



TO: University of Delaware Faculty Senate

From: Kathleen S. Matt, PhD – Dean

DATE: October 25, 2018

Dear Senators,

This letter is written in strong support of permanent status for our interdisciplinary Ph.D. program in Medical Sciences within the College of Health Sciences, and to confirm the College's continued commitment to this program.

This Ph.D. in Medical Sciences has undergone strong, and steady growth since its inception. The high level of interest in the program evident at our student recruitment events and suggests that enrollment in the Ph.D. program will continue to grow as the word gets out about its availability.

This program was designed for those wishing to leverage the opportunities of a multi-disciplinary environment offered by cross collaboration of CHS, UD and its affiliates. The level of rigor is high and graduates of the program have gone onto successful careers as independent scientists. Student productivity is high as measured by graduate student publications, presentations and fellowship awards. As we have growing numbers of graduates from this program, I am confident that tracking data will demonstrate their continued success.

Sincerely,

Kathleen S. Matt, PhD

Dean, College of Health Sciences

Kathlu Mall

Professor, Department of Kinesiology & Applied Physiology

ksmatt@udel.edu



305 Willard Hall Education Building Newark, DE 19716-3720 Phone: 302-831-2849 Fax: 302-831-4180 Email: mms-dept@udel.edu

October 28, 2018

From: Esther Biswas-Fiss, Ph.D., MB(ASCP) CM

Program Director, Ph.D. in Medical Sciences

Professor and Chair, Department of Medical and Molecular Sciences

To: University of Delaware Faculty Senate

RE: Permanent Status for the Ph.D. Program in Medical Sciences

To Whom It May Concern:

Following review of the Permanent Status Program Review (PSPR) self-study report, it is with great enthusiasm that I provide my wholehearted support for the permanent status request for the interdisciplinary PhD program in Medical Sciences offered through the College of Health Sciences.

As the PSPR self-study document demonstrates, the Medical Sciences PhD program provides a unique and strong foundation in the basic and applied health sciences allowing for interdisciplinary advanced graduate study. Graduates of this program are well prepared to succeed as scholars in areas ranging from the bench to the bedside. Novel synergies are created due to the interdisciplinary nature of the program, as students are exposed to a wide variety of research topics. Thus, a student whose thesis research entails the nutritional effects of a particular dietary regime may seek to include RNA biomarkers as a result of exposure to this aspect of science. The knowledge gained in our program will no doubt enable them to excel in "collaborative research initiatives" which are well looked upon by federal funding agencies.

Based on enrollment statistics, the program has been well received, having undergone steady growth since its first offering. Information gathered in recruiting events suggest it is likely that this trend will continue as more students learn of this opportunity. Certainly, in our most recent admission cycle, we have had high caliber applicants and matriculants who were highly competitive for admission to PhD programs nationwide. I am also pleased that we have been able to attract, and continue to attract, a diverse group of students. Students in the program have demonstrated high research productivity in terms of publications, presentations and receipt of fellowships. Graduates of the program have gone on for post-doctoral positions in their desired area of practice. As an individual whose career spans nearly thirty years at several academic institutions, I can say that the thesis defenses and work being conducted by our PhD students is highly competitive.

As a researcher, I feel that this program provides a solid foundation for a rigorous PhD and thesis project. The curriculum provides the needed foundation in biomedical science and research design, yet offers the flexibility for students to gain expertise in areas that specifically relate to their research interests. The existence of a PhD program with a health sciences focus was, and is, an important factor to myself and other active researchers in my department. As the Department of Medical and Molecular Sciences grows, I am confident that additional faculty will seek to become thesis advisors for students in this program. At

the same time, I anticipate the interdisciplinary aspects of this program will continue to attract mentors having primary appointments in departments across campus.

I fully support this program's application for permanent status and will continue to provide leadership and mentorship commitment for its students.

Sincerely,

Enth Biron Fi

Esther E. Biswas-Fiss, Ph.D.

Program Director, Ph.D. in Medical Sciences

Professor and Chair

Department of Medical and Molecular Sciences



College of Health Sciences

DEPARTMENT OF MEDICAL

Vijay Parashar, PhD **Assistant Professor** 305G Willard Hall Email: parashar@udel.edu

Phone: 302-831-4552

TO: University of Delaware Faculty Senate

DATE: October 27, 2018

RE: Permanent approval of the doctoral program in Medical Sciences

I am writing to recommend approval of the Faculty Senate of the proposed permanent doctoral graduate degree in Medical Sciences and confirm my continued commitment to this program.

Participation in this program has availed highly-motivated students to my research group. I have started mentoring Mr. Richard Knappenberger through this program in Fall 2018. Richard is a motivated student who is working hard towards his scientific goals since he joined my laboratory. The program allows the required amount of research time to him while preparing him as a scientist by offering a perfect balance of mandatory and elective courses. While Richard is in his first year of candidacy, this program has already provided him sufficient room to expand his research skills in laboratory while allowing him to take courses that relate to his research project. I am sure that, with the support of this program, Richard will do very well in his PhD tenure in my laboratory.

I am satisfied with the level of rigor of the program and academic quality of the students that are admitted to this program. Being able to personally meet all the candidates before their acceptance into the program, I am amazed by the quality of students this program is attracting. I fully support this program's application for permanent status and will continue to provide a mentorship commitment for its students. This further allows research faculty like me in the college to continue to receive federal funding.

Yours sincerely,

Vijay Parashar, PhD



305 Willard Hall Education Building Newark, DE 19716-3720 Phone: 302-831-2849 Fax: 302-831-4180 Email: mmsc-dept@udel.edu

> Professor, Molecular Biology Tel (302) 831-3367

To: University of Delaware Faculty Senate

From: Dr. Sam Biswas, Professor, Department of Medical & Molecular Sciences

Date: October 27, 2018

Dr. Subhasis (Sam) Biswas Ph.D.

Cell (856) 264-1999

RE: Permanent approval of the doctoral program in Medical Sciences

I am writing to recommend approval of the Faculty Senate of the proposed permanent doctoral graduate degree in Medical Sciences and confirm my continued support for this program.

After joining University of Delaware in 2017, I was faced with daunting task of finding high-quality graduate students to continue my research. The PhD program in Medical Science recruited a number of excellent graduate students and I was able to attract one of these students to my laboratory. This graduate student came to UDEL with a MS degree in molecular biology from the Catholic University of America. She has one year of research experience that allowed quick assimilation to our research. Thus far, she is doing well in her course work as well as working in the laboratory.

I also had the opportunity to meet many of the more senior students of the program. These students are hard-working and accomplished in completing various milestones towards PhD. This group is racially diverse and helped create a very intellectually and socially stimulating atmosphere for doctoral education.

I pledge to continue to provide mentorship commitment for the students in this program and fully support this application for a permanent status.

Thank you.

Sincerely yours,

Sam Biswas, Ph.D.

Professor

Department of Medical & Molecular Sciences

University of Delaware

Newark, DE 19716



DEPARTMENT OF BIOLOGICAL SCIENCES

University of Delaware Newark, Delaware 19716-2500 *Ph:* 302/831-6977

Fax: 302/831-6977

TO: University of Delaware Faculty Senate

From: Kenneth L. van Golen, Ph.D.

DATE: 23 October 2018

RE: Permanent approval of the doctoral program in Medical Sciences

To Whom It May Concern:

I am writing to recommend approval of the Faculty Senate of the proposed permanent doctoral graduate degree in Medical Sciences and confirm my continued commitment to this program.

At the beginning of 2016 I became the official mentor and faculty advisor of Sangjucta Barkataki, a Ph.D. candidate in the Medical Sciences program. Prior to that I acted as a member of her graduate committee. She had spent the previous summer in my laboratory learning specific techniques. Her mentor at that time left the university and I was asked to take over as her formal Ph.D. advisor. Prior to graduate school, Sangjucta had worked at Johns Hopkins in a microarray core. She came to me with a Masters degree and a good deal of laboratory experience. Her Ph.D. project involved the study of the mechanisms of Inflammatory Breast Cancer (IBC) skin metastases. IBC is a relatively rare but highly aggressive and deadly form of breast cancer. Approximately a quarter of women with IBC develop skin metastases, which rapidly degrades their quality of life and leads to decreased overall survival. For her work, Sangjucta received a travel award from the Delaware Breast Cancer Coalition to attend the biennial IBC International meeting at the Dana Farber Institute. She also received both a University Doctoral Fellowship Award and a \$100,000 research grant from the Inflammatory Breast Cancer Research Network. The founder and CEO of the network was so impressed with her work that she attended Sangjucta's doctoral defense in March of 2018.

Overall, I have been very pleased with the class work preparation of the students coming from this program. The rigor of the qualifying exams and the insistence of quality of research by the student's dissertation committee comprised of faculty from the program has been outstanding.

I fully support this program's application for permanent status and will continue to provide a mentorship commitment for its students.

Best regards,

Kenneth L. van Golen, Ph.D.

Associate Professor of Biological Sciences

Concentration Coordinator, Molecular Biology & Genetics

Senior Research Scientist, The Helen F. Graham Cancer Center

The Center for Translational Cancer Research

Carpenter Sports Building Newark, DE 19716-3750 Phone: 302-831-2265 Fax: 302-831-4261



College of Health Sciences DEPARTMENT OF

BEHAVIORAL HEALTH & NUTRITION

To: University of Delaware Faculty Senate

From: Marie Fanelli Kuczmarski, PhD, RDN, LDN

Professor of Nutrition

Department of Behavioral Health and Nutrition

October 22, 2018

RE: Permanent approval of the doctoral program in Medical Sciences

I am writing to recommend approval of the Faculty Senate of the proposed permanent doctoral graduate degree in Medical Sciences and confirm my continued commitment to this program.

Over the past year, I have served as an academic advisor and mentor of a student enrolled in this program. This doctoral student obtained her Master's degree from the University of Delaware in Nutrition Sciences. She worked at the USDA Human Nutrition Research Center in Beltsville for 6 years prior to returning for her doctoral degree. Her post-baccalaureate academic training and research experiences along with her first year doctoral-level courses have enable her to excel in defining a dissertation topic. As a recipient of a National Institute on Aging, NIH research internship, she will evaluate the nutritional status of a racially and socioeconomically diverse urban population. Currently, she is assisting with the preparation of a manuscript which will be her first co-authored article. She has taken her written preliminary exam and plans to complete the oral component this semester. The Medical Science program is the perfect mechanism to allow her to enhance her research experiences and obtain a doctoral degree.

I have been pleased with the program's academic preparation, especially the required advanced medical physiology courses, and the structure and requirements of the seminar courses. The research and productivity requirements are rigorous. I expect that graduates of this program will be competitive scholars and leaders.

I fully support this program's application for permanent status and will continue to provide a mentorship commitment for its students.

Marie Fanelli Kuczmarski



College of Health Sciences

DEPARTMENT OF
BEHAVIORAL HEALTH & NUTRITION

TO: University of Delaware Faculty Senate

FROM: Sheau Ching Chai, PhD, RD

Department of Behavioral Health and Nutrition

DATE: October 22, 2018

RE: Permanent approval of the doctoral program in Medical Sciences

I am writing to recommend approval of the Faculty Senate of the proposed permanent doctoral graduate degree in Medical Sciences and confirm my continued commitment to this program.

I am currently mentoring a PhD student, Safiyah Mansoori. Safiyah (my first PhD student, female and from an under-represented population) had already obtained her BS degree in Medical Diagnostics. She is interested in nutrition research specifically aiming to elucidate the role of diet in human health. This interdisciplinary Medical Science program is the perfect mechanism to allow her to continue her research in this area and obtain a doctoral degree. She is a second year student and has obtained her candidacy. She is currently working on her research proposal and will start collecting her dissertation data soon while working on two manuscripts using the data from my funded research projects.

This is an excellent program. I have been pleased with their academic preparation, research rigor, and productivity. This program also creates a collaborative opportunity that has allowed me to collaborate with top scientists engaged in highly innovative research.

I fully support this program's application for permanent status and will continue to provide a mentorship commitment for its students.

Sincerely,

Sheau Ching Chai, PhD, RD

Assistant Professor

Department of Behavioral Health and Nutrition

University of Delaware





DEPARTMENT OF ANTHROPOLOGY University of Delawate Newark, Delawate 19716-2510 Ph: 302/831-2802 Fax: 302/831-4002

TO: University of Delaware Faculty Senate

From: Melissa Melby, Department of Anthropology

DATE: 22 October 2018

RE: Permanent approval of the doctoral program in Medical Sciences

I am writing to recommend approval of the Faculty Senate of the proposed permanent doctoral graduate degree in Medical Sciences and confirm my continued commitment to this program.

I am currently chairing to doctoral dissertation committees for the following students: Debora Kamin Mukaz and Ngozi Dom-Chima. Both students are female from underrepresented populations at UD.

Ms. Kamin Mukaz's dissertation is entitled "Acculturation and Diabetes among African Migrants to the United States," and uses qualitative and quantitative methods. She has completed all of her fieldwork and is in the process of writing up her dissertation. Her work as already resulted in several publications and presentations:

- <u>D Kamin Mukaz</u>, **MK Melby**. (2018) What the Global Health Community Can Learn from Africa. *Delaware Journal of Public Health* 4(4): 20-24.
- <u>DK Mukaz</u>, MA Papas, **MK Melby**, Y Commodore-Mensah, K Setiloane. (2017)
 "Diabetes among African Migrants to the United States: Analysis of the National Health Survey 2010-2014." United States Conference on African Immigrant Health. 5th Annual Meeting. Washington, DC/Crystal City, VA. 6 Oct.
- D Kamin Mukaz, M Melby. (2017) Acculturation and diabetes among Congolese migrants to the United States. American Public Health Association 145th Annual Meeting. Atlanta, GA. 6 Nov.

Ms. Kamin Mukaz has also been assisting me with analyses of a Japanese data set, using Bayesian methodologies. We plan to publish several papers using these methods. Ms. Kamin Mukaz has demonstrated a high degree of professionalism, initiative and preparation for graduate studies.

Ms. Dom-Chima, is my second student from the Medical Sciences program, planning to do research on how financial coaching affects the social determinants of health in a population in Delaware. Shortly after we met, I shared a draft of a grant proposal with her, and she provided feedback on it. Over the summer, she began reading the literature, drafting her research proposal, and contributing to shared google docs on research design and methodology. She is also working on a systematic review with another graduate student, and contacted librarians and participated in a training session on how to do a systematic review. She has made considerable progress on framing her research questions, and conducting a background literature review, all while studying for her qualifying exams. Having recently attended her seminar presentation, I was extremely impressed by the level of engagement and rigor of the questions, demonstrating the program's rigor and the value of the cohort of students as well as participating faculty.

I fully support this program's application for permanent status and will continue to provide a mentorship commitment for its students.

Sincerely yours,

Melissa K. Melby, PhD Associate Professor

Department of Anthropology

Melon le Maly

Tel: 302-831-1857 mmelby@udel.edu



TO: University of Delaware Faculty Senate

FROM: Eric B. Kmiec, Director, Gene Editing institute

Christiana Care Health System

DATE: October 22, 2018

RE: Permanent approval of the doctoral program in medical sciences.

I am writing to indicate my strong support and recommended approval to the Faculty Senate for the proposed permanent doctoral graduate degree in the Department of Medical Sciences. I can also confirm my institute's continued commitment to this program.

I have been a faculty member at the University of Delaware since 1999, first, as a tenured full professor in the Department of Biology until 2010, and now as an affiliated faculty in the College of Health Sciences. I founded and now direct the Gene Editing Institute at Christiana Care Health System and, since my arrival I have sought the involvement in the Medical Sciences PhD program as a resource for qualified graduate students. I now have 4 of them and they are all performing beautifully. All have first author publications in high-quality journals and several of them have been recognized nationally and internationally for their contributions to the field of gene editing. Several have gone on to win awards at national meetings and one has a full scholarship from the B plus Foundation in Delaware. I will continue to expect good things from them.

My first student, Natalia Rivera is from an underrepresented population and already obtained her master's degree at Delaware State University. The medical sciences program was a perfect mechanism to allow her to continue her research with me and obtain a doctoral degree. She is currently in candidacy and will be defending her dissertation in summer of 2019. She currently has 5 publications and gives multiple presentations at national and international research meetings. It's safe to say that she will be a highly sought after as a postdoctoral candidate.

The three other graduate students are also progressing very well with two of them having already passed their prelim examinations; the fourth is a first year student. As such I have seen this program in action up close and I therefore can easily support this program's application for permanent status. I will continue to provide mentorship and financial commitments to its students.

Thank you in advance for your courtesy and, if I can provide any further information, please do not hesitate to contact me.

Sincerely,

Eric B. Kmiec, Ph.D.

Director

Gene Editing Institute

304-840-3375

Eric@GeneEditingInstitute.com

Eric.B.Kmiec@Christianacare.org

181 South College Avenue Newark, DE 19717-5267 Phone: 302-831-2231

Fax: 302-831-1046

October 16, 2018

Memorandum

To: Esther E. Biswas-Fiss

Professor and Chair

Department of Medical and Molecular Sciences

From: Trevor A. Dawes

Vice Provost for Libraries and Museums and May Morris University Librarian

I am responding to your request to supply information about the capability of the University of Delaware Library, Museums and Press to support permanent status for the PhD in Medical Sciences.

The existing online and print collections of the University of Delaware Library, Museums and Press, which are strong in the sciences and related interdisciplinary areas, are currently able to support this program. However, no additional funding is available for new resources. Enclosed is a description of collections, resources and services available for this purpose.

I would be pleased to respond to any questions.

/nb Enclosure

c: University of Delaware Library, Museums and Press

Susan A. Davi, Associate Librarian and Head, Collection Management and Licensed Electronic Content Department

M. Dina Giambi, Associate University Librarian for Technical Services and Resource Management

Sarah E. Katz, Senior Assistant Librarian, Reference and Instructional Services Department, and UDLib/SEARCH Training Coordinator

Sabine Lanteri, Senior Assistant Librarian and Science Liaison Librarian, Reference and Instructional Services Department

Thomas Melvin, Librarian, Reference and Instructional Services Department

Sandra Millard, Deputy University Librarian, Associate University Librarian for Public Services and Outreach, and Program Director, UDLib/SEARCH

Carol Rudisell, Librarian and Head, Reference and Instructional Services Department

William S. Simpson, Associate Librarian and Institutional Repository Librarian, Reference and Instructional Services Department

Faculty Senate

Karren Helsel-Spry, Administrative Assistant IV

181 South College Avenue Newark, DE 19717-5267 Phone: 302-831-2231 Fax: 302-831-1046

October 16, 2018

Report on Library Services and Collections in Support of the PhD in Medical Sciences

General Description

The University of Delaware Library, Museums and Press includes the Hugh M. Morris Library, where the main collection is housed; two branch libraries located on the Newark campus, the Chemistry Library and the Physics Library; and a third branch library, the Marine Studies Library, located in Lewes, Delaware. The Library collections parallel the University's academic interests and support all disciplines. The graduate programs in Medical Sciences are directly supported by the Library's strong collections in laboratory sciences, physiology, kinesiology, nutrition, nursing, health sciences, bioinformatics, biological sciences, chemistry, engineering, neuroscience, animal science, and related social sciences.

Databases, full-text electronic journals and electronic books, books, periodicals, microforms, government publications, maps, manuscripts and media provide a major academic resource for the University of Delaware, the surrounding community, the state of Delaware and the nation. Library staff members provide a wide range of services.

The University of Delaware Library, Museums and Press is a U.S. depository library and a U.S. patent depository library and contains the complete file of every patent issued by the U.S. Patent and Trademark Office (USPTO).

The online catalog, DELCAT Discovery, provides access to millions of items by author, title, subject and keyword.

Library collections number over 2,720,000 and are broadly based and comprehensive. In 2016/2017, the Library Web < library.udel.edu/> received over 3,900,000 page views.

Specific Support for the PhD in Medical Sciences

The Library's collections are strong and are able to support this graduate program. For many years, the Library has supported related graduate and undergraduate programs in bioinformatics, biology, engineering, health sciences and medical technology. The collections in these areas are excellent and continue to grow.

Esther E. Biswas-Fiss October 16, 2018 Page 2

An experienced librarian, Sarah E. Katz (sekatz@udel.edu), Senior Assistant Librarian, Reference and Instructional Services Department, serves as the Library liaison to the faculty in the Department of Medical and Molecular Sciences. As Library liaison, Ms. Katz works with the Department to:

- Further develop Library collections, both print and electronic to support the teaching, learning and research needs of the Department
- Provide research support for faculty and students in a consultation setting
- Provide instruction in a classroom setting
- Serve as a resource for the information needs of the Department as they relate to the Library, Scholarly Communication, Open Access and other topics

Three other science librarians have considerable expertise in related subject areas and can provide additional specialized services, as needed. They are:

- Sabine Lanteri (<u>slanteri@udel.edu</u>) Biological Sciences, Biomedical Engineering, Chemistry & Biochemistry, Chemical & Biomolecular Engineering
- Tom Melvin (<u>tmel@udel.edu</u>) Civil & Environmental Engineering, Electrical & Computer Engineering, Materials Science & Engineering, Mechanical Engineering
- William Simpson (wsimpson@udel.edu) Computer & Information Sciences

More than 200 research guides <guides.lib.udel.edu/> in all subject areas have been developed and are maintained by librarian liaisons. These research guides describe library resources and assist students in the research process. These guides introduce students to a wide array of useful resources including databases, eJournals, eBooks, reference materials, visual material and more. The librarians mentioned above are also available to work with faculty to develop research guides for specific courses within this program.

The Library subscribes to more than 400 online databases library.udel.edu/databases/> which support research in all areas. Among the most important databases for the study and research of medical sciences are: Cochrane Library, PubMed, Scopus, Web of Science, Springer Nature Experiments, BIOSIS Citation Index, SciFinder Scholar, Compendex, TOXNET, and National Center for Biotechnology Information (NCBI).

In addition to its extensive print-based collections, the Library provides access to more than 100,000 electronic journals < library.udel.edu/ejournals/> and more than 670,000 electronic books < library.udel.edu/ebooks/>. Within the Library's eJournal collection, the sciences are particularly strong, including almost all the journals published by Elsevier, Springer, and Wiley as well as smaller publishers such as American Society for Microbiology, American Medical Association, American Society for Clinical Pathology, BioMed Central, PubMed Central, Oxford University Press, Nature, and Annual Reviews.

Within the eBook collection, online access to almost all ebooks published by Springer, now including Palgrave Macmillan, from 2005-present is of particular importance. Other related

Esther E. Biswas-Fiss October 16, 2018 Page 3

eBooks are available from ProQuest Ebook Central, EBSCOhost eBooks, the NCBI Bookshelf, and the Colloquium Digital Library of Life Sciences.

The Library also provides online access to *Bates' Visual Guide to Physical Examination*, the *LWW Health Library* (anatomical sciences and physical therapy sections), *Lippincott Advisor*, and *Primal Pictures*, "the world's most detailed 3D model of human anatomy online." Access to *JoVE Video Journal* and *JoVE Science Education* is also available. These resources may be useful to students in this program

The Library subscribes to *RefWorks*, a web-based citation management tool that can be used with most databases. Access to *EndNote Online* via the Library's *Web of Science* subscription is also available.

The Library has strong collections of film and video library.udel.edu/filmandvideo/> which support study and teaching in all subject areas.

The Library has a nationally recognized Student Multimedia Design Center library.udel.edu/multimedia/> which provides access to equipment, software, and training related to the creation of multimedia projects. The Student Multimedia Design Center includes over 80 workstations, six studios, and two classrooms focused on multimedia creation. University of Delaware users also may borrow a wide variety of multimedia equipment. Through its Multimedia Literacy program, the Student Multimedia Design Center provides instructional support for faculty seeking to incorporate multimedia into their assignments.

The Library also maintains an Institutional Repository <udspace.udel.edu/>, which archives research reports, documents, and other resources produced by University of Delaware faculty and students.

Trevor A. Dawes

Vice Provost for Libraries and Museums and May Morris University Librarian