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Letter of Support for Kamal Barley who is applying for Participation in the DIMACS program

Kamal Barley is an African-American student who has been a graduate student at ASU for three semesters. He has passed a qualifier in mathematical biology and is about to take two more in May. He has decided to work at the interface of ecology and epidemiology. Kamal is extremely promising, highly disciplined, smart and collegial. He grew up in New York and is totally aware of the importance of increasing the representation of minorities in academia. He is a gifted computer programmer and loves mathematics!

I am currently his mentor and advisor. I will be working out with him on whatever project captures his interest and/or imagination during his visit to South Africa. Who will finally become his Ph.D. advisor? I could not answer this question. We have a strong group of mathematical biologists (6). We are also extremely likely to hire *two additional strong* individuals who find themselves in the middle of their successful academic and research careers. However, at this point it looks like I will be his Ph.D. advisor and that we would be working on a project at the interface of ecology and epidemiology.

Our group currently has six faculty members and two research professors (Karl Haderler and Priscilla Greenwood) and it is without question one of the strongest mathematical biology groups in the nation. The research of the mathematical biology faculty is directly tied in or motivated by the study of disease dynamics and ecology. We have an extraordinary biology program and have epidemiologist of the caliber of Roy Curtiss III (Member of the National Academies and in two Ph.D. committees within my group) and Sander van der Leeuw whose work in archeology and Complex Systems is closely tied in to the study of the factors that impact the dynamics of cities. Sander is leading an effort in the computational social sciences in which students like Kamal may also find fascinating research questions of interest to poverty and disease stricken nations. Our program in the ecology of infectious diseases led by Jim Collins (NSF Assistant Director in the Biological Sciences) also provides plenty of opportunities for our students to carry out significant research. In fact, I have a graduate student and a postdoctoral student working on malaria at the moment.

Kamal has chosen as his field, mathematical biology-possibly on a topic that involves disease dynamics. A visit to South Africa is likely to have a strong and lasting effect on his future as a researcher and as a committed citizen of the world.

I give Kamal a strong recommendation.

Sincerely

A handwritten signature in black ink, appearing to read 'Carlos Castillo-Chavez', with a stylized, cursive script.

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