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Letter of Support for Raquel Lopez who is applying for Participation in the DIMACS program

Raquel Lopez is a Mexican-American student who had an outstanding first semester as a graduate student. She naturally did very well in her coursework but in addition, she passed her first Ph.D. qualifier in mathematical biology. She was one of the highest ranked students in mathematical biology (our program has about 40 students). Raquel is extremely promising, totally committed to addressing issues of under-representation in the sciences and passionate about social problems. She is at a time in her studies (very strong mathematically and very interested in social issues) that a visit to South Africa is extremely likely to impact her future research.

I am currently her mentor and advisor and I will be working out with her on whatever project captures her passion and/or imagination during her visit to South Africa. Who will finally become her 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.

Our group currently has six faculty members and two research professors (Karl Hadeler 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 Raquel 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.

Raquel is therefore extremely likely to continue in this field and have as a Ph.D. advisor one of our distinguished researchers in the field of mathematical biology and work in a problem of interest to developing nations.

I give Raquel a strong recommendation.

Sincerely

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