**Statement of Scientific Interests**

**David Vasquez**

My goal for this statement of interests will be to discuss what fascinates me scientifically, where I hope to head in my career and why being a graduate biology student at the University of Victoria and your lab would help me pursue my dream of being both a researcher and educator. My background does not properly represent my scientific interests, it comes close but it is not where I want to head. My goal is to be a researcher at a University working in either a Biology Department or possibly an Oceanography Department with a focus on biology.

The last year I have been looking at tying my past experiences into a field that I would like to spend my life studying. Studying the artic oceans alone has enough questions of interest to spend many lifetimes researching. With the currently observed climate changes occurring it makes this area of research even more interesting and important. What led me to these interests was spending the last year reading scientific articles, speaking with faculty members and attending a biology conference to narrow down my interests. This personal work led me to want to pursue my PhD in biology; however I am applying at the MSc level because I know I need to strengthen my background before pursuing a PhD. Your work as a biologist using phytoplankton to study oceans, particularly in the arctic region, would align with my scientific curiosity and give me tools that would be valuable over the span of my entire career as a researcher.

If selected to work in your lab I would be able to engage right away in research that would allow me to gain hands on experience in both the lab and field. This research would allow right away for engaging work studying the physiology of phytoplankton, and using data to help better understand the ocean ecosystem. It would also give me tools to help as I further my own research interests which include our current climate and the changes being witnessed. I would also be interested after gaining my PhD in conducting paleoclimate research of artic regions.

My past experiences that would help me in this position include being an instructor for Radiation Biology, and a teaching and research assistant in Nuclear Engineering and Radiation Health Physics courses at the graduate and undergraduate level. My thesis designing radiation detection software involved working in a lab setting with numerous isotopes over the course of two years. I also have a strong background working with R and recently completed our graduate level statistics sequence at Oregon State University. I really enjoy working with data analysis and have used an array of programming languages like Python and Java to do so. I feel that some of these experiences would allow me to be a strong contributor on this research while I come up to speed in in other areas.

This research opportunity would be a great experience for me because it has clear scientific goals and would allow me to begin research fairly quickly while also filling in my biology background. It would also allow me to gain strong scientific tools and principals that would allow me to work in this field as a scholar and do well right from my first position after gaining a PhD. I realize my background may not be as strong in some areas but since this is an area I want to pursue a career as a scientist in I am very self-motivated to excel. The skills I learn would be what would allow me to gain funding and tenure, effectively communicate as an instructor, apply for my own grants and publish successfully. Finally, one last reason I was drawn to your lab was that it struck me as a very friendly and collegial place to work and that is incredibly important to me as if I come to the biology Department at the University of Victoria I would be living in a new town and it would be nice to join a community.