



Juan Manuel Perez Bertoldi, 2019-2020 Carl & Betty Helmholtz Gateway Fellow at International House, UC Berkeley



My name is Juan and I was born in Buenos Aires, Argentina, a city I am really fond of. I am a new Ph.D. student in Biophysics at UC Berkeley. Since I was a child, I have been captivated by biology. During the final years of my high school education, I developed a deep sense of curiosity about unravelling the fundamental mechanisms that Nature uses to make life and complex biological systems possible. Also passionate about the other natural sciences and looking forward to explore biology from a different perspective, I decided to pursue a 6 year degree in chemistry at University of Buenos Aires (UBA) after graduating from high school.

UBA is peculiar in one particular aspect: in addition to being the most important university in the country and one recognized worldwide for its prestige, it has open admissions. This means students do not pay tuition or sit for a qualifying exam. As it is free, UBA's student body is socioeconomically very diverse, and this allowed me the opportunity to meet people from very different realities. An early recognition of social inequality in academia and the educational system led me to get involved in outreach programs sponsored by my university. These programs were aimed at talented and curious high school students from public schools in underprivileged neighborhoods who showed interest and potential for STEM-related careers.

Academically speaking, I am interested in addressing biological questions quantitatively and robustly by using tools from the chemical and physical realms. In my second year at UBA, I applied for a research grant, which was finally awarded to me, with the goal of studying electron transfer kinetics in redox metalloproteins from a mechanistic and structural standpoint. The project has advanced since then, and I became familiar with Raman spectroscopy and electrochemistry, which are the two main pillars we use to interrogate our systems. Other significant research experiences include a 3-month computational project in Fox Chase Cancer Center, Philadelphia and a 1-year internship in molecular biology of RNA at Fundación Instituto Leloir while I was in high school.

Besides science and teaching, in my free time I really like cooking and baking for my friends and family. Cooking is, from the most fundamental perspective, chemistry, so I enjoy seeing how ingredients transform into new and tasty dishes by mixing and preparing them in different ways. Other activities I enjoy include hiking, reading (especially about philosophy), listening to classical music and going to the ballet at the Colon Theater in Buenos Aires.



The Carl and Betty Helmholtz Gateway Fellowship was initiated by Professor of Biophysics, Emeritus, Howard Mel. After Carl Helmholtz passed away in 2004, this endowed fund began accepting donations from various friends of the family to honor Carl and Betty for their many contributions, and was later established as a fellowship in 2007. Carl served as Chair of the Physics Department and Betty served on the International House Board of Directors for nine years.