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Dr. Kristin Swanson
Department of Pathology
University of Washington
1959 NE Pacific St, Box 357470
Seattle, WA 98104-2499

Dear Dr. Swanson,

My name is Georgi Kapitanov and I am on track to receive my Ph.D. in Mathematics from Vanderbilt University in May 2012. My main interest is biomathematics. I was very excited to see the open position for Research Scientist Position at your lab. I am specifically interested in working with you because your research is in line with what I have been modeling - cancer cell population growth.

In order for an individual or an institution to be successful in what they do, I believe they need to answer the following three questions, in that order: why (do we do what we do?), how (do we do it?), and what (is it that we do specifically?). I give my answers below.

Why: Knowledge of the human body and its processes will help us understand ourselves as human beings and living organisms. My curiosity and fascination with biology and medicine has led me to pursue a career in biomathematical research. My first love is mathematics but it took one lecture on biomathematics for me to know what I'd like to do for the rest of my life.

How: My experience trying to mathematically explain known processes within the human body is directed at challenging and complementing existing research, addressing key biological questions, and asking new ones. I worked with scientists from different disciplines during the summer school I attended. I have held many leadership positions throughout my school career, at some point being in charge of over fifty students working in the residential life at my undergraduate institution, Sewanee - University of the South. My teaching record is very good. So, by being able to lead, teach, and connect to people from diverse backgrounds, I will manage interdisciplinary projects and work with both scientists and mathematicians on new biomathematical models.

What: I have been working on models of cancer growth at the cellular population level, one of them submitted for publication. My models also include stem cell and cancer stem cell growth and incorporate numerical simulations. I am, however, ready to work on new biomathematical projects, as long as they are exciting and engaging.

I appreciate your taking the time to review my expertise and credentials. I am looking forward to hearing from you. The best way to reach me is via e-mail.

Respectfully yours,

Georgi Kapitanov