett Learning, Princeton University Press, Sinauer Associates, WH Freeman, WW Norton

#### Ad Hoc Grant Proposal Reviewer

Civilian Research and Development Foundation, CUNY Community College Collaborative Incentive Research Grant Program, National Science Foundation Division of Molecular and Cellular Biosciences, Polish National Science Centre, Tel Aviv University Center for Combatting Pandemics, U.S. Army Research Office

#### Editorial

American Society for Virology Program Committee (2024–Pres.) Peer Community in Evolutionary Biology – Recommender (2022–Pres.) Quarterly Review of Biology – Book Review Consultant (2021–Pres.) ASM's *COVID-19 Research Registry* – Curator (2020–2022) Oxford Academic Journals' *Virus Evolution* – Associate Editor (2019–Pres.) ASM's *Microbiology Resource Announcements* – Senior Editor (2018– Pres.)

#### Mentoring

Undergraduate Research Training Initiative for Student Enhancement (2023–Pres.) Science Organization of Minority Students (2015–2019) Minority Association of Premed Students (2015–2019) Queensborough Bridges to the Baccalaureate program (2009–Pres.) Louis Stokes Alliance for Minority Participation in STEM (2009–Pres.) Maximizing Access to Research Careers (MARC, Steering Committee) (2007–2020)

#### Panel Member and Reviewer

NIH Microbiology and Infectious Diseases Research study section (2021, 2023) NSF Postdoctoral Fellowships in Biology panel (2019) NIH Genetic Variation and Evolution (GVE) study section (2018) NSF Graduate Research Fellowship Program in Evolutionary Biology panel (2013) NSF Science and Technology Center Site Review Team for BEACON: An NSF Center for the Study of Evolution in Action at Michigan State University (2011)

NSF Advisory Panel in DEB Evolutionary Processes Cluster (2010, 2016)

#### Symposia Organizer

The Phage Club (2021-2022) – Monthly virtual phage research symposium Virus Ecology and Evolution Research symposium at CUNY ASRC (2019) Phage Hunters of New York at The Graduate Center of the City University of New York (2018) <u>Stochastic Dynamics in Living Cells</u> at The Graduate Center of the City University of New York (2015) Phage Summit at Queens College of The City University of New York (2013)

#### Website

<u>COVID Code</u> – This website contains recommendations for minimizing SARS-CoV-2 transmission in the built environment. The recommendations are based on mathematical modeling and simulation, and on experiments performed using a surrogate virus.

# Membership in Professional Societies

World Society for Virology (2019–Pres.) American Society for Virology (2019–Pres.) International Society for Viruses of Microorganisms (2017–Pres.) American Society for Microbiology (2008–Pres.) American Society of Naturalists (2005–Pres.) Society for the Study of Evolution (2005–Pres.)

#### Students Mentored

#### Summary

Mentored a total of 119 students (3 PD, 6 PhD, 16 MA, 73 UG, 22 HS) 22 students from underrepresented groups 17 undergraduates went on to research master's or PhD programs

#### Postdoctoral Associates (3 total)

Antun Skanata (2020–2021) Fabrizio Spagnolo (2019–2021) Sherin Kannoly (2018–Pres.)

#### PhD Students (6 Total)

Jonathan Luo—Graduate Center of the City University of New York (2023–present) Zubaida Islam—Graduate Center of the City University of New York (2021–present) Irene Hoxie—Graduate Center of the City University of New York (2016–2021)

• Postdoctoral Fellow, Krammer Lab, Icahn School of Medicine at Mount Sinai

Emily Lin—Graduate Center of the City University of New York (2013–2016)

- Research Assistant at Memorial Sloan Kettering Cancer Center
- Brian Ford—Graduate Center of the City University of New York (2011–2015) • Postdoctoral Fellow, University of Newcastle, UK
- James Carpino—Graduate Center of the City University of New York (2008–2014)
- Entrepreneur in 3D Printing

# PhD Student Rotations (10 Total)

Kaitlin Chan—Graduate Center of the City University of New York (2023) Kabir Thaker—Graduate Center of the City University of New York (2022) Malini Prasad—Graduate Center of the City University of New York (2021) Anna Flury—Graduate Center of the City University of New York (2021) Makayla Braunlin—Graduate Center of the City University of New York (2020) Johanna Bensel—Graduate Center of the City University of New York (2019) Niklas Janisch—Graduate Center of the City University of New York (2016) Emily Sible—Graduate Center of the City University of New York (2016) Sruti Patoori—Graduate Center of the City University of New York (2014) Glennon Bythroe—Graduate Center of the City University of New York (2013)

# Master's Students (16 Total)

Andy Castillo (2024–Pres.) Aleksandra Sokol (2024–Pres.) Delroy Brockett (2024–Pres.) Michael Loccisano (2023–2024) • Research Technician at Pfizer Inc. Aiden Stanciu (2022–2025) Yaxkin Meija (2021–Pres.) Michael Acquaotta (2019–2022) • NYC Public School Teacher JeanPaul Salinas (2019–2021)

Donna Bedasee (2018 – 2020)

• PhD Program at The Graduate Center of the City University of New York Aida Abbasiazam (2017–2019)

• Scientist at Catalent Pharma Solutions

Elsa Rosario (2017–2019)

• NSF GRFP in STEM Education, 2019

NYC Public School Teacher

Zachary Way (2016–2019)

• Best Poster Honorable Mention, 31st Annual Sigma Xi Research Day, Queens College Chapter (2017)

• DO Program at Des Moines University

Lauren Esposito (2014–2016)

• MPH program at Mt. Sinai College of Medicine '18

• Senior Analyst at Memorial Sloan Kettering Cancer Center

• Business Intelligence Engineer at Amazon

Gregory Lallos (2011–2013)

• Senior Research Technician, Regeneron Pharmaceuticals

• Scientist, Blue Rock Therapeutics

Jinyu Li (2010–2013)

- Lab Technician at Accupath Laboratories
- Supervisor, Clinical Laboratory Operations, Northwell Health

Bruce Sun (2009–2011)

• Scientist II, Blue Rock Therapeutics

#### Dissertation or Thesis Committee Membership (19 Total)

Taylor Rubin—PhD Biology, The Graduate Center CUNY (In progress) Joselyn Molinar—PhD Biology, Indiana University (In progress) Brandon Ely—PhD Biology, The Graduate Center CUNY (In progress) Praveena Naidu—PhD Biology, The Graduate Center CUNY (In progress) Katerina Yatamoto—PhD Biology, The Graduate Center CUNY (In progress) Charles Robinson—PhD Biology, The Graduate Center CUNY (2024) Cosmin Barbos—MA Biology, Queens College (2022) Guy Mason—PhD Biology, New York University (2023) Emma Ciccarelli-Purvin—PhD Biology, The Graduate Center CUNY (2022) LiYong Cao—MA Biology, Queens College (2021) Jonathan Goldstein—MA Biology, Queens College (2014) Tatiana Garces—MA Biology, Queens College (2014) Maylayal Salameh—MA Biology, Queens College (2014) Huansheng Cao—PhD Biology, Fordham University (2012) Sai Theja—MA Biology, Queens College (2011) Wassem Moarsi—MA Biology, Queens College (2010) Ryan Vinberg—MA Biology, Queens College (2010) Akash Sookdeo—MA Biology, Queens College (2010) Enobong Shammah—MA Biology, Queens College (2009), Committee Chair

## **Undergraduate Students (73 Total)**

Valeria Martinez (2024–Pres.) Ashley Jaime (2024–Pres.) Victoria Irizarry (2024–Pres.) Sukhleen Kaur (2024–Pres.) Kerwin Phillips (2024–Pres.) Manha Bulbul (2024–Pres.) Rebecca Schwartzman (2024) Iñigo Caballero (2023–Pres.) Aliza Nagel (2023–2024) Naya Melvani (2023) • Sc.B. Biochemistry, Brown University Brian Chan (2023–2024)

Jiaming Yan (2023–2024) Riki Posner (2023–Pres.) Anna Liu (2023) Delroy Brockett (2022–2023) Jade Cheng (2022) Michael Loccisano (2021–2022)

- Charles Darwin Prize
- Laura H. and Arthur L. Colwin Prize

• Research Scientist at Pfizer Inc.

Shyanon Rai (2021–2022)

• NYU Langone's Genome Technology Center Alexandra Goldblatt (2021–2023)

- Queens College Women's Club Award
- MD Program at New York Medical College

Naseerah Juman (2021–2023)

• Muriel and Philip Feigelson Award (Best Undergraduate Research in Biology)

• Helen T. Hendricks Scholarship

• DVM Program at Stony Brook University

Mazharul Mahe (2020–2023)

• Honors in the Mathematical and Natural Sciences

• Muriel and Philip Feigelson Award (Best Undergraduate Research in Biology) Izumi Kuremoto (2019–2020)

Kevin Singh (2019–2023)

• Honors in the Mathematical and Natural Sciences

Siddharth Malviya (2019)

• Burton L. Backner Student Affairs Award

• MPH Program, Dartmouth College

• Analyst, New York City Mayor's Office of Management and Budget Jon Shadan (2018–2021)

• Honors in the Mathematical and Natural Sciences

• MD Program at New York Institute of Technology College of Medicine Roberta Fazylova (2018–2020)

Gloria Stoyanova (2018–2019)

• Maximizing Access to Research Careers (MARC)

• Honors in the Mathematical and Natural Sciences

• PhD Program at Albert Einstein College of Medicine

Kristen Cheung (2018–2020)

• Honors in the Mathematical and Natural Sciences

• Macaulay Honors College '20

• Clinical Research Coordinator, Northwell Health

Michelle Markman (2018–2023)

• Honors in the Mathematical and Natural Sciences

• Macaulay Honors College '21

• MD Program at SUNY Downstate Medical School

Anna Gao (2017–2020)

• Laboratory Microbiologist, NYC Department of Health and Mental Hygiene Tevin Lynch (2017–2019)

• Honors in the Mathematical and Natural Sciences

• Muriel and Philip Feigelson Award (Best Undergraduate Research in Biology) David Musheyev (2017–2021)

• Honors in the Mathematical and Natural Sciences

• Macaulay Honors College '21

• MD Program at SUNY Downstate Medical School

Gabriella Oken (2017–2020)

• Maximizing Access to Research Careers (MARC)

Honors in the Mathematical and Natural Sciences

• University College Dublin School of Veterinary Medicine

Nanami Kubota (2017–2020)

• Honors in the Mathematical and Natural Sciences

Macaulay Honors College '20

• 2nd Prize Best Poster Runner Up, NYC SEA-PHAGES Symposium at Mount Saint Mary

• 38th Annual Meeting of the American Society for Virology Travel Award

• PhD Program at University of Pittsburgh

Hisham Alrubaye (2016–2018)

• Maximizing Access to Research Careers (MARC)

• Honors in the Mathematical and Natural Sciences

- Yale University Summer Undergraduate Research Program
- 1st Prize Best Poster, NYC SEA-PHAGES Symposium at Mount Saint Mary College
- PhD Program at University of Pittsburgh
- Sangeetha Tandalam (2015–2018)
  - Muriel and Philip Feigelson Award (Best Undergraduate Research in Biology)
  - Research Technician, Weill Cornell Medicine
  - Creighton University School of Medicine '25

Lixing He (2015)

Vincent-Joe Cali (2015-2018)

- Maximizing Access to Research Careers (MARC)
- Honors in the Mathematical and Natural Sciences
- Rutgers University Summer Undergraduate Research Program
- Colwin Award (Best Undergraduate Research in Biology, 2018)
- Albert Einstein College of Medicine '24
- Resident, Metropolitan Hospital Center

Carmen Urgiles (2015–2018)

- Maximizing Access to Research Careers (MARC)
- Honors in the Mathematical and Natural Sciences
- Invited Talk, NYC SEA-PHAGES Symposium at Mount Saint Mary
- American Society for Microbiology Research Capstone Program Fellowship
- Lab Technologist at Neochromosome, Inc.

Boryana Baric (2014–2015)

Paola Lozada (2014–2016)

Certified Medical Assistant, ENT and Allergy Associates

Peter Scimeni (2014–2015)

Zachary Way (2014–2016)

- Best Poster Honorable Mention, 31st Annual Sigma Xi Research Day, Queens College Chapter (2017)
- Colwin Award (Best Undergraduate Research in Biology, 2017)
- DO Program at Des Moines University
- Jonathan Itzhakov (2014–2015)

Aaron Wadler (2014–2015)

- PA program at State University of New York Downstate Health Sciences University '18
- Physician Assistant at Northwell Health
- Fraida Streiter (2014–2016)
  - Physician Assistant program at New York Institute of Technology, '21
  - Physician Assistant at Catholic Health
- Elsa Rosario (2014–present)
  - Maximizing Access to Research Careers (MARC)
  - Honors in the Mathematical and Natural Sciences
  - Best Poster in Microbiology prize, ABRCMS 2014, San Antonio, TX
  - Best Poster in Biology prize, 23rd Annual CSTEP Conference, Lake George, NY
  - MS Queens College '19
  - NYC Public School Teacher
- Daniel Grossman (2013–2014)

Ashley Prasad (2013–2016)

- Honors in the Mathematical and Natural Sciences
- Physician Assistant program at Hofstra University, '18

• Physician Assistant at Phelps Hospital and Northern Westchester Hospital

Rahat Shah (2013–2015)

• Medical Assistant, NorthShore University Health System David Toubiyan (2013–2015)

- St. Georges School of Medicine '20 Marko Baloh (2012–2016)
  - PhD Program at Texas A&M University
  - Postdoctoral Researcher, RWTH Aachen University

Qainat Shah (2012–2015)

- Award for Best Undergraduate Research in Neuroscience
- 1st runner up, Best Poster Presentation, QC Undergraduate Research Day 2014
- Maximizing Access to Research Careers (MARC)
- Honors in the Mathematical and Natural Sciences
- Yale University Summer Undergraduate Research Program
- MPH program at Mt. Sinai College of Medicine '17
- Albany Medical College '22
- MD, Cleveland Clinic

Lauren Esposito (2011–2014)

- Feigelson Award (Best Undergraduate Research in Biology, 2014)
- MS Queens College '16
- MPH program at Mt. Sinai College of Medicine '18
- Senior Analyst at Memorial Sloan Kettering Cancer Center
- Business Intelligence Engineer at Amazon

Swati Gupta (2011–2015)

- Thomas Jefferson University's Accelerated Professional Master's program '18
- Cytologist at Northwell Health
- Elizabeth Chapler (2011–2013)
  - Honors in the Mathematical and Natural Sciences
  - Physician Assistant program at Pace University '15
  - Physician Assistant at Mount Sinai West
- Stephanie Gampel (2011–2012)
  - Lucile Lindberg Scholarship
  - Albert Einstein College of Medicine '16

Rachel Morgenstern (2011–2012)

- MPH program at Columbia University Mailman School of Public Health '15
- Clinical Research Coordinator at Hospital for Special Surgery
- Lauren Mordukhaev (2010–2013)
  - Honors in the Mathematical and Natural Sciences, Macaulay Honors College
  - Charles Darwin Award (Highest GPA, QC Biology Department)
  - Hofstra Donald & Barbara Zucker School of Medicine '18

• Psychiatry Resident, The University of Texas Health Science Center at Houston Kevin Mu (2010–2013)

- Honors in the Mathematical and Natural Sciences
- Macauley Honors College Macaulay Honors College Thesis Award
- Feigelson Award (Best Undergraduate Research in Biology, 2013)
- Lab Technician, Poss Lab, Center for Infectious Disease Dynamics, Penn State University
- Cornell Veterinary College '18
- Veterinarian, Private Practice

Jane Ching (2010-2012)

- PharmD University of Maryland '16
- Senior Clinical Pharmacist, Transplant, SUNY Downstate Medical Center Shalini Singh (2010–2011)

• NSF-STEP Queensborough Bridge Fellowship for Summer Research (2010)

- Winner of 1st Prize for Best Poster at the 43rd Annual Meeting of the Metropolitan Association of College and University Biologists
- City College '15
- Adjunct Lecturer, Queensborough Community College

Avi Bitterman (2010–2011)

- Charles Darwin Award (Highest GPA, QC Biology Undergraduates)
- Jefferson Medical College '16
- Resident Physician at Icahn School of Medicine at Mount Sinai Dermatology David Lee (2009–2011)
- Honors in the Mathematical and Natural Sciences Jinyu Li (2009–2011)
  - Lab Technician at Accupath Laboratories
  - Supervisor, Clinical Laboratory Operations, Northwell Health
- Kevin Jhun (2009–2012)
  - Honors in the Mathematical and Natural Sciences, Macauley Honors College
  - University Scholar Award, Queens College
  - Best poster prize, 2012 Sigma Xi conference
  - Feigelson Award (Best Undergraduate Research in Biology, 2012)
  - PhD program at Mt. Sinai Medical College
  - Scientist at Mnemo Therapeutics

Mark Johnson (2009)

Carlos Romero (2009)

- MA Biology Queens College '15
- Junior Project Lead at Harvard LabXchange

Emilsie Leconte (2009)

Guylsda Alphonse (2009)

• Staff Nurse at Upper East Side Rehabilitation and Nursing Center

- Jung David Kim (2009–2011)
  - NSF-STEP Queensborough Bridge Fellowship for summer research (2009)
  - Summer Program for Undergraduate Research Award (2010)
  - EMT, Northshore LIJ Medical Center

Svetlana Musheyev (2008–2009)

- Feigelson Award (Best Undergraduate Research in Biology, 2009)
- NYU School of Dentistry '15
- Pediatric Dentist, Private Practice
- Sai Theja (2008–2009)
  - NSF-STEP Queensborough Bridge Fellowship for Summer Research (2009)
  - Summer Program for Undergraduate Research Award (2009)

#### High School Students (22 Total)

- Taksh Shah, Bronx Science (2023) Monil Patel, Townsend Harris (2020-2021) Alexander Chasteen, Bronx Science (2019-2021)
  - Yale University '25
- Andrew Liu, Bronx Science (2018–2020)

Maressa Cumbermack, Townsend Harris (2016–2017)

- Princeton University '21
- MD Candidate, Weill Medical College

Darsiya Krishnathasan, Townsend Harris (2016–2017)

• Stony Brook University '21

• Tufts University School of Medicine

David Musheyev, Townsend Harris (2016–2017)

- Macaulay Honors College '21
- MD Program at SUNY Downstate Medical School
- Sasha Balkaran, Townsend Harris (2016–2017)
  - Macaulay Honors College '21
- Fulbright Award Scholar, Universidad de Laguna David Zarowin, Townsend Harris (2015)
  - New York University '20
- Junior HR Associate, L'Oreal

Samia Abedin, Townsend Harris (2014)

• Columbia University '19

- Corporate Paralegal at Weil, Gotshal, and Manges Nimrod Gozum, Townsend Harris (2012–2013)
- NYCSEF Semifinalist/Second Award in Microbiology
- Stony Brook University '17

Alan Chu, Francis Lewis (2012)

- SUNY Binghamton '18
- Shanawaj Khair, John Bowne (2011–2012)
- 2012 NYSEF Finalist
- Intel International Science and Engineering Fair 2012
- Best poster prize, 2012 Sigma Xi conference
- Stony Brook University '16
- MD-PhD Candidate at the University of Colorado School of Medicine

Daniel Arango, John Bowne (2011–2012)

- 2012 NYSEF Finalist
- Intel International Science and Engineering Fair 2012
- Best poster prize, 2012 Sigma Xi conference
- Queensborough Community College '14

Deborah Sands, John F. Kennedy (2008)

- Cornell '14
- University of Pennsylvania '19
- Associate at Sidley Austin LLP

Shajoti Rahman, Townsend Harris (2008-10)

- Hunter College, CUNY '14
- SUNY Downstate College of Medicine '19

• MD at Icahn School of Medicine at Mount Sinai

Dipabali Chowdhury, Townsend Harris (2008–10)

NYCSEF Semifinalist/Second Award in Microbiology

• Cornell University '14

• Global Learning & Development Manager at MongoDB Katherine Valles, Townsend Harris (2008–10)

- NYCSEF Semifinalist/Second Award in Microbiology
- Fordham University '14
- IRTA Fellow at NIH
- Albert Einstein College of Medicine '21
- Research Fellow, Albert Einstein College of Medicine

Ashraf Hussain, Townsend Harris (2008-10)

- Queens College '13
- MD, Suny Downstate Medical Center College of Medicine '18

• Clinical Instructor, Ronald O. Perelman Department of Emergency Medicine at NYU Grossman School of Medicine

Lydia Wu, Townsend Harris (2007–2009)

- Sophie B. Davis School of Biomedical Education, CUNY '13
- Albany Medical College '16
- MD at Weill Cornell Medicine

Julie Kim, Townsend Harris (2007–2009)

- NYCSEF Semifinalist
- Carnegie Mellon University '13
- MFA, Ohio State University
- Feminist Writer & Organizer

Aneury Hernandez, Townsend Harris (2007–2009)

- NYCSEF Semifinalist/Third Award in Microbiology
- University of Michigan '13
- Stony Brook University School of Medicine '19
- MD at Icahn School of Medicine at Mount Sinai

#### **Visiting Scientists**

Rabab Mahdi, MA (2021–2023)

Dr. Fabrizio Spagnolo—Long Island University: Post (2021–present)

- Dr. Monica Trujillo—Queensborough Community College (2020-present)
- Dr. Saima Cheema-Queens College (2016-2018)
- Dr. Rafael Ovalle—Brooklyn College (2012–2013)
- Dr. Gillian Ryan—Dalhousie University (2009)

Dr. Sophie Rigvava—George Eliava Institute of Bacteriophages, Microbiology and Virology (2009)