

**BOARD OF TRUSTEES  
UNIVERSITY OF THE DISTRICT OF COLUMBIA  
UDC RESOLUTION NO. 2023 - 20**

**SUBJECT: TENURE APPROVAL FOR MATHILDE KNIGHT, 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. Mathilde Knight, 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 (University), 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 Knight's academic background and records of achievement in teaching, scholarship, and university and community service and have recommended her for promotion from Associate Professor to the rank of full Professor and for tenure; and

**WHEREAS**, they judged Professor Knight to be an outstanding professor with impressive skills and expertise in her field who meets the criteria by which University of the District of Columbia faculty are evaluated, based on the 8<sup>th</sup> Master Agreement, noting her rankings as outstanding in her teaching effectiveness; her research and scholarly works, expertise, professional credentials; and wide community engagement make her an asset to UDC; and

**WHEREAS**, the Chief Academic Officer and the President have affirmed the recommendation of tenure for Professor Knight 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. Mathilde Knight, College of Arts and Sciences, at the rank of full 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

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

CONFIDENTIAL MEMORANDUM

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

FROM:   
Chief Academic Officer

DATE: April 30, 2023

RE: Recommendation: Professor Mathilde Knight for tenure and promotion to the rank of 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. Mathilde Knight for tenure and promotion to the rank of 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 Knight was promoted to Associate Professor of Biology in 2017 when she arrived in a full-time role at UDC. **She is applying for the rank of Professor with tenure. Professor Knight received two Distinguished (most recent two) and one Outstanding rating in the past three years.** She, therefore, meets the eligibility requirements.

**Chair: Strongly Recommended**  
**DEPC: Strongly Recommended**  
**CPC: Strongly Recommended**  
**Dean: Recommended (1 of 1)**

**TEACHING:** The **DEPC** praises Professor Knight, saying that she is a “precious asset” on the faculty who “encourages students to be willing, able, and strongly competitive yet receptive to novel ideas and humble enough to select the right career path and remain on it until one’s academic career is completed.” In other words, she sets the right tone of encouragement and nurturing with her students, while not compromising on standards. The Dean points out the long relationship UDC has enjoyed with Professor Knight, going back to when she was teaching as an adjunct before being hired as a visiting professor. Appropriate for a faculty member of her experience, Professor Knight has made teaching contributions beyond her specific classrooms—at a higher level of curriculum innovation. According to **Dean Massey**, Dr. Knight “developed UDC’s first molecular biology course” and went on to build a “comprehensive post-baccalaureate curriculum for our undergraduate

alumni seeking additional exposures and supports before pursuing careers or next levels of education. In five years, she has built a platform for student success with few rivals." This is the kind of evidence of impact one expects to see from more accomplished faculty members with many years of experience. Professor Knight was key in organizing and running the Research Week activities for CAS students to share their presentations. She is clearly very dedicated to student learning and advancement in STEM, especially the sciences. The portfolio's evidence of teaching success is borne out most prominently through the many examples of students presenting at conferences and symposia, internal and external, under the guidance and mentorship of Professor Knight. She meets the standard in this domain.

**SCHOLARSHIP:** The **Chair** (Dr. Song) observes that "Dr. Knight has conducted fascinating research over the last five years, [and that] her numerous publications . . . have been well-received and have made a significant impact." Dr. Song also praises Professor Knight for her collaboration with "distinguished scholars nationally and internationally, as well as her participation in a number of invited conferences, symposia, and research workshops," all of which have raised the "reputation of the University and the Biology program." **Dean Massey** states that Professor Knight, a highly regarded molecular biologist, is "an international authority on Schistosomiasis" and that she serves as a valuable mentor, positioning graduate students "in our Cancer Biology/Biology program with the skill, professional comfort, and access to networks needed to compete successfully in international science communities, [even traveling] with them around the globe to share their discoveries." For the Dean, what distinguishes Professor Knight is her ability to pursue high-level research in her very active lab while simultaneously "[engaging] graduate and post-doctoral level students in science from initial questions to translational value." Considering Professor Knight's scholarly output since arriving at UDC in 2017, a total of four (4) journal articles have appeared: two in 2017, one in 2018, and one in 2021. The two most recent have been published in *PLoS Neglected Tropical Diseases*; the other two appeared in *Nature Communications* and *Advanced Parasitology*. All are co-authored. Since arriving at UDC, Professor Knight has mentored and guided younger scholars in pursuing research and publication. She is well known for this and should be applauded. Moreover, her longer record of publications, several of which appear from top publishers in the field, stretches back to the 1980s. Professor Knight meets the standard of this domain. Her overall **h-index** is impressive, even in the years since 2018 (36 all-time, 16 since 2018). Her **i10 index** is similarly strong (60 all time, 28 since 2018): [https://scholar.google.com/scholar?hl=en&as\\_sdt=0%2C21&q=matty+knight&btnG=](https://scholar.google.com/scholar?hl=en&as_sdt=0%2C21&q=matty+knight&btnG=). She is, by all accounts, a highly accomplished scholar and should be acknowledged as such. Beyond strict statistics for publications, Professor Knight has a remarkable record in terms of speaking engagements, research projects/collaborations, and research in progress. She continues to be an active and productive researcher with significant reach/impact.

**SERVICE:** Professor Knight's service includes contributions at all levels: program, College, University, profession, and community. She's been the Curriculum and Assessment Chairperson and oversaw a 2021 revision of the entire curriculum; she served on the CAS Grievance Committee, scholarship review committees, and DEPC. She's been a key part/planner for Commencement, Founders' Day, and Research Week. She's an experienced NIH grant reviewer and peer reviewer for journals in the field. Finally, her development of the master's program in partnership with the Lombardi Comprehensive Cancer Center has been a springboard for several community activities that focus on healthcare and prevention strategies, especially in cancer. As a research coordinator, she works closely with Dr. Carolyn Cousin in directing many of the master's students to focus their attention on community projects that assist, especially, African Americans in the District of Columbia. Thus, through those students, she directly impacts the promotion of screening protocols and other health-related preventive measures. She has also served the community as an outreach cancer scientist who has spoken to community people about cancer screening, eating better, and exercise. In sum, she meets the standard in this domain.

### **Summary Evaluation**

Professor Knight is a recognized authority in her field, one who has helped advance the understanding of infectious diseases across diverse populations; indeed, her reputation in the scholarly community has brought credit to UDC. Moreover, she is helping to shape the next generation of biologists (and STEM students of color in general) who can follow her example. Professor Knight provided several letters of recommendation, including from **Dr. Paul Brindley** of the School of Medicine and Health Sciences at George Washington University and **Dr. Joanna Bridger**, Director of the Centre for Genome Engineering and Maintenance at Brunel University London. In his strong endorsement of Professor Knight's application, Dr. Brindley writes, "*Dr. Knight has consistently demonstrated excellence as a researcher and scholar, certainly during her current position as adjunct professor in this department, and as dedicated academician and researcher who also provides*

*reliable and effective service to the broader academic community.*" Similarly, Dr. Bridger offers a strong endorsement of Professor Knight's application, noting that she herself was mentored by Dr. Knight in the mid-1980s, a relationship that encouraged Dr. Bridger to pursue a Ph.D.: *"[Dr. Knight's] mentorship and training enabled me to go on to finish my education and achieve a Ph.D. and much more besides. Without her inspiring me at that early stage, I would not be where I am now, a professor, directing a research center with over 35 academics within it, graduating over 25 Ph.D. students, and publishing over 100 research papers."* A third letter writer is **Dr. Najib M. El-Sayed**, Department of Cell Biology and Molecular Genetics & Center for Bioinformatics and Computational Biology, who serves as the Director of Integrated Life Sciences, Honors College, University of Maryland College Park. Dr. El-Sayed offers his *"highest recommendation as [Dr. Knight] is an extremely bright and talented scientist who I am sure you already recognize as an outstanding member of the UDC community."* In summary, Dr. Knight remains a stalwart member of CAS, UDC, and the larger academic community. **Therefore, I concur with all recommendations and external reviewers in supporting Professor Knight to be tenured and promoted to the rank of Professor.**

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

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

the recommendation to promote Professor Mathilde Knight to the rank of Professor with tenure, and

recommend her for approval to the Board of Trustees.

  
Signature

5/11/23

Date

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

## University of the District of Columbia: Application for Promotion and Tenure

## Directions:

Complete this form, append all supporting documentation in the same order as listed herein, and submit to your Department Chairperson no later than the second Friday of September. Index all attachments and reference the attachment numbers in the appropriate section of this form.

Name: Mathilde Knight Date: August 24, 2022

College: College of Arts and Science Dept.: Biology

Current Rank: Associate Professor Step: NA

Date promoted to current rank: June 13, 2017

Date of initial employment at June 13, 2017

UDC or predecessor institution:

Rank applying for: Full Professor with tenure

**I. Earned degrees and certificates**

Degree	Major	Institution	City/State	Date
PhD	Biochemistry in Virology	Kings College	London/UK	May, 1982
BS	Microbiology	Chelsea College	London/UK	May, 1978

The remainder of this application pertains to the time period from the date of successful application for promotion to the current rank. Add additional pages as necessary. Material pertaining to the period before the date of successful application for promotion to current rank may be appended to the application.

**II. Performance Evaluations**

Summary of Previous Performance Evaluations (indicate both numerical score and rating for overall performance). Attach copies of referenced profile sheets. Begin listing with the most recent evaluation.

Year	Teaching	Scholarship	Univ. Serv.	Comm. Serv.	Overall
2021-2022	4	4	4	4	4
2020-2021	4	4	4	4	4
2019-2020	3	4	4	4	3.666
2018-2019	Not available	Not available	Not available	Not available	NA
2017-2018	Not available	Not available	Not available	Not available	NA

### III. Scholarship and professional Activities

#### A. Continuing Education

##### 1. Courses completed for academic credit

Date	Course No. & Title	Institution	Credit Hrs.	Attachment#
1982	Ph.D. (Biochemistry)	University of London (Kings College)	3 years	<a href="#">A.1.1</a>
1978	BS.C (Microbiology)	University of London (Kings College formerly Chelsea College)	3 years	<a href="#">A.1.2</a>

Has an official transcript been filed with the Office of Academic Affairs?   X   Yes        No

##### 2. Short Courses, Workshops, etc. (not included in III A1)

Date	Title	Role	Sponsor(s)	Hours	Attachment #
September 1-2, 2015	Snail Genome Meeting	Organizer	NIH-NIAID	2 days	<a href="#">A.2.1</a>
2014	Workshops on Xcelligence Technology: Breakthroughs in Cancer and Toxicology	Presenter	ACEA Biosciences Inc	2 days	<a href="#">A.2.2</a>
October 19-21, 2012	Polyethyleneimine mediated siRNA gene silencing in the <i>S. mansoni</i> snail host, <i>B. glabrata</i>	Organizer, instructor	NIH and BRI	3 days	<a href="#">A.2.3</a>
2011	Workshop in translational research: 'Stress in the snail vector <i>B. glabrata</i> and transmission of <i>S. mansoni</i>	Instructor	NIH-NIAID	1 day	<a href="#">A.2.4</a>
1984-1987. UK	Individualized instruction of senior researchers in the use and application of Recombinant DNA technology.	Instructor	NIH medical research	NA	NA
1984-1987. UK	Extensive training of master's and PhD candidates in Molecular Biology	Instructor	NIH medical research	NA	NA
1984-1987. Mill Hill, UK	Post-graduate master's and PhD students in recombinant DNA technology.	Instructor	NIH medical research	NA	NA

##### 3. Conference Participation

Date	Nature of Conference	Role	Attachment #
June 21-25, 2021. UK	British Society of Parasitology	Speaker	<a href="#">A.3.1.1</a> <a href="#">A.3.1.2</a>
2019	National Institute of Science (NIS)	Supervisor for participant with	<a href="#">A.3.2</a>

		presenting students	
2019	American Society of Tropical Medicine and Hygiene (ASTMH)	Supervisor for students presenting	<a href="#">A.3.3</a>
2018	American Society of Tropical Medicine and Hygiene (ASTMH)	Supervisor for students presenting	<a href="#">A.3.4</a>
August 9-11, 2015. Salvador, Brazil	14 <sup>th</sup> International Symposium on Schistosomiasis: Variability in the susceptibility of the snail host <i>Biomphalaria glabrata</i> to <i>Schistosoma mansoni</i> and impact of global warming	Presenter	<a href="#">A.3.5</a>
August 9-11, 2015. Brazil	14 <sup>th</sup> International Symposium on Schistosomiasis	Participant	<a href="#">A.3.6</a>
August 4-6, 2015. Valencia, Spain	OMICS conference; Epidemiology and Public Health: impact of global warming and snail susceptibility to schistosomiasis	Speaker	<a href="#">A.3.7</a>
2014, Houston, Texas	National Institute of Science: The impact of global warming on Infectious Diseases.	Speaker	<a href="#">A.3.8</a>
2014, UK	BSP University of Nottingham talk. Reversing <i>Biomphalaria glabrata</i> resistance to <i>Schistosoma mansoni</i> by induction of stress genes	Keynote Speaker	<a href="#">A.3.9</a>
March 2013, Japan	Tokyo, Japan. A centenary symposium for the memory of discovery of <i>Oncomelania</i> snails being intermediate hosts for <i>Schistosoma japonicum</i>	Keynote Speaker	<a href="#">A.3.10</a>
2011, UK	Imperial talk. Towards a molecular understanding of the snail/schistosome interaction.	Speaker	<a href="#">A.3.11</a>
2010, USA	NYU Seminar talk. Stressed snails and Schistosomes: effect of stress induction and susceptibility of <i>Biomphalaria glabrata</i> to <i>Schistosoma mansoni</i>	Speaker	<a href="#">A.3.12</a>
2006. Richmond, VA	Early induction of stress and schistosomiasis in the snail host, <i>Biomphalaria glabrata</i> and parasite <i>Schistosoma mansoni</i> infection, British Society of Parasitology, Nottingham University	Speaker	<a href="#">A.3.13</a>
2002. Shanghai, China	International Conference on Emerging Infectious Diseases in the Pacific Rim: Molecular approaches toward elucidating the snail, <i>Biomphalaria glabrata</i> and parasite, <i>Schistosoma mansoni</i> relationship.	Speaker	<a href="#">A.3.14</a>
1985. UK	British society of Parasitology, Autumn Symposium: Cloning and expression of antigenic and maturation-linked polypeptides of <i>S.mansoni</i> .	Speaker	NA

## B. Authorships

### 1. Books

Date	Title	Publisher	Co-Authors(s)	Attachm ent #
2014	Cancer and the Nuclear Envelope: The non-random repositioning of whole	Adv Exp Med Biol	Joanna M. Bridger; Halime D. Arican;	<a href="#">B.1.1</a>

	chromosomes, and individual gene loci in interphase nuclei and its relevance in disease, infection, aging and cancer		Helen A. Foster; Lauren S. Godwin; Amanda Harvey; Ian R. Kill; Ishita S. Mehta; Mai Hassan Ahmed	
2010	Fluorescence in situ Hybridization (FISH) Protocols and Applications	Humana Press	Joanna M. Bridger, Emmanuela V. Volpi	<a href="#">B.1.2</a>
2010	Advances in the genomics and proteomics of the freshwater intermediate snail host of <i>Schistosoma mansoni</i> , <i>Biomphalaria glabrata</i> .	Springer Science+Business Media	Ittiprasert, W., Myers, J., Odoemelam, E., Raghavan, N., Lewis, F., Bridger, J.	<a href="#">B.1.3</a>
2007	Mobile Genetic Elements in Metazoan Parasites: Endogenous retrotransposon sequences of the <i>Schistosoma mansoni</i> intermediate snail host, <i>Biomphalaria glabrata</i>	Austin: Landes Bioscience, in press	Bridger J., Ittiprasert W., Odoemelam E., Masabanda J., Miller A., Raghavan N. 2007.	<a href="#">B.1.4</a>
2006	Parasitic Flatworms: Molecular Biology, Biochemistry, Immunology and Control; Changes in the gene expression profile of an invertebrate snail host upon exposure to parasitic platyhelminths	CABI	Raghavan, N.	<a href="#">B.1.5</a>
1984	Molecular Parasitology: Identification and biosynthesis of schistosomes surface antigens.	Academic Press, New York	Simpson, A.J.G., Payares, G. and Smithers, S.R.	NA
1982	Interferons: The 2-5A System and interferon action.	Action Press, New York	Cayley, P.J., Silverman, R.H., Balkwill, F., McMahon, M., and Kerr, I.M.	NA
1981	Cellular Responses to Molecular Modulators: The 2-5A system in interferon-treated and control cells.	Academic Press, New York	Cayley, P.J., Silverman, R.H., Wreschner, D.H., Gilbert, C.S., Brown, R.E. and Kerr, I.M.	NA
1981	Methods in Enzymology: Enzymatic synthesis, purification and fractionation of (2'-5') oligodeoxylic acid.	Academic Press, New York	Hovanessian, A.G., Brown, R.E., Martin, E.M., Roberts, W.K., and Kerr, I.M.	NA

## 2. Published Papers, Articles, Reports, etc.

Date	Title	Publisher	Co-Authors	Attachment #
2021	PIWI silencing mechanism involving the retrotransposon <i>nimbus</i> orchestrates resistance to infection with <i>Schistosoma mansoni</i> in the snail vector, <i>Biomphalaria glabrata</i>	PLoS Neglected Tropical Diseases	Smith, M., Yadav, S. Fagunloye, O.G. Pels, N. A., Horton, D.A. Alsultan, N., Borns, A. Cousin, C. Dixon, F., Mann, Lee, C. Brindley, P.J., El-	<a href="#">B.2.1</a>



			Sayed, N.M, Bridger, J.M.	
2018	The snail <i>Biomphalaria glabrata</i> as a model to interrogate the molecular basis of complex human diseases	PLoS Neglected Tropical Diseases	Bridger JM, Brindley PJ	<a href="#">B.2.2</a>
2017	Whole genome analysis of a schistosomiasis-transmitting freshwater snail	Nature Communications	Adema, Coen M.; Hillier LaDeana W.; Jones, Cathy S.; Loker, Eric S. +209 Co-Authors	<a href="#">B.2.3</a>
2017	The Compatibility Between <i>Biomphalaria glabrata</i> Snails and <i>Schistosoma mansoni</i> : An Increasingly Complex Puzzle.	Adv Parasitology	Mitta G, Gourbal B, Grunau C, Bridger JM, Théron A.	<a href="#">B.2.4</a>
2016	Epigenetic modulation, stress and plasticity in susceptibility of the snail host <i>Biomphalaria glabrata</i> to <i>Schistosoma mansoni</i> infection	Int J Parasitol	Wannaporn Ittiprasert, Halime Arican-Goktas and Joanna M. Bridger	<a href="#">B.2.5</a>
2015	Susceptibility of snails to infection with schistosomes is influenced by temperature and expression of heat shock proteins Epidemiology	Epub	Oumsalama Elhelu, Michael Smith, Brandon Haugen, André Miller, Nithya Raghavan, Christopher Wellman, Carolyn Cousin, Freddie Dixon, Victoria Mann, Gabriel Rinaldi, Wannaporn Ittiprasert, Paul J.	<a href="#">B.2.6</a>
2015	Cytometric analysis, genetic manipulation and antibiotic selection of the snail embryonic cell line Bge from <i>Biomphalaria glabrata</i> , the intermediate host of <i>Schistosoma mansoni</i> .	Epub	Rinaldi G, Yan H, Nacif-Pimenta R, Matchimakul P, Bridger J, Mann VH, Smout MJ, Brindley PJ, Int J Parasitol.	<a href="#">B.2.7</a>
2014	Schistosomes and snails: a molecular encounter	Frontiers in Genetics – Evolutionary and Genomic Microbiology	Halime D. Arican-Goktas , Wannaporn Ittiprasert, Edwin C. Odoemelam, André N. Miller and Joanna M. Bridger.	<a href="#">B.2.8</a>
2014	Differential spatio-epigenetic repositioning of activated genes in <i>Biomphalaria glabrata</i> resistant and susceptible snails infected with <i>Schistosoma mansoni</i>	PLoS Negl Trop Dis	H.D. Arican-Gotkas, W. Ittiprasert, J.M. Bridger	<a href="#">B.2.9</a>
2013	Polyethyleneimine Mediated DNA Transfection in Schistosome parasites and regulation of the WNT signaling pathway by a Dominant-Negative SmMef2	PLoS Negl Trop Dis	Liang S. and Jolly E.	<a href="#">B.2.10</a>

2013	Identification and characterization of functional eSSR markers for genetic linkage mapping of <i>Schistosoma mansoni</i> juvenile resistance and susceptibility loci in <i>Biomphalaria glabrata</i>	Int J Parasitol	Ittiprasert W, Miller A, Su X, Mu J, Bhusudsawang G, Ukoskit K.	<a href="#">B.2.11</a>
2012	Will All Scientists Working on Snails and the Diseases They Transmit Please Stand Up?	PLOS Neglected Tropical Diseases	Coen M. Adema, Christopher J. Bayne, Joanna M. Bridger, Eric S. Loker, Timothy P. Yoshino, Si-Ming Zhang	<a href="#">B.2.12</a>
2012	Reversing the phenotype of the <i>Biomphalaria glabrata</i> Snail Host <i>Schistosoma mansoni</i> Infection by Temperature Modulation	Plos Pathology	Ittiprasert W.	<a href="#">B.2.13</a>
2011	Polyethyleneimine (PEI) mediated siRNA gene silencing in the <i>Schistosoma mansoni</i> snail host, <i>Biomphalaria glabrata</i>	PLoS Negl Trop Dis	Miller, A., Liu, Y., Puthupparampil, S., Woodle, M., Ittiprasert, W.	<a href="#">B.2.14</a>
2011	Non-random organization of the <i>Biomphalaria glabrata</i> genome in interphase Bge cells and the spatial repositioning of activated genes in cell co-cultured with <i>Schistosoma mansoni</i> .	Int J Parasitol.	Ittiprasert, W., Odoemelum, E., Adema, M.A., Miller A., Raghavan, N., Bridger, J.	<a href="#">B.2.15</a>
2010	FISH on chromosomes derived from the snail model organism <i>Biomphalaria glabrata</i> .	Methods in Molecular Biology	Odoemelum, E., Raghavan, N., Ittiprasert, W., Miller, A., Bridger, J.	<a href="#">B.2.16</a>
2010	Identification of immediate response genes dominantly expressed in juvenile resistant and susceptible <i>Biomphalaria glabrata</i> snails upon exposure to <i>Schistosoma mansoni</i> .	Mol Biochem Parasitol	Ittiprasert W, Miller A, Myers J, Nene V, El-Sayed N.	<a href="#">B.2.17</a>
2009	<i>Schistosoma mansoni</i> infection of juvenile <i>Biomphalaria glabrata</i> induces a differential stress response between resistant and susceptible snails.	Exp Parasitol	Ittiprasert W, Nene R, Miller A, Raghavan N, Lewis F, Hodgson J.	<a href="#">B.2.18</a>
2009	<i>Biomphalaria glabrata</i> peroxiredoxin: effect of <i>Schistosoma mansoni</i> infection on differential gene regulation.	Mol Biochem Parasitol.	Raghavan, N., Goodall, C., Cousin, C, Ittiprasert, W., Sayed, A., Miller, A., Williams, D. and Bayne, C.	<a href="#">B.2.19</a>
2009	The karyotyping and gene mapping of the <i>Biomphalaria glabrata</i> embryonic (Bge) cell line.	Int J Parasitology	Odoemelum, E., Raghavan, N., Miller A., Bridger, J.	<a href="#">B.2.20</a>
2009	Two allelic isoforms of the serotonin transporter from <i>Schistosoma mansoni</i> display electrogenic transport and high selectivity for serotonin.	Eur J Pharmacology	Fontana AC <sup>1</sup> , Sonders MS, Pereira-Junior OS, Javitch JA, Rodrigues V, Amara SG, Mortensen OV.	<a href="#">B.2.21</a>

2008	The NIH-NIAID schistosomiasis resource center.	PLoS Negl Trop Dis.	Lewis FA <sup>1</sup> , Liang YS, Raghavan N.	<a href="#">B.2.22</a>
2008	Differences in cysteine protease activity in <i>Schistosoma mansoni</i> resistant and susceptible <i>Biomphalaria glabrata</i> and characterization of the hepatopancreas cathepsin B full-length cDNA.	Journal of Parasitology	Myers J., Ittiprasert W., Raghavan N., Miller A.	<a href="#">B.2.23</a>
2007	<i>Nimbus</i> (BgI): An active non-LTR retrotransposon of the <i>Schistosoma mansoni</i> snail host <i>Biomphalaria glabrata</i>	Int J Parasitol	Raghavan N., Tettelin H., Miller A., Hostetler J., Tallon L.	<a href="#">B.2.24</a>
2006	A bacterial artificial chromosome library for <i>Biomphalaria glabrata</i> , intermediate snail host of <i>Schistosoma mansoni</i> .	Mem Inst Oswaldo Cruz	Adema, C., Luo, M-Z., Hanelt, B., +14 co-authors	<a href="#">B.2.25</a>
2006	The snail ( <i>Biomphalaria glabrata</i> ) genome project	Trends in Parasitology	Raghavan, N.	<a href="#">B.2.26</a>
2003	Assessment of genetic heterogeneity within laboratory-maintained <i>Schistosoma mansoni</i> -resistant stocks of <i>Biomphalaria glabrata</i> snails by RAPD-PCR.		Ittiprasert, W., Rowe, C., Patterson, C., Miller, A., Raghavan, N., Bandoni, S.	<a href="#">B.2.27</a>
2003	Comparative gene analysis of <i>Biomphalaria glabrata</i> hemocytes pre- and post-exposure to miracidia of <i>Schistosoma mansoni</i> .	Mol. and Biochem. Parasitol	Raghavan, N., Miller, A.N., Gardner, M., FitzGerald, P.C., Kerlavage, A.R., Johnston, D.A., Lewis, F.A.	<a href="#">B.2.28</a>
2001	The relationship between <i>Schistosoma mansoni</i> and <i>Biomphalaria glabrata</i> : genetic and molecular approaches.	Parasitology	Lewis, F.A., Patterson, C.N. and Richards, C.S.	<a href="#">B.2.29</a>
2001	Differential gene expression in haemocytes of the snail <i>Biomphalaria glabrata</i> : effects of <i>Schistosoma mansoni</i> infection	ELSEVIER	André N Miller, Nithyakalyani Raghavan, Peter C FitzGerald, Fred A Lewis	<a href="#">B.2.30</a>
2000	Molecular studies of <i>Biomphalaria glabrata</i> , an intermediate host of <i>Schistosoma mansoni</i> .	International Jour. Parasitology	Ongele, O., and Lewis, F.A.	<a href="#">B.2.31</a>
1999	The identification of markers segregating with resistance to <i>Schistosoma mansoni</i> infection in the snail <i>Biomphalaria glabrata</i> .	Proc. Nat. Acad. Sci	Miller A., Patterson, C., Rowe, C. Michaels, G., Carr, D., Pichars, C., and Lewis, F.	<a href="#">B.2.32</a>
1998	Expressed Sequence Tags (ESTs) of <i>Biomphalaria glabrata</i> , an intermediate snail host of <i>Schistosoma mansoni</i> , use in the identification of RFLP markers.	Malacologia	Miller, A., Geoghagen, N.S.M., Lewis, F., and Kerlavage, A. 1998	<a href="#">B.2.33</a>
1998	Characterization of the myoglobin and its coding gene of the mollusc <i>Biomphalaria glabrata</i> .	Journal of Biological Chemistry	Dewilde, S., Winnepenninckx, B., Arndt, M. H., Nascimento, D. G., Santoro, M. M.,... & Liu, L.X.	<a href="#">B.2.34</a>

1997	A laboratory-based approach to biological control of snails.	Memorias do Instituto Oswaldo Cruz	Lewis, F. A. & Richards, C. S.	<a href="#">B.2.35</a>
1995	<i>Schistosoma mansoni</i> : Changes in the albumen gland of <i>Biomphalaria glabrata</i> snails selected for nonsusceptibility to the parasite.	J. Parasitology	Cousin, C., Ofori, K., Acholonu, S., Miller, A., Richards, C., Lewis, F.	<a href="#">B.2.36</a>
1996	Use of RAPD-PCR to differentiate genetically defined lines of an intermediate host of <i>Schistosoma mansoni</i> , <i>Biomphalaria glabrata</i>	J. Parasitology	Larson, S.E., Andersen, P.L., Miller, A.N., Cousin, C.E., Richards, C.S., Lewis, F.A.	<a href="#">B.2.37</a>
1996	<i>Schistosoma mansoni</i> : Use of a subtractive cloning strategy to search for RFLPs in Parasite-resistant <i>Biomphalaria glabrata</i>	Experimental Parasitology.	Miller, A.N., Ofori, K., Lewis, F.A.	<a href="#">B.2.38</a>
1993	<i>Schistosoma mansoni</i> : analysis of an unusual infection phenotype in the intermediate host snail <i>Biomphalaria glabrata</i> .	Exp Parasitology	Lewis FA, Richards CS, Cooper LA, Clark B	<a href="#">B.2.39</a>
1992	Identification of a repetitive element in the snail <i>Biomphalaria glabrata</i> : relationship to the reverse transcriptase-encoding sequence in LINE-1 transposons	Gene	Miller, A., Raghavan, N., Richards, C., and Lewis, F.	<a href="#">B.2.40</a>
1992	Genetics of <i>Biomphalaria glabrata</i> and its effect on the outcome of <i>Schistosoma mansoni</i> infection	Parasitology Today	Richards, C., and Lewis, F.	<a href="#">B.2.41</a>
1991	Use of a cloned ribosomal RNA gene probe to detect restriction fragment length polymorphisms in the intermediate host <i>Biomphalaria glabrata</i>	Experimental Parasitology	Brindley, P.J., Richards, C.S. and Lewis, F.A.	<a href="#">B.2.42</a>
1989	A cDNA clone encoding part of the major 25,000-dalton surface membrane antigen of adult <i>Schistosoma mansoni</i>	Parasitology Research	Kelly, C., Rodrigues, V., Yi, X., Wamachi, A., Smithers, S.R. and Simpson, A.J.G.	<a href="#">B.2.43</a>
1989	Predicted structure of a major <i>Schistosoma mansoni</i> eggshell protein	Molecular and Biochemical Parasitology	Rodrigues, V., Chaudhri, M., Meadows, H., Chambers, A., Taylor, W.R., Kelly, C., and Simpson, A.J.G.	<a href="#">B.2.44</a>
1987	Surface and species-specific antigens of <i>Schistosoma haematobium</i>	Parasitology	Kelly, C., Hagan, P., Hodgson, J., Hackett, F., Simpson, A.J.G., Smithers, S.R., and Wilkins, H.A.	<a href="#">B.2.45</a>
1987	Resistance to reinfection with <i>Schistosoma haematobium</i> in Gambian children: analysis of their immune system	Trans.Roy.Soc. Trop.Med. and Hyg.	Hagan, P., Blumenthal, U.J, +9 co-authors	<a href="#">B.2.46</a>
1987	The cloning of schistosome antigens. W.H.O.	Tropical Disease Research	Simpson, A.J.G., Kelly, C., Hackett, F., and Smithers, S.R.	<a href="#">B.2.47</a>

		Series. ACTA Tropical		
1987	Characterization of the structure and expression of the gene encoding a major female specific polypeptide of <i>Schistosoma mansoni</i>	Molecular and Biochemical Parasitology	Simpson, A.J.G., Chaudhri, M., Kelly, C., Rumjanek, F., Martin, S., and Smithers, S.R.	<a href="#">B.2.48</a>
1987	Purification and amino acid sequencing of <i>Schistosoma mansoni</i> surface antigens.	In Molecular Paradigms for Eradicating Helminthic Parasites	Kelly, C., Knight, M., Simpson, A. J. G., Hacken, F., Geisow, M., & Smithers, S. R.	<a href="#">B.2.49</a>
1986	Repetitive DNA as a tool for the identification and comparison of nematode variants: application to <i>Trichinella</i> isolates	Molecular and Biochemical Parasitol	Chambers, A.E., Almond, N.M., Simpson, A.J.G., and Parkhouse, R.M.E.	<a href="#">B.2.50</a>
1986	The Cloning of schistosome genes encoding antigenic and maturation linked polypeptides	Parasitology	Simpson, A.J.G., Kelly, C. and Smithers, S.R.	<a href="#">B.2.51</a>
1986	Adult schistosomes cDNA libraries as a source of antigens for the study of experimental and human schistosomiasis.	Molecular and Biochemical Parasitology.	Simpson, A.J.G., Bickle, Q., Hagan, P., Maloney, A., Wilkins, H.A. and Smithers, S.R.	<a href="#">B.2.52</a>
1986	Cloning of a major developmentally regulated gene expressed in mature females of <i>Schistosoma mansoni</i>	Molecular and Biochemical Parasitology.	Simpson, A.J.G.	<a href="#">B.2.53</a>
1986	The recognition of <i>Schistosoma mansoni</i> surface antigens by antibodies from patients infected with <i>S. mansoni</i> and <i>S. haematobium</i> .	Transactions of the Royal Society of Tropical Medicine and Hygiene	Simpson, A.J.G., Hackett, F., Kelly, C., Payares, G., Ali, P., Lillywhite, J., Fleck, S.L. and Smithers, S.R.	<a href="#">B.2.54</a>
1985	Use of cloned DNA probes for identification of Schistosomes. Transactions of the Royal.	Society of Tropical Medicine and Hygiene	Walker, T.K., Simpson, A.J.G., Rollinson, D.	NA
1985	<i>Schistosoma mansoni</i> antigen preparations which induce antibodies to schistosomula surface antigens.	Experimental Parasitology.	Hackett, F., Simpson, A.J.G., Ali, P., Payares, G. and Smithers, S.R. 1985.	NA
1985	Isolation and characterisation of nucleic acids from the hydatidic organisms <i>Echinococcus</i> spp (Cestoda).	Molecular and Biochemical Parasitology.	McManus, D.P., Simpson, A.J.G.	NA
1985	The schistosomulum surface antigens of <i>Schistosoma haematobium</i> . Parasitology 90: 490-508	Parasitology	Simpson, A.J.G., Hagan, P., Hodgson, J., Wilkins, H.A., and Smithers, S.R.	NA
1984	The modulation of expression of polypeptide surface antigens on developing schistosomula of <i>Schistosoma mansoni</i>	J. Immunology	Simpson, A.J., Payares, G., Walker, T., and Smithers, S.R.	NA

1984	Cell-free synthesis of <i>Schistosoma mansoni</i> surface antigens; Stage specificity of their expression	The EMBO Journal 3	Simpson, A.J.G., Payares, G., Chuadhri, M. and Smithers, S.R.	NA
1982	The antiviral action of interferon.	Phil.Trans.R.Soc.Lon	Kerr, I.M., Cayley, P.J., Silverman, R.H.	NA
1982	Control of the ppp(A2'p)nA system in Hela cells; Effects of interferon and virus infection	Eur. J. Biochemistry	Silverman, R.H., Cayley, P.J., Gilbert, C.S. and Kerr, I.M.	NA
1982	Virus-mediated inhibition of the ppp(A2'p)nA system and its prevention by interferon.	Biochem. Biophys. Res. Communication	Cayley, P.J., and Kerr, I.M. 1982.	NA
1981	2-5A (pppA2'p5'A2'p5'A) in interferon-treated encephalomyocarditis virus-infected mouse L-cells. The Interferon System	Texas Report on Biology and Medicine	Silverman, R.H., Wreschner, D.H., Cayley, P.J., Gilbert, C.S., Brown, R.E. and Kerr, I.M.	NA
1981	The 2-5A (pppA2'p5'A2'p5'A) and protein kinase systems in interferon-treated and control cells.	Advances in Cyclic Nucleotides Research.	Kerr, I.M., Wreschner, D.H., Silverman, R.H., Cayley, P.J.	NA
1981	Radioimmune and radiobinding assays for A2'p5'A2'p5'A and related oligonucleotides	Methods in Enzymology: Academic Press	Wreschner, D.H., Silverman, R.H. and Kerr, I.M.	NA
1980	Radioimmune Radiobinding and HPLC analysis of A2'p5'A2'p5'A, pppA2'p5'A2'p5'A and related oligonucleotides from intact cells	Nature	Cayley, P.J., Silverman, R.H., Wreschner, D.H., Gilbert, C.S., Brown, R.E. and Kerr, I.M.	NA
<b>More Publications</b>	Full list of 143 is shown on Google Scholar <a href="https://scholar.google.com/scholar?hl=en&amp;as_sdt=0%2C21&amp;q=matty+knight&amp;btnG=&amp;">https://scholar.google.com/scholar?hl=en&amp;as_sdt=0%2C21&amp;q=matty+knight&amp;btnG=&amp;</a> and Research Gate <a href="https://www.researchgate.net/">https://www.researchgate.net/</a>			

### 3. Completed Unpublished Papers, Articles, Reports, etc.

Date	Title	Co-Author(s)	Attachment #
2022	Siglecs in the snail host, <i>Biomphalaria glabrata</i> , are upregulated with susceptibility to <i>Schistosoma mansoni</i> infection	Olavemi G. Fagunyole; Swara Yadav; Oumsalama, Elhelu; Lidia Campos-Zurita	<a href="#">B.3.1</a>



## C. Research Activities

### 1. Proposals

Date	Title	Funding Source	Funded		Attachment #
			Yes	No	
2022	An opportunity to educate underrepresented undergraduates at UDC in genomics studies (pending).	NIH-NHGRI (R25, R2)	-	-	<a href="#">C.1.1</a>
2020	The Pipeline to Bring More Minority Students into STEM	Department of Education		No	<a href="#">C.1.2</a>
August, 2020	SARS-CoV-2 RNA viral interactions in African and Caucasian American microbiomes	NIH-NIAD (R21)		No	<a href="#">C.1.3</a>
March, 2019	(MPI PI) RNAi Screens for susceptibility phenotypes in <i>Biomphalaria</i> spp. to <i>Schistosoma mansoni</i> . (Submitted with Dr. Marina Mourao FIOCRUZ Brazil)	NIH-NIAID (R01)		No	<a href="#">C.1.4</a>
October, 2017	(PI) <i>Biomphalaria glabrata</i> , as a model organism to study spatial epigenetics underlying biotic stress October 2017	NIH-NSF		No	<a href="#">C.1.5</a>
2017	(Co-PI) Increasing Minority Participation in Cancer Prevention and Control (submitted with Dr. Carolyn Cousin)	NIH-NIAID		No	<a href="#">C.1.6</a>
2016	Transgenesis approaches for <i>Biomphalaria glabrata</i> 2016	NIH-NIAID R-21		No	<a href="#">C.1.7</a>
2010-2011	Equipment Grant	ARRA funds	yes		NA
2005-2011	(PI) A gene map for <i>Biomphalaria glabrata</i>	NIH-NIAID, AI63480	Yes		<a href="#">C.1.8</a>
2007-2010	Minority award supplement for Dr. Jocelyn Myer's	NIH-NIAID, R01	Yes		NA
2003-2004	Characterization of sequences related to retrotransposons in <i>Biomphalaria glabrata</i> , and intermediate snail-host for <i>Schistosoma mansoni</i> .	Sandler Foundation	Yes		NA
1990-2002	Snail/Schistosome genetic influences on cercariogenesis. Co-investigator; (PI) Dr. Fred Lewis	NIH-NIAID, AI-77777	Yes		NA
1999-2001	Developmental gene expression of intramolluscan stages of <i>Schistosoma mansoni</i> . Training grant for graduate student Dr. Eba Ongele.	UNDP/World Bank/WHO_TDR, Grant T23/181/26	yes		NA

### 2. Research in Progress

Starting Date	Est. Completion Date	Brief Description	Attachment #
Fall, 2021	Fall, 2023	The Snail <i>Biomphalaria glabrata</i> as a model organism to investigate the molecular basis of Tau protein expression in aging.	<a href="#">C.2.1</a>

		In the proposed study, we will test the hypothesis that the expression of tau relates to both aging and susceptibility, as well as produces structural changes in the CNS between juvenile and adult snails responding to parasite infection.	
Fall, 2021	Fall, 2024	Use of a Host/Pathogen model system as a surrogate for studying metastatic cancer as a parasitic disease. We infected snails that are resistant (BS90) or susceptible (BB02) to the parasite (miracidia) and used real time RT-PCR analysis to determine how parasite exposure affects the temporal expression of homologs of known cancer-related transcripts.	<a href="#">C.2.2</a>
Spring, 2022	Fall, 2023	Carbonic Anhydrase Project. To test the hypothesis, RNA isolation, cDNA synthesis and real-time PCR will be performed to quantitatively analyze the expression of CA in <i>B. glabrata</i> . To inhibit the expression of CA, the snail will be treated with sodium salicylate prior to exposure to parasitic infection.	<a href="#">C.2.3</a>
Summer, 2019	Spring, 2023	hTERT Project Results. Cancer is a malignant parasite and the snail host/parasite relationship, Therefore, serves as a good animal model to examine the regulation of cancer related transcripts, including the snail ortholog of hTERT. hTERT siRNA/PEI mediated gene silencing does not block infection after 6 weeks of parasitic exposure.	<a href="#">C.2.4</a>
Fall, 2018	Spring, 2024	Identification and molecular characterization of a PIWI-like/Agonaute (AGO) protein in the parasitic trematode, <i>Schistosoma mansoni</i> . A snail anti-PIWI antibody was used in a co-immunoprecipitation assay to pull- down cross-reacting PIWI-like proteins in soluble protein extracts from adult schistosome parasitic worms, the <i>B. glabrata</i> snail and planaria.	<a href="#">C.2.5</a>
Spring, 2018	Spring, 2024	Involvement of stress in the <i>S. mansoni</i> and <i>Biomphalaria glabrata</i> relationship and the effect of stress inhibitor drugs on the host-pathogen interaction. One approach to develop new intervention tools to prevent schistosomiasis has been placed on interrupting the development of the parasite during its intra-molluscan stages in the snail host.	<a href="#">C.2.6</a>

#### D. Creative works, shows, exhibits, patents (include relevant information)

Date	Nature of work/ Brief Description	Sponsor(s)/Source of Recognition	Attachment #
2022-ongoing	Provisional patent application in progress: Use of expression of carbonic anhydrase as a biomarker for detection of parasites infected snails in the field	Clement BT Knight Cancer Foundation	<a href="#">D.1</a>
2015	Snail Consortium. Organizer for the Genomic meeting to address the lab work and writing paper "Whole genome analysis of a schistosomiasis-transmitting freshwater snail"	NIH-NIAID	<a href="#">D.2.1</a> <a href="#">D.2.2</a>



### E. Other professional activities (include all relevant information)

Date	Role	Sponsor(s)	Attachment #
November, 2022	Invited speaker for the XVI International Symposium on Schistosomiasis	Fiocruz Brazil	<a href="#">E.1</a>
December, 2022	Invited speaker for Brunel University, UK	Brunel University	<a href="#">E.2</a>
May 5, 2021	Invited speaker for Differential gene expression of PIWI in <i>Biomphalaria glabrata</i> snails with varying susceptibility to <i>Schistosoma mansoni</i>	University of Glasgow, Scotland	<a href="#">E.3</a>
2020	Invited speaker for Tropical Disease Infections	GW medical school	<a href="#">E.4</a>
August 8, 2019	Invited speaker for A balancing act: revealed in examining the differential gene expression of PIWI and HOP in <i>Biomphalaria glabrata</i> snails with varying susceptibility to <i>Schistosoma mansoni</i>	Brunel University, Uxbridge, UK	<a href="#">E.5</a>
2019	Participant in UDC Biology research, and giving and award of “Accomplishment in Research/Scholarship”, “As a Technology all-star at the Women of Color STEM Conference	UDC	<a href="#">E.6.1</a> <a href="#">E.6.2</a>
February 3-4, 2016	Invited speaker for Epigenetic Modulation, Stress, and Variation in Susceptibility of the Snail, <i>Biomphalaria glabrata</i> , to <i>Schistosoma mansoni</i> Infection. The symposium for international research and innovations in schistosomiasis, Washington DC	SIRIS	<a href="#">E.7</a>
February 2, 2016	Invited speaker for Epigenetics, stress and plasticity in the susceptibility of the snail host <i>Biomphalaria glabrata</i> to <i>Schistosoma mansoni</i> infection	Mollusc epigenetics, Montpellier, France	<a href="#">E.8</a>
July 29, 2015	Invited speaker for Stress and susceptibility of the snail host <i>Biomphalaria glabrata</i> to <i>Schistosoma mansoni</i>	Brunel University, Uxbridge, UK	NA
July 28, 2015	Invited speaker for Stress and Susceptibility of the snail host <i>Biomphalaria glabrata</i> to <i>Schistosoma mansoni</i>	Welcome Trust Sanger Institute; Genome Campus, Hinxton, UK	<a href="#">E.9</a>
2013-present	Collaborator to <b>Drs Paul Brindley and Victoria Mann</b> : George Washington University, Washington DC- The snail transgenesis project. We have examined using the Bge snail cell line and Xcelligence real time cell culture system, puromycin antibiotic sensitivity. Results from this study have been published and we continue to collaborate together with the UDC master’s students who rotate through GWU to do their thesis work. Mr. Brandon Haugen Class of 2017 conducted his thesis project through this collaboration. I currently	Dr. Knight	<a href="#">E.10</a>

	work with other UDC students (undergraduates and postgraduates) through this collaboration. We have been severely hampered by the pandemic since we no longer have access to the Brindley lab at GW. All discussions about progress on our collaboration with this lab are now virtual on Zoom.		
2014-present	Collaborator to <b>Dr. John Teem</b> , in Florida, and I collaborate on developing a molecular toolkit for editing the genome of the snail, <i>B. glabrata</i> by using the CRISpr/Cas 9 system. He also lectures to the biotech students on the use of gene drives- how by using gene editing to create transgenic organisms we can reduce populations of snails or mosquitoes that transmit infections in the human population, e.g. schistosomiasis and malaria, respectively.	Dr. Knight	<a href="#">E.11</a>
2012-2014	Invited speaker for the GWU Nobel lecture series "Science and Medicine: A Priceless journey"	Medical School, Department of Biochemistry, DC	<a href="#">E.12</a>
2011	Invited speaker for The PEI mediated siRNA gene silencing in the <i>Schistosoma mansoni</i> snail vector, <i>Biomphalaria glabrata</i>	NIH/FAES	NA
2010	Invited speaker for Stressed snails and Schistosomes: effect of stress induction and susceptibility of <i>Biomphalaria glabrata</i> to <i>Schistosoma mansoni</i>	New York University	NA
2008	Invited speaker for Towards a molecular understanding of the snail/schistosome interaction	Imperial College of Science and Technology, UK	NA
2005-present	Collaborator to <b>Dr. Clarence Lee</b> : Howard University. We have collaborated in training students in his department in parasitology to conduct research with me, under my supervision for their Ph.D.	Dr. Knight	<a href="#">E.13.1</a> <a href="#">E.13.2</a> <a href="#">E.13.3</a>
2000-present	Collaborator to <b>Dr Joanna Bridger</b> : Brunel University, Middlesex, UK. We have worked together for several years now characterizing chromosomes of the snail vector, <i>B. glabrata</i> . Initially, we worked with the snail Bge cell line in order to isolate and prepare the first metaphase spreads from the cell line. The work positioned (by using FISH) <i>nimbus</i> loci and also a locus corresponding to the argonaute protein, <i>piwi</i> . Dr Bridger and I continue to work on the role of epigenetics in snail compatibility to schistosomes, and based on our novel findings that schistosomes mediate spatial epigenetics, the non-random re-positioning of gene loci, concurrent with the upregulation of the particular gene-locus, we plan to submit a revised joint NIH grant in the Fall on this topic that will evaluate the snail as a useful model system to elucidate the mechanism of spatial epigenetics in the schistosome snail host relationship.	Dr. Knight	<a href="#">E.14.1</a> <a href="#">E.14.2</a>

2019-present	Collaborator to <b>Dr. Pilarita Rivera</b> and I supervise Ms. Ruth Joy Realdor MD-PhD student who is conducting research for her Ph.D. thesis work with me at UDC.	Dr. Knight	<a href="#">E.15.1</a> <a href="#">E.15.2</a>
1998	Invited speaker for Progress toward a molecular understanding of the basis of resistance to <i>S. mansoni</i> infection in the snail host, <i>Biomphalaria glabrata</i> .	Johns Hopkins University – School of Public Health	NA
1993-present	Collaborator to <b>Dr. Najib El-Sayed</b> . University of Maryland. We have worked for several years on the snail vector transcriptomics, and the work generated by this collaboration has recently been published (see attachment above, Smith et al, 2021). Professor El-Sayed has for the past 5 years given a guest lecture to the undergraduate students on using the illumina platform for high throughput genome sequencing and genome analysis to the undergraduate seniors in my molecular biology lectures.	Dr. Knight	<a href="#">E.16</a>
1991	Invited speaker for the Symposium "Frontiers in molecular parasitology" A molecular approach to study Gene Structure and Function in the <i>S. mansoni</i> intermediate host <i>B. glabrata</i> . University of Georgia	UGA NIH Training Grant Program in Cell Biology of parasites and vectors	NA
1990-present	Collaborator to <b>Dr. Cousin</b> . I have collaborated with Dr. Cousin since the early nineties when she came to learn molecular biology technology in my lab in Rockville MD. At the time, she was looking for someone who could help her bring her credentials into the molecular dimension to improve her chances for getting her grant proposals from NIH funded. Dr. Cousin already had an extensive research background in examining the EM ultrastructure of the larval cercaria form of the schistosome parasite and with my help, she and her UDC students were able to transition to molecular based research that came to fruition with awarded grants and publications. With her suggestion, I started a molecular biology night course at UDC that introduced me to the university as an adjunct professor. I have trained several students from UDC because of our collaboration and continue to work with her to instruct and assist wherever I can to help teach undergrads and postgrads in our care to do the best in their research in the biology division at UDC.	Dr. Knight	<a href="#">E.17</a>
1986	Invited speaker for the Molecular cloning and the expression of a gene encoding a 25kDa tegumental antigen of <i>S. mansoni</i> , Department of Pathology, Cambridge University, UK	Cambridge University, UK	NA
1985	Molecular cloning of species and sex-specific genes of <i>Schistosoma mansoni</i> . Department of Applied Biology	Imperial College of Science and Technology	NA

		(University of London)	
1985	Isolation and characterization of parasite antigens by recombinant DNA technology.	Brunel University, M.Sc postgraduate Immunology Course	NA
1985	A molecular approach in the study of schistosome surface antigens	NIMR, Mill Hill, Postgraduate Ph.D. students' lecture series	NA

## F. University Service (include all relevant information)

### 1. Departmental

Date	Activity	Total # of Estimated Hours	Attachment #
2021	Curriculum and Assessment. Chairperson. To make periodic reviews of the curriculum in order to bring it up-to-date and relevant. Revised the entire curriculum with updates.	NA	NA
2020-present	Advisement. Member. Advised the following Biology majors with the surnames beginning with H, K, S, et. I have advised several students who are interested in pursuing advanced degrees, especially in research. I was asked to make arrangements to meet either during my office hours or at a time that was convenient for them. I also write numerous recommendation letters for graduate school applications. I advise 30 students per semester, approximately and wrote 200 letters of recommendation during the past 5 years. I mentored my assigned biology majors by scheduling appointments to see them usually by email but some send text messages to my cell phone. Because of the pandemic, I made adjustments to keep a flexible schedule in advising students who needed my help and so I did not necessarily adhere to the office hours that were posted. Students have my cell phone number so they can call me as well.	NA	<a href="#">F.1.1</a> <a href="#">F.1.2</a> <a href="#">F.1.3</a> <a href="#">F.1.4</a> <a href="#">F.1.5</a> <a href="#">F.1.6</a> <a href="#">F.1.7</a> <a href="#">F.1.8</a> <a href="#">F.1.9</a> <a href="#">F.1.10</a>
2014-present	Grad. Mentorship. Member & the research coordinator. Mentoring undergraduate research students in the STEM Center, Volunteers Undergraduate Research Course.	NA	NA

### 2. College-Wide

Date	Activity	Total # of Estimated Hours	Attachment #
2017-present	Division of Science and Mathematics. Amenities/Hospitality. Member. Responsible for providing appropriate measures to recognize and appreciate situations that require sympathy, congratulations etc. Appreciations of our Graduates for academic and professional achievements. An Historical	NA	NA

	Review of the Success of Alumni. On three occasions during this evaluation period, relatives of faculty members passed away (Ms. Lisa Sutton, Dr. Freddie Dixon and Dr. Leona Harris). I have worked with the chairperson of the committee to affect these efforts.		
2006-present	-Beta Kappa Chi Scientific honor society. -National Insti. of Science. These are two sister organizations that have a joint Annual meeting. Co-Advisor and Supporter. Emphasize & promoting the objectives of this national scientific honor society at the college and University levels. Attending the national meeting in person in 2018 and preparing several students at the under- graduate and graduate level to present and doing the same, virtually in 2022.	NA	NA
2014-present	Grievance Committee. Barbara Holmes Endowed Scholarship. Advisor and Reviewer. I had the grace to dine with queens and the compassion to walk with the downtrodden. Because of the love and compassion that she gave her students which will remain with them for life, an endowed scholarship in her memory is given annually to an academically promising student(s) in a STEM discipline. This award is given to a student majoring in a STEM discipline in May of each year. This award is given to a student majoring in a STEM discipline in May of each year.	NA	<a href="#">F.2.1</a>
2014-present	Clement Knight Cancer Foundations. Initiator Reviewer. Clement B.T. Knight Cancer Foundation. This organization consults and works with the Sweden Ghana Medical Center, that provides patient care and education-awareness of cancer in Ghana- mainly bladder and liver cancer caused by schistosomiasis. The Foundation also funds education programs, PhDs in tropical medicine. Dr. Michael Smith, and Dr. Daniel Horton (Brunel University) completed their Ph.D. with some funds from the Foundation.	NA	<a href="http://www.cbtknightcancerfoundation.org">http://www.cbtknightcancerfoundation.org</a>
2019-present	UDC Premedical Society. Faculty Advisor. During this academic year, I once again served as the faculty advisor for the UDC pre-health society. A letter from the president, Ms. Dejene Miller is attached here.	NA	<a href="#">F.2.2</a> <a href="#">F.2.3</a>
2019-present	Dept of evaluation and Promotion Committee. Graduate Advisory for the MS in Biology. Member. I serve as a reviewer for students applying for entrance into the MS Program in Biology. Reviewing the proposal submitted by 2nd- year students in Research I to determine if all of the guidelines and the format are adhered to prior to the official beginning and the Implementation of the research component of the MS Degree Program. This committee gives the final grade to the second-year students after the defense of their research manuscript. I have interacted with most of the faculty at Lombardi Comprehensive Cancer Center in updating the course offering in the MS Program in the concentration of Cancer Biology Prevention and Control and serves as the coordinator to the MS in Biology concentration in Infectious Diseases. I assist the Director in the planning and implementation of the Divisional Honor Programs from 2017-2019.	NA	NA
2018-present	Research Coordinator. I was appointed in 2018 by the Director of the Master's Program in Biology to the position of Research Coordinator. One of my duties was assisting in final approval of the graduate proposal for the final research project and overseeing the progress of their research. I assist the Director Dr. Carolyn Cousin, in organizing and planning the Graduate Manuscript Defense for MS Degree	NA	NA

	Program in Cancer Biology Prevention and Control and the MS Degree in Biology (currently the name of the updated MS Program in Biology).		
2020-present	Recruitment Member. I serve as an active member of the Recruitment Committee and I am in the process of preparing a report for the Dean's Office in reference Graduate recruitment.	NA	NA

### 3. University-wide

Date(s)	Activity	Total # of Estimated Hours	Attachment #
2019-present	<p>College of Arts and Science and University Activities. University Activities- attended, participated in or planned several University Activities related to student achievements: <u>Commencement</u>, <u>Founders Day</u>, <u>Undergraduate Research Day</u> and the University's Honors Program (where I received an award) are a few that shall be mentioned.</p> <p>CAS last lecture and presented a talk entitled '<i>The challenge of teaching a practical hands-on lab course in a virtual remote setting</i>' STEM Center for Research and Dev.</p> <p>I have attended all of the major university activities since I have been full time.</p> <p>I can emphatically state that. My involvement in the University planned event is outstanding. I do not miss these activities. The activities can be either undergrad or graduate programs.</p>	NA	<a href="#">F.3.1</a>
2020	Panel organizer and coordinator for the speakers of the virtual BEYA conference.		<a href="#">F.3.2.1</a> <a href="#">F.3.2.2</a>

### G. Community Service (include all relevant information)

Date(s)	Activity	Total # of Estimated Hours	Attachment #
1996-2013	I frequently serve as a reviewer of NIH grants and have served on either special emphasis Ad Hoc panels, or the vector biology study sections at NIH-NIAID.	NA	<a href="#">G.1</a>
2006-present	I am an associate editor of the open access journal Plos Neglected Tropical Disease, an editor of the open access journal Plos One and frequent guest editor for the open access journal Plos Pathogens.	NA	<a href="#">G.2.1</a> <a href="#">G.2.2</a>
2021	I served as a speaker with a talk on 'publication and writing 101' in the lunchtime learning webinar series-Graduate Program at UDC.	NA	<a href="#">G.3.1</a> <a href="#">G.3.2</a>
2014-Present	The many activities that are done by Minority Women in Science are done generally in connection with the Biology Program. Such activities as Science Discovery Day annually held in February, and the Math Science Gift Store annually held in December are major activities that invite the participation of students from the community. Science Discovery is a workshop for middle school	NA	<a href="#">G.4.1</a> <a href="#">G.4.2</a> <a href="#">G.4.3</a>

	students which allows them to see the various STEM professions through a demonstration of an activity performed in that profession. The Math Science Gift School allows students to use mock money to purchase scientific toys. These students either range from pre-kindergarten to late elementary school (ages 3-11). In an attempt to recruit more young girls to consider careers in science, I spoke to middle school girls about my life choices.		
2014-present	The Master's Program is an example of an activity from the Partnership with the Lombardi Comprehensive Cancer Center serves as a springboard for several community activities that focus on healthcare and prevention strategies, especially in cancer. As research coordinator, I have been at the forefront of assisting Dr. Cousin in directing many of the Master's students to focus their attention in this direction of community projects that assist, especially, African American in the District of Columbia. This gives these students the opportunity to have a direct impact on promotion of screening protocols and other preventive methods. I have served the community as an outreach cancer scientist who has spoken to community peoples about cancer screening, eating better and exercise as a part of my role as research coordinator for students with projects that are health related.	NA	NA

M. Knight.

Date: 09/06/2022

Signed \_\_\_\_\_  
Faculty Member





## FISCAL IMPACT STATEMENT

TO: The Board of Trustees

FROM: Managing Director of Finance *David A. Franklin*

DATE: June 8, 2023

SUBJECT: Tenure Approval for Mathilde Knight, 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. Mathilde Knight, Associate 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. Knight at the rank of full Professor.

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

### Background

Dr. Knight joined the CAS in August of 2017. Vetting of all dossier content was completed at the levels of the program, Department, and School. The CAO reviewed all recommendations and Dr. Knight's portfolio (which includes external reviews of her qualifications). All reviews validate the strengths of Professor Knight's tenure and promotion dossier and conclude that she is an outstanding teacher, researcher and scholar who has earned national and international recognition and praise for her work, making her a highly competitive tenure candidate. Additionally, she has demonstrated a strong record of service to the University community.

The recommendation of tenure for Professor Knight 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.