

Jennifer Cook Easterwood

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Education

PhD Microbiology and Immunology, Medical University of South Carolina, Charleston, SC. August 2005. "The Effects of Highly Active Antiretroviral Therapy (HAART) on the Pathological and Behavioral Features of HIV-Associated Dementia in a SCID Mouse Model".

Bachelor of Science, Biological Sciences, Cum Laude. Presbyterian College, Clinton, SC. May 2000.

Appointments

Spring 2011-present: Associate Professor of Biology. Queens University of Charlotte. Charlotte, NC.

Fall 2005-Spring 2011: Assistant Professor of Biology. Queens University of Charlotte.

Fall 2021-present: Member-at-large, Queens University of Charlotte Faculty Personnel Committee

Fall 2012-present: Chair and Founder, Queens University of Charlotte IACUC.

Fall 2016: Served as department member for Blair College of Health for tenure review. Queens University of Charlotte.

Fall 2015: Served as department member for School of Nursing for tenure review. Queens University of Charlotte.

Fall 2013-2015: Chair of College of Arts and Sciences Faculty Personnel Committee. Queens University of Charlotte.

Fall 2012-2013: Science representative of College of Arts and Sciences Faculty Personnel Committee. Queens University of Charlotte.

Fall 2013: Chair of School of Nursing for tenure review. Queens University of Charlotte.

Fall 2006- 2012: Biology Secondary Education Program Coordinator. Queens University of Charlotte.

Fall 2006-present: Faculty Advisor-Tri-Beta Tau Tau Chapter. Queens University of Charlotte.

Fall 2010: CAS Faculty Representative, Knight School of Communication Search Committee for Visiting Professor in Digital Media. Queens University of Charlotte.

Spring 2006-Spring 2010: Faculty Representative- Retention Committee. Queens University of Charlotte.

Winter 2006-2007 and Winter 2009-2010: Faculty Leader- John Belk International Program (JBIP) Winter Study Tour in Rome and Florence. Queens University of Charlotte.

Spring 2006, Spring 2010, Spring 2015: Biology Search Committee. Queens University of Charlotte.

Teaching/Research Experience

Courses Taught

Fall 2005-Present. **Online/Adult classes in bold.**

Biology Department:

Biol 470: Biological Investigations (Fall 2009, Fall 2013, Fall 2014)
Biol 430/322 and Bio416: Topics: Introduction to Immunology (Fall 2006, Spring 2009, Spring 2011, Spring 2013, Spring 2015, Spring 2017).
Bio 402/416: Advanced Topics in Cellular and Molecular Biology- Immunology (Spring 2015 and Spring 2021)
Biol 402 and Bio 303: Genetics (Every Fall-402, Currently Spring-303)
Biol 307: Introduction to Microbiology (Spring and Fall)
Biol 209 and Bio 201: Foundations of Biology- Cellular and Molecular (Every Fall). Designed this course and lab with Prof. Katsanos and Dr. Weir
Biol 120: Microbiology for Health Professions (Summer, Fall, and Spring). Designed and taught this course as a hybrid offering with an online lecture and on-campus lab (Summer 2010 and Summer 2012).
Biol 460: Senior seminar (Spring 2007 and 2008)
Biol 450: Independent Studies in Molecular Genetics (Spring 2007)
Biol 430: Topics: Environmental Microbiology (Spring 2014).

Other Departments:

Core 120: The Moderns (Spring 2007)
Core 122: Modern Citizenship (Spring 2009 and 2010)
Core 412: Applying Ethics (Fall 2012)
Honors 220: DNA Technology (Spring 2007). Designed this course.
JBIP 210: John Belk International Study Tour Preparation Course (Fall 2006, 2007, and 2009).
QLC 340: Outbreak! The Science Behind Epidemics. Online lecture and lab general education course. (Every spring and summer since 2017).

Spring 2023

Faculty Mentor for Independent Study and Capstone Research Project, Maria Garcia-Lopez. "Sexing Raptors Using Morphometrics and Molecular Techniques".

Spring 2020-Fall 2020

Faculty Mentor for Capstone Research Project, Irene Kuriakose. "The Attempted Isolation of *G. rubripertincta* Bacteriophage and Annotation of *G. terrae* Phage "YungMoney"

Fall 2014-Spring 2016

Faculty Advisor for Honors Thesis, Harley Williams. "A Genetic Sexing Study of Raptor Species Native to the Southeast".

Fall 2013- Spring 2016

Faculty Advisor for Honors Thesis, Mona Atta. "A Survey of Molds Found in Queens Residence Halls."

Fall 2014-Spring 2015

Faculty Mentor for Independent Research, Elec Atkinson. "C. elegans as a Model Organism for Undergraduate Labs and Research". Researched and developed the use of C. elegans for genetic crosses in an undergraduate genetics course.

Fall 2012-Spring 2013

Faculty Mentor for Biological Investigations, Gideon Yeboah. "Evaluation of Disinfectant Efficacy on Bacteria-Coated Otoscope Cones."

Fall 2009-Spring 2011

Faculty Advisor for Honors Thesis, Dustin Harris. "Levels of Recombinant Bovine Growth Hormone in Cooked vs. Uncooked Beef."

Spring 2008- Spring 2009

Faculty Advisor for Honors Thesis. Kamil Kepinski. "Genetically Modified Food is Our Future".

Spring 2008- Spring 2009

Faculty Advisor for Honors Thesis. Jessica Bock. "An Overview of Antiretroviral Medications Over the Past 25 Years".

Peer-Reviewed Publications

Easterwood, J, Bethel, D., Kuriakose, I, Katsanos, J. " The Genomic Characterization of Two *Microbacterium foliorum*- Specific Bacteriophages, "QuadZero" and "AnnaLie". Microbiology Resource Announcements. July 2022. 11(7).

Katsanos, J., Ngene, C., **Easterwood, J**. "Genome Sequences of two F1 subcluster bacteriophages, Burwell21 and Nivrat, isolated using the bacterial host *Mycobacterium smegmatis*". Microbiology Resource Announcements. 2020. 9(11): e01594-19.

Easterwood, J, Gase, H, Ngene, C, Katsanos, J. "Genome Sequences of Mycobacteriophages Ebony and Holeinone". Microbiology Resource Announcements. 2019. 8(22): e00186-19.

David I Hanauer¹, Mark J. Graham², **SEA-PHAGES#**, Laura Betancur³, Aiyana Bobrownicki², Steven G. Cresawn⁴, Rebecca A. Garlena⁵, Deborah Jacobs-Sera⁵, Nancy Kaufmann⁵, Welkin H. Pope⁵, Daniel A. Russell⁵, Viknesh Sivanathan⁶, David J. Asai^{6*}, and Graham F. Hatfull^{5*}. (# **Jennifer Easterwood**- contributing author). An Inclusive Research-Education Community (iREC): A model for student engagement in Science. PNAS 2017; 114(51): 13531-13536.

Cook-Easterwood J. Cover your cough! A short and simple activity to demonstrate the antimicrobial effect of desiccation. JMBE. 2013; 14(2): 263-264.

Cook-Easterwood J, Middaugh LD, Griffin WC, 3rd, Khan I, Tyor WR. Highly active antiretroviral therapy of cognitive dysfunction and neuronal abnormalities in SCID mice with HIV-encephalitis. Exp Neurol. 2007; 205(2): 506-512.

Cook JE and Tyor WR. The Pathogenesis of HIV-Associated Dementia: Recent Advances Using a SCID Mouse Model of HIV-Encephalitis. Einstein J Biol Med. 2006; 22:32-40.

Cook JE, Dasgupta S, Middaugh LD, Terry EC, Gorry PR, Wesselingh SL, Tyor WR. 2005. Highly active antiretroviral therapy and human immunodeficiency virus encephalitis. Ann Neuro. 2005;57:795-803

Griffin WC, 3rd, Middaugh LD, **Cook JE**, Tyor WR. The severe combined immunodeficient (SCID) mouse model of human immunodeficiency virus encephalitis: deficits in cognitive function. J Neurovirol. 2004;10:109-115

GenBank Publications

Easterwood, J, et. al. Publication of the microbacteriophage QMacho in GenBank. Accession number OP434443. National Center for Biotechnology Information. October 2022.

Easterwood, J, et. al. Publication of the microbacteriophage QuadZero in GenBank. Accession number MZ150787. National Center for Biotechnology Information. June 2021.

Easterwood, J, et. al. Publication of the bacteriophage Doobus in GenBank. Accession number MZ820083. National Center for Biotechnology Information. August 2021.

Easterwood, J and Kuriakose, I. Publication of the bacteriophage YungMoney in GenBank. Accession number MZ150791. National Center for Biotechnology Information. December 2021

Easterwood, J, et. al. Publication of the microbacteriophage Nucci in GenBank. Accession number MN096367. National Center for Biotechnology Information. 2019.

Easterwood, J, et. al. Publication of the mycobacteriophage Nivrat in GenBank. Accession number MH651183. National Center for Biotechnology Information. 2018.

Easterwood, J, et. al. Publication of the bacteriophage Vasanti in GenBank. Accession number MK359313. National Center for Biotechnology Information. 2018.

Easterwood, J, et al. Mycobacterium Phage, HoleInOne, complete genome. Genbank Accession MG812490. National Center for Biotechnology Information 2018.

Honors/Awards

Spring 2022. Professional Develop funds awarded to support the publication of Microbiology Resource Announcements manuscript.

Spring 2020. Professional Develop funds awarded to support the publication of Microbiology Resource Announcements manuscript.

Fall 2019. Research stipend awarded by Tri-Beta National Honor Society.

Spring 2016. Awarded \$265 by the Professional Development Committee to attend the Association of Southeastern Biologists Conference, 2016.

Fall 2015. Acceptance into SEA-PHAGES Program. HHMI and University of Pittsburgh.

Spring 2013. Awarded \$1100 by the Professional Development Committee to attend the Association of Southeastern Biologists Conference, 2013.

Annual Faculty Review 2005-present. Queens University of Charlotte. Exceeded expectations.

Fall 2010. Awarded \$1000 by the Professional Development Committee to research primary cell cultures.

March 2010. Most Influential Women on Campus. Women's History Month Committee, Queens University of Charlotte.

Fall 2007. LI-COR Genomics Education Matching Funds Award. \$52,101.50 to be used towards the purchase of a LI-COR DNA sequencer.

October 2004. Second place winner, Student Research Day 2004, MUSC.

July 2003. Student Travel grant, American Society for Virology 22nd annual meeting.

Conferences

Kuriakose, I, **Easterwood, J**. "The Attempted Isolation of *G. rubripertincta* Bacteriophage and Annotation of *G. terrae* Phage "YungMoney". Association of Southeastern Biologists, Virtual conference. April 2021.

Kuriakose, I, **Easterwood, J.** "The Attempted Isolation of *G. rubripertincta* Bacteriophage and Annotation of *G. terrae* Phage "YungMoney". SNCURCS, Virtual Conference. November 2020.

Kuriakose, I, Katsanos, J, **Easterwood, J.** "The Isolation and Annotation of Bacteriophages "MCubed" and "Nucci". SNCURCS, Raleigh, NC. November 2019.

Kuriakose, I., **Easterwood, J.**, Katsanos, J. "The Isolation and Annotation of Bacteriophages MCubed and Nucci". 11th Annual SEA-PHAGES Symposium, Ashburn, VA. June 2019

Jerez, O., Tubolino, S., **Easterwood, J.**, Katsanos, J. "Queens University of Charlotte performed another "Nivrat" experiment along with "Burwell21". 10th Annual SEA-PHAGES Symposium, Ashburn, VA. June 2018.

Natalia Furr, Scott Weir, **Jennifer Easterwood.** *Lys-3* and *lys-8* gene expression in *E. aerogenes* and *B. thuringiensis* infected *C. elegans*. Oral Presentation. Association of Southeastern Biologists, Myrtle Beach, SC. April 2018.

Alana Jefferson and **Jennifer Easterwood.** Comparison of the Multiplex Primer Set to the P2/P8 Primer Set and the DNA Source used for the Molecular Sexing of Hawks and Owls. Poster Presentation. Association of Southeastern Biologists, Myrtle Beach, SC. April 2018.

Maggie Commins, Patricia Koplas, **Jennifer Easterwood**, Sarah Griffith. "Practical ideas for integrating civic learning outcomes across the curriculum". PACE Conference, Elon University, NC. February 14, 2018.

Hailey Gase, Alyssa Strickler, Caroleen Ellis, Orianna Jerez, Chioma Ngene, **Jennifer Easterwood**, April Sipprell, Scott Weir, Joanna Katsanos. Queens University of Charlotte makes a "HoleInOne" discovery with "Ebony", isolating and annotating two bacteriophages. 9th Annual SEA-PHAGES Symposium. Janelia Research Campus, VA. June 9-11, 2017.

Jennifer Easterwood and Patricia Koplas. "Biology curriculum redesign with emphasis on common research experiences," NC Project Kaleidoscope Regional Network meeting. Greensboro, NC. May 16, 2017.

April, 2016. Williams H, Thomas J, **Easterwood J.** "A Genetics Study of Raptor Species Native to the Southeast." Association of Southeastern Biologists, Concord, NC.

April 2016. Dishman S, **Easterwood J**, Rhodes K, Henderson S, Wolniak M, Katsanos J. "Isolation and Genomic Annotation of the Novel *Bacillus thuringiensis* Bacteriophage, Rex16". Association of Southeastern Biologists, Concord, NC.

April, 2015. Atkinson E, **Easterwood J**, Thomas J. "C. elegans as a Model Organism for Undergraduate Labs and Research". Association of Southeastern Biologists, Chattanooga, TN.

April, 2015. Doughty J, Thomas J, **Easterwood J.** "What are you Growing? Microbial Growth on Birds of Prey". Association of Southeastern Biologists, Chattanooga, TN.

April 2014. **Easterwood, J** and Thomas, J. "Girl or Boy? Molecular Sex Determination of Raptors in an Upper-level Genetics Course." Association of Southeastern Biologists. Spartanburg, SC.

April, 2013. Yeboah G, Taylor K, Koplas P, **Easterwood J**. "Evaluation of Disinfectant Efficacy on Bacteria-Coated Otoscope Cones." Association of Southeastern Biologists, Charleston, WV.

Fall 2012. Charlotte Biotechnology Conference. Charlotte, NC

Fall 2009. Charlotte Biotechnology Conference. Charlotte, NC

Fall 2007. NSF Grant Writing Workshop. Fayetteville, NC

April 2007. Association of Southeastern Biologists 2007. Columbia, SC.

March 2007 and March 2016. GlaxoSmithKline Women in Science Scholars Program. Raleigh, NC.

April 2004. Experimental Biology 2004. Washington DC. Poster presentation.
Cook JE, Griffin WC, Middaugh LD, Tyor WR. "Neurological changes in a SCID mouse model of HIV encephalitis after treatment with highly active antiretroviral therapy".

July 2003. American Society for Virology 22nd annual meeting. Davis, CA. Oral presentation. Cook JE, Middaugh LD, Tyor WR. "Neuropathological changes in HIV-encephalitis after highly active antiretroviral therapy".

Abstracts:

April, 2004

Tyor WR, **Cook JE**, Griffin WC, Middaugh LD. Highly active antiretroviral therapy in a SCID mouse model of HIV-encephalitis reduces neuropathology and viral load. American Academy of Neurology meeting. San Francisco, CA.

March, 2003

Tyor WR, **Cook J**, Dasgupta S, Terry E, Middaugh L. Measurement of Highly Active Antiretroviral Therapy in Mouse Brain. American Academy of Neurology meeting. Honolulu, Hawaii.

October, 2002

Tyor WR, **Cook J**, Dasgupta S, Terry E, Middaugh L. Measurement of Highly Active Antiretroviral Therapy in Mouse Brain. American Neurological Association meeting. New York, NY.

Service Activities:

Member-at-large, University FPC
Chair, Queens IACUC
Faculty advisor, Tri-Beta Biological Honor Society

Physics Search Committee, non-departmental member
Editorial Board for Eastern Biologist Journal.
Peer Reviewer for several Immunology and Genetics textbooks (Oxford University Press and Benjamin Cummings).
Peer Reviewer for the Journal of Neuroscience
Charlotte-Mecklenburg County Schools volunteer
April 2013: Poster Judge for Association of Southeastern Biologists Conference.
April 2014
 Invited Lecture. Brevard University. "DNA, RNA, or Protein? The Search for the Genetic Material".
April 2013
 Invited Speaker. Norwich University. "There and Back Again: A Teacher's Journey of Scientific Research".
February 2012: Introduced and moderated questions for: Learning Society at Queens Presents Craig Venter
February 2009
 Invited Speaker. The Citadel Military College. "Microbial Adaptations to Diverse Environments".
Spring 2007 and 2008
 Faculty Organizer. Marking Excellence: Celebrating the Achievements of Students (ME:CAS student research day). Queens University of Charlotte.
September 29, 2004
 Guest Lecturer, "The use of anti-HIV drugs in battling HIV infection of the brain". Biology Department, Presbyterian College.

Professional References:

Dr. Patricia Koplas
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Professor of Chemistry
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Dr. Kent Rhodes
Professor Emeritus, Department of Biology
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