

Dr. Rafael Palacios  
Coordinator  
Undergraduate Program on Genomic Sciences  
National Autonomous University of Mexico  
Cuernavaca, Mexico

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Dear Rafael,

I write to lend my very enthusiastic support for the outstanding Undergraduate program in Genomic Sciences at the National University of Mexico in Cuernavaca. I am extremely supportive of its continuation and expansion.

I will first outline my credentials for your colleagues who are evaluating the program. I am Senior Vice President and Director of the Division of Human Biology of the Fred Hutchinson Cancer Research Center in Seattle, Washington, USA. I also am Professor in Genome Sciences at the University of Washington. My research focuses on mammalian genome dynamics and structural variation, with a particular emphasis on human subtelomeres and large gene families such as those for chemosensory receptors. My research combines the use of molecular cytogenetics tools, such as fluorescence in situ hybridization and flow cytometric separation of chromosomes, with comparative genomics, and computational methods. I have been involved in graduate education in genomics for many years, having served as the Vice Chair of the Department of Molecular Biotechnology (recently folded in with Genetics to become the Department of Genome Sciences), the Principal Investigator of an NIH training grant for graduate and postgraduate training in genomics (which supported 21 trainees each year), and a member of many graduate student thesis committees. In addition, numerous graduate students and postdoctoral fellows have trained in my laboratory.

I am quite familiar with the Undergraduate Program in Genomic Sciences in Cuernavaca. In 2006, one of the program's students approached me directly about a summer internship in my laboratory. I was impressed by the student's letter, and she ultimately spent a summer in my laboratory characterizing chromosomal rearrangement breakpoints. She did a stellar job, because she had come prepared with a deep and broad knowledge of genomics, practical computational skills, and incredible enthusiasm and dedication. She was a real delight to have in the lab.

I then had the fortune to be invited to spend two full days with students and faculty in the program in Cuernavaca. My visit included giving two seminars. I was honored to be included in the outstanding line-up of speakers the students and faculty had invited from around the world. The visit showed that the student intern the previous summer had not been an outlier. All the students with whom I interacted in Cuernavaca were similarly outstanding. I was extremely impressed by the initiative, independence and organizational skills of the students, who are strongly encouraged on all fronts by Dr. Rafael Palacio, the program's Director. My visit was hosted by two students, who were gracious, organized, and clearly very excited about their training program.

The caliber of the students in the program is outstanding. The students I interacted with (many) were smart and had acquired broad training in genomics, genetics and bioinformatics. The

program was clearly motivating them, training them well, and giving them the needed balance between fundamental and applied science. The students were dynamic, interactive, and inquisitive. They respected and valued their faculty mentors, in particular Dr. Palacio. It was clear that they were being given the expertise and the encouragement (an important combination) to take initiative and to be both rigorous and bold in their approach to research. They were extremely knowledgeable on a broad range of topics. It is rare to be thrown in with a student group that is so well informed or so prepared with questions about my work or about advice in meeting their career goals. I was particularly impressed by how the students took the lead during my visits, peppered me with questions, and, on top of that, presented their own research with enthusiasm and skill in one-on-one and small group meetings. The students' ability to communicate in English were outstanding, because they are given regular opportunities to exercise their skills and to gain confidence, poise, and new scientific knowledge. In summary, I found my 2-day visit stimulating, refreshing, and inspiring. I came away very impressed with the program.

The summer internship program pushes the students to excel and aim to do research in internationally recognized labs inside and outside of Mexico. This internship program is an extremely valuable component of the training provided and should be further encouraged.

The program should serve as a model for many other undergraduate – and for that matter – graduate programs in genomics research. Many of the students were operating at or above the level of many graduate students in excellent U.S. academic institutions.

The program is being led superbly by Dr. Palacio. Dr. Palacio should be applauded for his vision in pushing for this program to fill a national need, and for his leadership and enthusiasm in bringing it to such an impressive level so quickly. The students are top-notch, and the program is doing an outstanding job achieving its goal of training well-rounded scientists for the 21<sup>st</sup> century. The courses and research experiences offered by the training program are ideally balanced and focus the students on interesting and significant biological problems. The program clearly meets an important need. Dr. Palacio and his colleagues have arrived at an outstanding formula for success, and they have recruited and stimulated a stellar group of students that reflect extremely well on the program.

I enthusiastically support the expansion of this program and its continued support.

Best regards,



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