BOARD OF TRUSTEES
UNIVERSITY OF THE DISTRICT OF COLUMBIA
UDC RESOLUTION NO. 2023 - 23

SUBJECT: TENURE APPROVAL FOR SAMUEL WATERS, PH.D., COLLEGE OF ARTS & SCIENCES

WHEREAS, pursuant to D.C. Code §38-1202.06(3), the Board of Trustees is authorized to establish or approve policies and procedures governing admissions, curricula, programs, graduation, the awarding of degrees, and general policy making for the components of the University; and

WHEREAS, Dr. Samuel Waters, Assistant Professor of Biology in the Division of Sciences & Mathematics of the College of Arts and Sciences (CAS) of the University of the District of Columbia has petitioned the University to be granted tenure in the department in which she is qualified; and

WHEREAS, Dr. April Massey, Dean of CAS, in conjunction with the Division Chair, Department and College Promotion and Tenure Committees, has conducted a thorough review of Professor Waters's academic background and records of achievement in teaching, scholarship, and university and community service and have recommended him for promotion from Assistant Professor to the rank of Associate Professor and for tenure; and

WHEREAS, they judged Professor Waters to be an outstanding professor with outstanding skills and expertise in his field who meets the criteria by which University of the District of Columbia faculty are evaluated, based on the 8th Master Agreement, noting his rankings as outstanding in his teaching effectiveness; his research and scholarly works, expertise; and wide community engagement make him an asset to UDC; and

WHEREAS, the Chief Academic Officer and the President have affirmed the recommendation of tenure for Professor Waters from Dean Massey and the Division and College Promotion and Tenure Committees, and the President has forwarded the recommendation for tenure to the Board of Trustees.

NOW THEREFORE BE IT RESOLVED, that the Board of Trustees of the University of the District of Columbia approves the award of tenure to Dr. Samuel Waters, College of Arts and Sciences, at the rank of Associate Professor.

Submitted by the Academic & Student Affairs Committee: May 31, 2023

Approved by the Board of Trustees: June 8, 2023

Christopher D. Bell
Chairperson of the Board

UNIVERSITY OF THE DISTRICT OF COLUMBIA
OFFICE OF THE CHIEF ACADEMIC OFFICER

LAWRENCE T. POTTER, JR., Ph.D.
CHIEF ACADEMIC OFFICER

CONFIDENTIAL MEMORANDUM

TO: Ronald Mason, Jr., J.D.
President

FROM: Lawrence T. Potter, Jr. Ph.D.
Chief Academic Officer

DATE: April 30, 2023

RE: Recommendation: Professor Samuel Waters for tenure and promotion to the rank of Associate Professor

President Mason:

Guided by the *Eight Master Agreement* and criteria established by the College of Arts and Sciences for promotion and tenure, I have reviewed the portfolio and supporting documentation submitted by **Dr. Samuel Waters for tenure and promotion to the rank of Associate Professor**.

As Chief Academic Officer, my review aims to evaluate evidence of significant and relevant achievements in scholarship/creative work, teaching, and service. In addition, I review the self-narrative to ensure there is alignment between established standards and evidence provided within the portfolio. I conduct my review of each applicant after the files have been reviewed by the Chair, DEPC, CPC, Dean, and URC (in cases where an appeal is filed). Based on a holistic review of recommendations and the file, I make an independent recommendation to you for consideration.

Professor Waters arrived as a tenure-track Assistant Professor of Biology in 2018. **He is applying for promotion to Associate Professor with tenure**. **He has met the eligibility criteria for the time in rank and annual ratings, with 4, 4, and 3 being his composite annual scores for the past three years.**

Chair: Strongly Recommended
DEPC: Strongly Recommended
CPC: Strongly Recommended (3 of 5)
Dean: Recommended (3 of 5)

TEACHING: Professor Waters has taught a wide range of biology courses over the past five years (8 total), including Developmental Biology, Genetics, Molecular Biology, and Embryology. He has taught both lecture and laboratory courses, as well as teaching/training undergraduates in research in his research laboratory. Professor Waters' courses have consistently received positive student evaluations (average of 3.59 out of 4.00). Dedicated to continued growth as a teacher, Professor Waters also receives the UDC Innovative Educator Badge (from CAL). The **Dean** praises Professor Waters, noting that "the value of his teaching is underscored by the satisfaction expressed by his students and the gains that they are making (degree completion and progression to doctoral degrees) because of his intentionality in connecting science theory

and practice through a comprehensive bench science experience that culminates in the dissemination of [student] work in professional forums." Dr. Waters is known as a valued mentor for students, one who helps students gain placement in quality graduate programs. He has met the standard in this domain.

RESEARCH: The **Dean** describes Professor Waters as a "nationally recognized microbiologist and developmental biologist with expertise in factors (Gbx transcription factor family members, Gbx1 and Gbx2) impacting neural development." The **Chair** praises Dr. Waters for his "ability to develop and implement a viable and relevant research in his field [and notes that] his NSF HBCU-UP grant (collaborating with Howard University Medical School) was a major accomplishment." In his career, he has published several significant studies in his field of investigation, all of which have been cited multiple times. At UDC during the last five years, Professor Waters has published two (2) quality peer-reviewed research articles, one abstract, and has been invited to submit another manuscript in a "Methods Collection," which he has been invited to guest edit with the *Journal of Visualized Experiments* (*JoVE*). *JoVE* is a "peer-reviewed, PubMed-indexed video-methods journal devoted to the publication of biological, medical, chemical and physical research in a video format" (online sources). What is noteworthy here is the quality of the scholarship. The two venues for publication are of high quality. For example, the *Federation of American Societies of Experimental Biology (a.k.a.) FASEB Journal* has an impact factor of 5.8 and a strong editorial board. The second, the *Journal of Developmental Biology* (*JDB*), has a lower impact score (.8), but most journals are below 1; the editorial board for the *JDB*, however, is exceptional. Given his comparatively high teaching load and the approximately 1.5-year depreciation of laboratory research activity due to COVID-19, his lab-dependent research has been quite good. Also, in the past five years, he has attended 9 conferences/symposia, during which he was a presenter, invited speaker, or judge for 7 of those appearances. Professor Waters meets the standard in this domain.

SERVICE: Professor Waters has served as the Biology Program Coordinator for the past 4 years. The Chair commends Professor Waters for his "service as a judge at local and national research conferences" and notes that he has also served as an "NSF grants review panelist for the National Science Foundation, [which has led to] a partnership between UDC and SciTech2U, a Maryland-based non-profit organization focused on engaging K-12 students from underrepresented backgrounds in high-quality STEAM experiences." This is precisely the kind of community service/outreach that UDC faculty should be engaged in to enrich the community and younger students and generate interest in UDC as a college of choice. The **CPC** also praises Dr. Waters' community engagement, and the **DEPC** commends Dr. Waters' for spearheading the Biology Program's effort to secure funding through the CAO's HEERF Supplemental Funding, noting that the "resources provided by the proposal will improve the quality of experiential learning for UDC students enrolled in biology courses." Professor Waters serves on several Division-level committees, including Assessment, Curriculum, Advising, Safety, and Outreach & Enrollment. He has also served on the Honorary Degree Committee (university level) and the Judicial Hearing Committee (university level). In short, Professor Waters meets the standard in this domain.

Summary Evaluation

Professor Waters has letters of reference from three external reviewers. The first letter is from **Dr. Martin Goulding**, a leading authority on neural circuits in the spinal cord and recipient of the 2022 Brain Prize, the world's top recognition in neuroscience. Dr. Goulding recommends promotion and tenure and places Dr. Waters *"equal to or above his peers,"* describing him as *"an excellent and tireless educator [who has a] building national reputation for his scholarly contributions."* The second letter is from **Dr. Mark Lewandoski,** a Senior Cancer and Developmental Biology Laboratory investigator and Head of the Genetics of Vertebrate Development Section at the **National Cancer Institute**. Dr. Lewandoski endorses promotion and tenure for Dr. Waters, stating, *"I admire the grace, intelligence and work ethic with which [Dr. Waters] meets the challenges that occur in his scientific vocation. His scientific research, teaching merits and community service place him equal or above his peers, with a growing national reputation."* In n the third letter, **Dr. Mark Hannink**, a Professor of Biochemistry and Associate Director of the Bond Life Sciences Center at the University of Missouri, writes, *"I am very impressed with Dr. Waters' continued research productivity, having published two manuscripts and an Experimental Biology abstract in 2020 […]; in my opinion," he concludes, "Dr. Waters has exceeded all expectations in the areas of research, teaching and service that are expected for promotion with tenure to Associate Professor."* In summary, Professor Waters

has met the standards in each domain**.** **Therefore, I concur with all recommendations and external reviewers in supporting Professor Waters to be tenured and promoted to Associate Professor.**

The electronic dossier is available for review. Send an email request to the Office of the Chief Academic Officer at CAO@udc.edu.

I, Ronald Mason, Jr., President of the University of the District of Columbia, APPROVE X DENY _____

the recommendation to promote Professor Samuel Waters to the rank of Associate Professor with tenure, and

recommend him for approval to the Board of Trustees.

Signature

5/11/23

Date

cc: Professor Samuel Waters
Albert Pearsall, President, UDCFA
Lorinnsa Bridges-Kee, Vice President of Human Resources

CURRICULUM VITAE
Samuel T. Waters

TITLE [redacted]

ADDRESS [redacted]

TELEPHONE [redacted]

EMAIL samuel.waters@udc.edu

EDUCATION

San Diego State University, San Diego. BS in Environmental Health, 1992
University of Virginia, Charlottesville. Ph.D. in Microbiology, 2001

RESEARCH AND PROFESSIONAL EXPERIENCE:

Assistant Professor and Biology Program Coordinator, Division of Sciences and Mathematics, University of the District of Columbia, 2017 - present
Adjunct Assistant Professor, Department of Anatomy, Howard University Medical School 2022-present
Independent BioScientific Professional Consultant, Woodbridge, VA, 2014-2017
Senior Biologist, Kelly Scientific, American Type Culture Collection (ATCC), 2015-2016
Assistant Professor, Division of Biological Sciences, University of Missouri, 2006-2014
Postdoctoral Fellow (CRTA), National Cancer Institute 2001–2006

HONORS AND AWARDS

UDC Innovative Educator Badge 2021
UDC Online Teach-Only Certificate 2020
Cancer Research Training Award, National Cancer Institute, 2001-2006
Ruth and William Silen, M.D. Award for Oral Research Presentation. New England Science Symposium, Harvard Medical School, 2005
NIH Underrepresented Minority in Biomedical Research Supplement, University of Virginia, 1995-2001
Best Oral Research Presentation at the Seventeenth and Nineteenth Annual Department of Medicine Residents and Fellows Research Day, University of Virginia School of Medicine, 1998,2000
President of the Graduate Biosciences Society, University of Virginia, 1996
Entering Deans Fellowship, University of Virginia, 1994
Cell and Molecular Biology Program Training Grant, University of Virginia, 1994
NIH Underrepresented Minority in Biomedical Research Supplement, San Diego State University, 1993
Minority Biomedical Research Support (MBRS) Fellowship, San Diego State University,1993
Howard Hughes Medical Institute (HHMI) Undergraduate Research Fellowship, San Diego State University, 1992
Dean's List, San Diego State University, 1991

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

Society for Developmental Biology

RESEARCH INTERESTS

Molecular and genetic analysis of transcriptional regulators during neural development.

PUBLICATIONS

Abstracts:

1. Janine M. Ziermann and **Samuel T. Waters**. *Gbx2* Hypomorph Mice with Cranial Nerve V, VII, and VIII as well as Craniofacial and Cardiac Abnormalities. FASEB J. 2020 Apr 21. https://doi.org/10.1096/fasebj.2020.34.s1.06699

Manuscripts (published): graduate and undergraduate students underlined

1. David A. Roeseler, Lona Strader, Matthew J. Anderson, and **Samuel T. Waters**. *Gbx2* is required for the migration and survival of a subppulation of trigeminal cranial neural crest cells. J Dev Biol. 2020 Dec 11;8(4), 33; doi: 10.3390/jdb8040033. **https://doi.org/10.3390/jdb8040033**

2. Desirè M. Buckley, Jessica Burroughs-Garcia, Sonja Kriks, Mark Lewandoski, and **Samuel T. Waters**. *Gbx1* and *Gbx2* are essential for normal patterning and development of interneurons and motor neurons in the embryonic spinal cord. J Dev Biol. 2020 Apr 1;8(2). pii: E9. doi: 10.3390/jdb8020009. **https://doi.org/10.3390/jdb8020009**

3. Eric Villalon, David Schulz and **Samuel T. Waters**. Real-time PCR quantification of gene expression in embryonic mouse tissue. Methods Mol Biol. 2014;1092:81-94. doi: 10.1007/978-1-60327-292-6_6.

4. Desire M. Buckley, Jessica Burroughs-Garcia**,** Mark Lewandoski, and **Samuel T. Waters**. Characterization of the *Gbx1*$^{-/-}$ mutant: a requirement for *Gbx1* for normal locomotion and sensorimotor circuit development. PLoS One. 2013;8(2):e56214. doi: 10.1371/journal.pone.0056214. Epub 2013 Feb 13. http://www.ncbi.nlm.nih.gov/pubmed/23418536

5. David A. Roeseler, Shrikesh Sachdev, Desire M. Buckley, Trupti Joshi, Doris K. Wu, Dong Xu, Mark Hannink and **Samuel T. Waters**. Elongation Factor 1 alpha1 and genes associated with Usher syndromes are down-stream targets of GBX2. PLoS One. 2012;7(11):e47366. doi: 10.1371/journal.pone.0047366. Epub 2012 Nov 8. http://www.ncbi.nlm.nih.gov/pubmed/23144817

6. Jessica Burroughs-Garcia., Vinoth Sittaramane., Anand Chandrasekhar., and **Samuel T. Waters**. Evolutionarily Conserved Function of Gbx2 in Anterior Hindbrain Development. Developmental Dynamics, Apr;240(4):828-838. 2011. http://www.ncbi.nlm.nih.gov/pubmed/21360792

7. **Waters ST**., and Lewandoski M. A threshold requirement for GBX2 levels in hindbrain development. Development. 133(10):1991-2000. 2006. http://www.ncbi.nlm.nih.gov/pubmed/16651541

8. **Waters ST.,** Wilson C., and Lewandoski M. Cloning and embryonic expression analysis of the mouse Gbx1 gene. Gene Expression Patterns. 3(3):313-317. 2003.

9. **Waters ST**., McDuffie M., Bagavant H., Deshmukh US., Gaskin F., Jiang C., Tung KS., and Fu SM. Breaking Tolerance to Double Stranded DNA, Nucleosome and other Nuclear Antigens is not required for the Pathogenesis of Lupus Glomerulonephritis. J. Exp. Med. 199(2):255-264. 2004.

10. Fu SM., Castillo JD., Deshmukh US., Lewis JE., **Waters ST.,** and Gaskin F. Autoantibodies and glomerulonephritis in systemic lupus erythematosus. Lupus. 12(3):177-182. 2003.

PUBLICATIONS

11. **Waters ST**., Fu SM., Gaskin F., Deshmukh US., Sung SJ., Kannapell CC., Tung KS., McEwen SB., and McDuffie M.: NZM2328: A New Mouse Model of Systemic Lupus Erythematosus with Unique Genetic Susceptibility Loci. Clinical Immunology. 100(3):372-383. 2001.

12. Deshmukh US., Lewis JE., Gaskin F., Dhakephalkar PK., Kannapell CC., **Waters ST**., and Fu SM.: Ro60 Peptides Induce Antibodies to Similar Epitopes Shared among Lupus Related Autoantigens. J. Immunol. 164(12):6655-6661. 2000.

13. Deshmukh US., Lewis JE., Gaskin F., Kannapell CJ., **Waters ST**., Lou YH., Tung KS., and Fu SM.: Immune Responses to Ro60 and Its Peptides in Mice. I. The Nature of the Immunogen and Endogenous Autoantigen Determine the Specificities of the Induced Autoantibodies. J. Exp. Med. 189(3):531-540. 1999.

14. Kabouridis PS., **Waters ST**., Escobar S., Stanners J., and Tsoukas CD.: Expression of GTP-binding protein alpha subunits in human thymocytes. Molecular and Cellular Biochemistry. 144(1):45-51. 1995.

In Preparation:

Invited Manuscript

1. Janine Ziermann, Paola Correa-Alfonzo, Kelly Lee, and **Samuel T. Waters**. Real-Time PCR as a Validation tool For Gbx2 Target Genes. JoVE, Methods Collection.

INVITED PRESENTATIONS

Invited Lectures and Seminars:

Gbx2 is required for normal craniofacial development. Division of Sciences and Mathematics, University of the District of Columbia, Washington DC, 2022.

Are you teaching content, or just covering material? College of Arts and Sciences, University of the District of Columbia, Washington DC, 2021.

Gbx2 is required for the migration and survival of a subpopulation of trigeminal cranial neural crest cells. Department of Anatomy Seminar Series, Howard University, Washington DC, 2019.

Gbx2 is required for the migration and survival of a subpopulation of trigeminal cranial neural crest cells. Cancer and Developmental Biology Laboratory, Frederick MD. 2018.

Gbx2 is required for the migration and survival of a subpopulation of trigeminal cranial neural crest cells. Feeding and Swallowing Group Meeting. George Washington University, Washington DC, 2017.

"Gbx Transcription Factors in Neural Development and Motor Control". Biology Colloquium. Grinnell College, Grinnell, IA 2014.

"Gbx Transcription Factors in Neural Development". Biomedical Seminar Series. Long Island University, Brooklyn, NY 2012.

"Gbx Transcription Factors in Neural Development". MBRS Science/Recruitment Seminar Series. San Diego State University, San Diego, CA 2012.

"Gbx Transcription Factors in Neural Development". Pharmaceutical Sciences Graduate Student Seminar Series. University of Missouri-Kansas City. 2010.

"Gbx Transcription Factors in Neural Development". Summer Research Internship Program (SRIP) Distinguished lecturer. University of Virginia School . 2009.

Invited Lectures and Seminars:

"Gbx Transcription Factors in Neural Development". Blacks in Science Day Forum. Saint Louis Science Center. Saint Louis, MO. 2008

"Genetic Analysis of Mouse Gbx Transcription Factors During Neural Development". New England Science Symposium. Harvard Medical School. 2005.

"Genetic Analysis of Mouse Gbx Transcription Factors During Neural Development". Biomedical Sciences Student Colloquium. San Diego State University, San Diego, CA. 2005.

"Genetic Analysis of Mouse Gbx Transcription Factors During Neural Development". National Institutes of Health Black Scientists Association. National Institutes of Health, Bethesda, MD. 2005.

"A Threshold Requirement for GBX2 Levels During Cerebellar Development". NCI Interdisciplinary Retreat, Rocky Gap Resort, Cumberland, MD. 2004.

"The Role of Gbx Transcription Factors During Development". NCI Interdisciplinary Retreat. Cumberland, MD. 2002.

"The Role of Gbx Transcription Factors During Development". NCI Interdisciplinary Retreat. Cumberland, MD. 2001.

"A Resistant Allele in the New Zealand Mixed Murine Model for systemic Lupus Erythematosus". Biomedical Sciences Student Colloquium. San Diego State Uinversity, San Diego, CA, 2000

"The Generation of NZM2328 Congenic Mice Carrying C57L/J-derived Resistant Alleles". Nineteenth Annual Department of Medicine Residents and Fellows Research Day. University of Virginia School of Medicine. 2000.

"The Phenotypic and Genotypic Analysis of the New Zealand Mixed 2328 Murine Model of Systemic Lupus Erythematosus". Experimental Biology 99. Washington D.C. 1999.

"The Phenotypic and Genotypic Analysis of the New Zealand Mixed 2328 Murine Model of Systemic Lupus Erythematosus". Seventeenth Annual Department of Medicine Residents and Fellows Research Day. University of Virginia School of Medicine. 1998.

Recent National/International Poster Presentations (2006-present): undergraduate students*, graduate students underlined

Desire M. Buckley., Jessica Burroughs-Garcia, and **Samuel T. Waters**: *Gbx1* loss of function affects development of the monosynaptic stretch reflex. Midwest Society for Developmental Biology, Saint Louis, Missouri October 2014.

Desire M. Buckley., Jessica Burroughs-Garcia, Eric Villalon, and **Samuel T. Waters**: *Gbx1* and *Gbx2* cooperatively regulate pattering of the dorsal and ventral spinal cord. Midwest Society for Developmental Biology, Saint Louis, Missouri September 2013.

Vivienne C. Echendu*, Jessica Burroughs-Garcia**, Samuel T. Waters**. In situ hybridization analysis of Gbx1 RNA expression in Gbx1 knockout mouse mutants. Council on Undergraduate Research (CUR) meeting for REU students in Washington DC., October 2011.

J. Burroughs-Garcia**,** M.J. Will, M. Lewandoski, **S.T. Waters**. A requirement for Gbx1 in normal locomotion. Society for Neuroscience, Washington, DC, November 2011.

David A. Roeseler, Shrikesh Sachdev, Trupti Joshi, ChanHo Hwang, Dong Xu, Mark Hannink, **Samuel T. Waters**. GBX2 target gene identification reveals Usher syndrome genes PCDH15 and USH2A. Society for Developmental Biology, Chicago, IL, July 2011.

Recent National/International Poster Presentations (2006-present): undergraduate students*, graduate students underlined

Jessica Burroughs-Garcia**,** Vinoth Sittarmane, Anand Chandrasekhar, **Samuel T. Waters**. Evolutionarily conserved function of Gbx2 expression in cranial nerve V development. Society for Developmental Biology, San Francisco, CA, July 2009.

Jessica Burroughs-Garcia**,** Justin M. Ryder*, Vinoth Sittarmane, Anand Chandrasekhar, **Samuel T. Waters**. Role of Gbx2 expression in craninal nerve V development. MidWest Society for Developmental Biology, Iowa City, IA, 2008.

Magda Nemeth, Michael Burton**, Samuel T. Waters**. Examination of Gbx1 in dorsal spinal interneuron migration. MidWest Society for Developmental Biology, Iowa City, IA, 2008.

RESEARCH SUPPORT

Project Lead: Waters, Samuel 02/01/2022- $124,050
University of the District of Columbia, CAO's HEERF
"Enriching student-centered teaching and research experiences in the Biology Program by acquiring state-of-the art equipment and supplies".

PI: Waters, Samuel 07/01/2020- 06/3/2023 $226,822
National Science Foundation
"Collaborative Research: Excellence in Research: Impact of Gbx2 on neural crest cells during neuronal, craniofacial and cardiovascular development".

PI: Waters, Samuel 05/16/19-05/15/20 $7,000
University of the District of Columbia STEM Center for Research and Development
"Transcriptional Regulation of Sensor motor Circuits Defining Motor Behavior".

PI: Waters, Samuel 06/1/18-08/15/18 $5,000
University of the District of Columbia FIRG
"Gbx2 is required for the migration and survival of a subpopulation of trigeminal cranial neural crest cells".

PI: Waters, Samuel 08/1/10-07/31/13 $174,526
National Science Foundation
"Role of Gbx transcription factors in development of sensory-motor circuits"
Sponsor for; Desire M. Buckley, National Science Foundation Graduate Research Fellowship.
Genetic inducible fate mapping of Gbx1 throughout development of the CNS.

PI: Gassmann, Walter; Co-PI: Waters, Samuel 06/1/11-05-31/13 $64,900
University of Missouri Research Board
"Balancing of plant development and immune responses by SRFR1"

PI: Waters, Samuel 03/1/10-08/31/11 $38,240
University of Missouri Research Board
"Direct Targets of GBX2 regulating sensory-motor circuitry"

PROFESSIONAL SERVICE ACTIVITIES

International, National and State:

Guest Editor for a Methods Collection in the journal JoVE, 2022
Reviewer for the journal Cells, 2022
Reviewer for the Journal of Developmental Biology, 2021
Judge for the inaugural Annual Biomedical Research Conference for Minoritized Scientists (ABRCMS) ePoster Spring Symposium for Emerging Scientists. April 2022
Judge for oral and poster presentations at the Annual Biomedical Research Conference for Minoritized Scientists (ABRCMS) supported by the NIGMS. November 2019

International, National and State:

Judge for oral and poster presentations at the annual National Institute of Science-Beta Kappa Chi Joint Meeting, Washington, DC, 2018
Judge for oral presentations and posters at the Annual Biomedical Research Conference for Minoritized Scientists (ABRCMS) supported by the NIGMS. November 2011
Faculty representative/recruiter at the Council on Undergraduate Research (CUR) meeting for REU students in Washington DC., October 2011
Judge for oral presentations and posters at the Annual Biomedical Research Conference for Minoritized Scientists (ABRCMS) supported by the NIGMS. November 2008

Grant review panels

Panel member, (NSF) Developmental Mechanisms and the EvoDevo, October 2020
Panel member, (NSF) Neural Systems Cluster, CAREER Proposal Panel, October 2013

Grant review panels

Panel member, (NSF) Integrative Organismal Systems, March 2013
Panel member, (NSF) Integrative Organismal Systems, October 2011
Panel member, (NSF) Integrative Organismal Systems, October 2010
Panel member, (NSF) Integrative Organismal Systems, October 2009
Reviewer, University of Missouri Research Board, November 2008
Reviewer, University of Missouri Research Board, November 2007
Reviewer, University of Missouri Research Board, November 2006

LOCAL SERVICE

Campus:

University of the District of Columbia Judicial Hearing Committee, 2018 - present.
University of the District of Columbia Honorary Degree committee, 2018 - 2019.
Advisory Council Member, Chancellor's Diversity Initiative (CDI), University of Missouri, 2011-2013.
Advisory Committee Member, Post-baccalaureate Research Education Program (PREP) Scholars, 2009-2013
Advisory Committee Member, Initiative for Maximizing Student Diversity (IMSD), 2009-2013
Committee Member, Arts and Science Diversity Committee, University of Missouri, 2009-2013
Panelist, “Ridgel and Marshal Fellowship” orientation, University of Missouri, 2009-2011.
Blacks in Science Day Forum. Saint Louis Science Center. 02/23/2008
Faculty sponsor, University of Missouri Racquetball Club 2006-2014
Honorary Volleyball coach. University of Missouri Women’s Volleyball 11/2008
Panelist, “ Negotiating a Job Offer” (sponsored by the graduate school) 11/2008
Poster judge, Society for Neuroscience, 2008.
Inaugural Nexus student lecture, 2007
Judge Spring undergraduate research and creative achievement forum 2007
Panelist, Preparing Future Faculty -Surviving and succeeding in graduate school. (sponsored by the graduate school) 2007
Fall semester commencement speech (University of Missouri School of Arts and Sciences), 2006
Express student lecture, 2006
Poster presentation, LSC, 2006

Departmental:

Biology Program Coordinator, University of the District of Columbia, 2018- present
The Division of Sciences and Mathematics Curriculum Committee, University of the District of Columbia, 2017- present.
Division of Biological Sciences Diversity committee 2011-2013
Lecture Developmental Genetics Developmental neurobiology 10/2011
Divisional Council, Biological Sciences, 2009-2011
Lecture Developmental Genetics Developmental neurobiology 10/2007
Lecture Professional Survival Skills 10/2008

OUTREACH ACTIVITIES

I have formed a partnership with Scitech2U, a Maryland-based non-profit organization that provides underrepresented, K-12 students access to quality, innovative STEAM education using experiential learning meant to engage and enrich their passion for STEAM.

TEACHING INTERESTS

Developmental Biology, Genetics, Cell and Molecular Biology,

FORMAL COURSES TAUGHT:

Microbiology Lecture/Lab 241/240 (Fall, 2021 - present)

This is an undergraduate lecture course that is intended to provide students with an understanding of basic principles concerning microbial life and its relationship to human welfare.

Embryology Lecture/Lab 365/364 (Fall, 2019 - present)

This is an undergraduate lecture course that is intended to provide students with an understanding of animal development, the cellular and molecular basis of animal development and an understanding of organogenesis.

Introduction to Biology Lecture/Lab 101/103 (Fall 2018 - present)

This is an undergraduate lecture/lab course that is intended to provide students with the fundamental concepts of Biology.

Advanced Genetics Lecture/Lab 361/360 (Spring 2018 - present

This is an undergraduate lecture/lab course that is intended to provide students with advanced concepts of genetics.

General Genetics Lecture/Lab 361/360 (Spring 2018 - present)

This is an undergraduate lecture/lab course that is intended to provide students with the fundamental concepts of genetics.

Molecular Biology Lecture/Lab 490/491 (Spring 2018 - present)

This is an undergraduate lecture course that emphasizes nucleic acid structure and methods, information transfer, gene expression in bacteria and eukaryotes, and posttranscriptional regulation in eukaryotes. The students will learn the techniques and experiments used to discern these mechanisms.

Developmental Biology 495 (Fall 2017)

This is an undergraduate lecture course that is intended to provide students with an understanding of animal development, the cellular and molecular basis of animal development and an understanding of organogenesis

Undergraduate Research Biology 401/402 (Fall 2017- present)

This is an undergraduate laboratory course that is intended to provide students with experiential learning opportunities. Students conduct research that results in an abstract suitable for presentation at a local or national meeting.

Undergraduate Introduction to Cell Biology, BioSci 2300 (Fall 07, Spring 08, Spring 09, Fall 10, Fall 11, Fall 12, Spring 13, Fall 2013).

Lecture: This is an undergraduate lecture course that is intended to introduce students to cell biology. I use the textbook as the primary source of information. I have incorporated many of the suggestions received through Peer evaluations and student comments to tailor my approach of teaching the course, such as, examples brought to class for discussion, including video explanations in lecture, review materials for exams and exams. This has resulted in increased enthusiasm and student participation during lectures. The outcome I strive to achieve for this class is to provide students with a broad understanding of the basic principles and concepts of Cell Biology and instill a new level of appreciation for the topics discussed.

Neural Development in Health and Disease, BioSci. 8200 (FS09, SP11).

This is a graduate level course that I have developed. The course is driven mostly by primary literature. The first portion of the course introduces the basic structure and function of the nervous system and describes its rough development. Topics in neural development are presented with a particular emphasis

on molecular genetic studies, which integrate patterning of the nervous system and the role of neurotrophic factors in neural development. The second portion of the course covers topics in important and scientifically tractable disorders of nervous system function. Discussions focus on the molecular basis of these disorders and understanding how molecular abnormalities produce neurological deficits. The outcome I strive to achieve for this class is to increase the knowledge base of students through an understanding of the relevant primary literature. In addition, I hope to increase the students' ability and comfort in presenting and discussing primary research articles.

SUMMARY OF STUDENT ADVISING

Graduate Students:

Dissertation adviser

2007- 2009: Nemeth, Magda., (Received non-thesis MA, Biological Sciences).
2007- 2013: Burroughs-Garcia, Jessica. Successful Dissertation Defense (04/13). Degree date August, 2013
2008 - 2013: Roeseler, David. Successful Dissertation Defense (11/12/13). Degree date December, 2013.
2011- 2015: Buckley, Desire. *Recipient of National Science Foundation Graduate Research Fellowship, 2012*. Successful Dissertation Defense (01/22/15). Degree date May, 2015.

Master's Thesis adviser

2022- Present: Lee, Kelly. Biology, Cancer Biology, Prevention and Control program
2022- Present: Ukwandu, Harriette. Biology, Cancer Biology, Prevention and Control program

Graduate Committees:

Kristen McPike, Ph.D. candidate, Department of Anatomy, Howard University, (Janine Ziermann adviser)
Erkan Osman, Ph.D. student, Molecular Microbiology and Immunology, University of Missouri, (Chris Lorson adviser)
Danny Stark, Ph.D. student, Division of Biological Sciences, (D. Cornelison adviser)
Dane Lund, Ph.D. student, Division of Biological Sciences, (D. Cornelison adviser)
Natalie Downer, Ph.D. student, Division of Biological Sciences, (Michael Garcia adviser)
Jacqueline Glascock, Ph.D student, Molecular Microbiology and Immunology, (Chris Lorson adviser)
Ji Chul Nam, MS student, Plant Sciences, (Walter Gassmann adviser)
Victoria Hodgkinson, Ph.D. student, Biochemistry, (Michael Petris adviser)
Melissa Terryberry, MS student Division of biological Sciences, (Chris Lorson adviser)
Stephan Shannon, MS student Division of Biological Sciences, (Deyu Fang adviser)
Derrick Glasco, Ph.D. student, Division of Biological Sciences, (Anand Chandrasekhar advisor)
Denzil Roberts, Ph.D. student, Electrical and Computer Engineering, (Gregory Triplett adviser)
Ashley Siegel, Ph.D. student, Division of Biological Sciences, (D. Cornelison adviser)
Devin Barry, Ph.D. student, Division of Biological Sciences, (Michael Garcia adviser)

Postbaccalaureate:

2010: Eric Villalon., (PREP Scholar)
2009: Ross, Jolill., (PREP Scholar)

Undergraduate Research Students:

2022 - Present Amanda Yaya., (Junior)
2019 - 2022 Davian West (Senior) Degree granted (2022) Indana University Graduate School
2019 - 2022 Oshane Orr (Senior) Degree granted (2022) University of Pittsburgh Graduate School
2018 - 2022 Rajay Lindsey (Senior) Degree granted (2022) University of Pittsburgh Graduate School
2018 - 2022 Renae Duncan (Senior) Degree granted (2022) University of Rochester Graduate School
2019 - 2022 Novistka Moore (Senior) Degree granted (2022)
2017-2019 Lona Strader (Junior) Degree granted (2019)
2017-2019 Nicodeme Ekani (Junior) Degree granted (2019)
2013 – 2013 Thalia Sass (Freshman)

2012 - 2013: Panousis, Paraskevi., *LSUROP summer 2012, 2012 -2013 fellow* (Junior)
2011 - 2013: Voris, Zachary., (Junior)
2012 - 2013: Kantor, Asher., Degree granted (2013) University of Missouri Graduate School
2011 - 2013: Myer, Stephanie., (Senior)
2011: Echendu, Vivenne. *REU/ summer fellow*.
2009 - 2011: Smith, Adam., Degree granted (2011) University of Missouri, Medical School
2010: Kramme, Katherine., (Junior)
2010: Twellman, Erin., Degree granted (2010) University of Missouri Medical School
2010: Smith, Jeremy., *REU/ summer fellow*
2009-2010: Kemelage, Andrew, Degree granted (2010) University of Missouri-Kansas City Dental School.
2009: Garner, Ashley., (Sophomore EXPRESS student)
2009 - 2010: Breedlove, Lindsay., Degree granted (2010) University of Missouri Medical School
2009: Hanson, C., (Freshman)
2008 - 2010: Patel, Krupa., Degree granted (2010) University of Pennsylvania Dental School
2008 - 2009: Feldhaus, Jacob., Degree granted (2010) University of Missouri Medical School
2008 - 2009: Urkov, Sam., *LSUROP fellow*, Degree granted (2010)
2008: Brown, Ray., (EXPRESS student)
2007: Ryder, Justin., *REU/ summer fellow*
2007 - 2008: Leaderbrand, C., (freshman)
2006: Fagbemi, Larry., (EXPRESS student) Degree granted (B.S. University of Missouri)
2006 - 2008: Roeseler, David., Graduate School, Biological Sciences, University of Missouri.

UNIVERSITY OF THE DISTRICT OF COLUMBIA 1851

FISCAL IMPACT STATEMENT

TO: The Board of Trustees

FROM: Managing Director of Finance David A. Franklin

DATE: June 8, 2023

SUBJECT: Tenure Approval for Samuel Waters, Ph.D., College of Arts & Sciences

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Conclusion

It is concluded that there is no fiscal impact associated with the granting of tenure to Dr. Samuel Waters, Assistant Professor of Biology in the Division of Sciences & Mathematics, in the College of Arts & Sciences (CAS) of the University of the District of Columbia (UDC). The proposed resolution is for the approval of tenure for Dr. Waters at the rank of Associate Professor.

The Chair, DEPC, and CPC of CAS have conducted thorough, independent reviews and prepared independent reports to the dean regarding tenure for Professor Waters. It was then considered at the Dean's, CAO's and President's levels. It has been recommended in the Board Resolution that Professor Waters be approved for promotion and tenure at the rank of Associate Professor.

Background

Dr. Waters joined the CAS in August of 2018 as an assistant professor. Vetting of all dossier content was completed at the levels of the program, Department, and School. The CAO reviewed all recommendations and Dr. Waters's portfolio (which includes external reviews of his qualifications). All reviews validate the strengths of Professor Waters's tenure and promotion dossier and conclude that he is an outstanding teacher and mentor, researcher and scholar who has earned laudable recognition and praise for his work, making him a highly competitive tenure candidate. Additionally, he has demonstrated a strong record of service to the University community.

The recommendation of tenure for Professor Samuel Waters has been affirmed by the Dean, Chief Academic Officer, and President. The President has forwarded the recommendation and background information along with a resolution for the award of tenure to the Board of Trustees.

Financial Impact

This request has been approved based upon the information provided. There are no anticipated risks at this time.