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To: UD Faculty Senate Graduate Studies Committee

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Subj.: PhD in Medical Sciences Permanent-Status Review

Housed in the Department of Medical and Molecular Sciences, "The PhD in Medical Sciences is designed for students seeking advanced training in a specialized field of medically-related science, such as diabetes mellitus, obesity, immunology and infectious disease, oncology, and other chronic health conditions" (quoting the original program proposal). A major motivation for the program's establishment was to facilitate the hiring and retention of research-active faculty, presumably by providing a supply of appropriately trained and motivated graduate students to work in their labs, in multiple departments of the College of Health Sciences and in cognate fields in other colleges. The first student was admitted to the program in fall 2012. Of 17 total students matriculated to date, two have completed the program successfully and are employed as professional researchers, two withdrew, and 13 continue.

Objectives, Strengths, and Weaknesses

The program's self-study report provides clear evidence that the program's goals are being met: students in the program are active in presenting at conferences, and have contributed to a significant number of peer-reviewed and other publications; both alumni to date have secured research position in industry; and several glowing letters from students' faculty mentors attest to the mentors' satisfaction with the abilities and training of the program's students working in their labs.

The Doctor of Philosophy in Medical Sciences program is compatible with the University's priorities. It fills an important role in the College of Health Sciences, supporting the College's ability to attract and retain outstanding research-active faculty, while providing students the opportunity to engage with health research projects in an interdisciplinary context while collaborating with faculty from several departments, both in the College of Health Sciences and across the University. It advances the University's goals to increase the number of nationally recognized doctoral programs and strengthen its multidisciplinary research activities, as described in the 'Delaware Will Shine' strategic plan.

Impact and Demand

Demand for the Medical Sciences PhD has been strong, with 4 or more students matriculating most years since its inception in 2012. Application and enrollment data reported in Figure 1 on p. 14 of the self-study report show that the number of applications for each cohort after the program's initial year has ranged from 10 (17F) to 26 (14F), and was 17 for fall 2018. On

average across the seven cohorts to date, 31% of applicants have been admitted (34/110) and 76% of admitted students have matriculated (26/34, but note that these numbers from Figure 1 do not match the 17 matriculations described in the text of the report). The program has attracted a diverse pool of students: 82% of students admitted have been women, with 59% of those being historically underrepresented minorities. Demand for the program is anticipated to remain high, as the College of Health Sciences' new master's degree in Medical Sciences, and strong informal partnerships with Delaware State University faculty, will both provide additional pipelines into the doctoral program.

The Medical Sciences PhD program has the strong support of the College of Health Sciences and the faculty of the Department of Medical and Molecular Sciences, as well as affiliated faculty in the Christiana Care Health System Gene Editing Institute and the Departments of Biological Sciences, Behavioural Health & Nutrition, and Anthropology. This strong base of support provides an enthusiastic pool of advisors for students to select from. To date, all students in the program have been fully supported with teaching assistantships, research assistantship or graduate fellowships.

Evaluation

Students in the Medical Sciences PhD are carefully monitored as they progress through the program, to ensure that they are progressing towards the learning outcomes of the program. These assessments take the form of a written and oral preliminary examination based on course work and taken during the student's first year, a dissertation proposal, and ultimately a dissertation defense. That all graduates of the program to date have obtained job offers in their desired field by the time they finished their degree speaks highly of the perceived rigor of the program and skills of the graduates it produces.

Summary

Review of the self-study report and other documents provided indicates that approval of permanent status for the Medical Sciences PhD program is appropriate. The program is meeting its own programmatic objectives, enjoys strong student demand and robust support by the College of Health Sciences and faculty in CHS and other colleges, and advances the strategic goals of the University of Delaware related to graduate studies and faculty research.