Sample Statement of Research Proposal and Personal Statement for the Gates Cambridge Scholarship Application—Student #1

Statement of Research Proposal

Molecular staging of colon cancer, or the correlation between phenotype and the discrete genetic mutations present at a particular pre-malignant stage, will lead to more accurate prognosis, therapeutic intervention, and treatment targeted for a precise genetic profile. With these theories in mind, I plan to pursue my MSc at Cambridge University and to focus my efforts on elucidating the genetic profiles of colon cancer. I would be honored to work under the direction of Dr. Carlos Caldas of the Hutchinson/MRC Research Centre, whose laboratory is engaged in characterizing the molecular profiles of colon cancers and elucidating prognostic indicators in the onset of cancer. I have chosen to pursue graduate studies at Cambridge because of its unrivaled reputation for scientific achievement. I am confident that the intellectual development I would be afforded at Cambridge, through a rigorous and largely independent training program, would be unmatched by most other institutions. Furthermore, Dr. Caldas' laboratory is concerned with the biological behavior of cancer at the genetic level and uses this understanding to guide therapy; the partnership between basic science and its clinical counterpart are integral to my future career as a medical scientist.

In not more than 500 words, please describe below how your interests and achievements, both academic and extra-curricular, demonstrate a capacity for leadership, commitment to using your knowledge to serve your community and to applying your talents to improve the lives of others. Please also explain how your proposed studies in Cambridge will help you with the aims of your future career.

At thirteen, I wanted to explore creativity through reproducing an intricate Renaissance painting. Using dozens of blues and greens, I emulated the brush strokes and shading. And after much toil, I felt confident that museum curators would have a hard time distinguishing between mine and the original.

In receiving a first place award at a local art competition for my rendition of Tintoretto's *Christ at the Sea of Galilee*, I experienced only partial satisfaction. My painting was merely a great reproduction. My arts classes stressed imitation, and I realized that applying creativity would not occur until much later. Thus, I set aside my study of art, and continued my pursuit of creativity.

At the time, my interest in science was also begging for exploration. I had my first experience with research in eighth grade—"Are There Really Any Differences Between Commercial Hand Lotions?" While engaged in devising a method to test the antibacterial effectiveness of hand lotions, I found an immediate outlet for originality. The creativity in science proved to be both objective and self-perpetuating; the means of uncovering new data is an indisputably creative endeavor and a single question often gives rise to

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many more. Thus, I found creativity responsible for both initiating and driving the scientific process.

Years later, I find that the accumulation of complex genetic mutations responsible for the evolution of cancer leaves much for my creative mind to ponder. A single pathway for any given cancer doesn't seem to exist, but several genetic permutations often lead to the same end. My fascination with contributing to an understanding of these "creative" processes lies in their potential for development of chemopreventative strategies that may halt pre-malignancy as well as for treatments individualized to fit a precise genetic profile of cancer.

I find the processes associated with the study of rhetoric complementary to processes that propel science. In both fields, hypotheses look to evidence for support and a meaningful conclusion leads to a refined question. In addition to the science of writing, I have developed an appreciation for the writing of science. I co-founded and edit the *Journal for Pre-Health Affiliated Students* (JPHAS). I expanded JPHAS from an initial pre-medical only publication because I recognized the increasing interrelatedness of health careers and that an awareness of healthcare options may yield more satisfying results for students.

I have extended the scientific process to my service within the larger community. In the past, I received enormous fulfillment working with boys in state custody, teaching them science in hopes they will acquire useful academic knowledge and a sense of accomplishment. I currently take part in a weekly seminar, "Youth and Science: Possibilities and Challenges." Recently, I helped initiate a program aimed toward the girls housed in a shelter. Finding that the same science lessons didn't accomplish the same goals, I combined my old passion, art, with my new vocation, science, to generate more relevance and interest. The newly developed ten sessions include "Genetic Gems," where the central dogma of biology lends itself to deciphering girls' names (amino acid sequence) into double-stranded jewelry (DNA codons). While the immediate goal of the program is to spark the girls' interest in biology, I hope the program will have a longer lasting impact on their sense of intellectual capacity.

Creativity has been the driving force in my development, and science provides the most promising pathway for me to explore the full potential of my creativity. In pursuing an MSc in Molecular Oncology at University of Cambridge, I will establish the ideal foundation for my future role as researcher, medical practitioner, and academic pursuing a deeper public consciousness of the cancer problem.

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Sample Statement of Research Proposal and Personal Statement for the Gates Cambridge Scholarship Application—Student #2

Statement of Research Proposal

Studying Computer Speech, Text, and Internet Technology at Cambridge will provide me with the necessary background to pursue my future career. Upon completion of this course, I intend to work on the development of new methods of interacting with computers and accessing web-based technology. This work would serve to make technology accessible to a much wider audience, including those suffering from physical disabilities, and also by improving the exchange of information both nationally and internationally. As technology plays an ever more prevalent role in our society it is critical that it remains accessible and understandable to all and that it serves to break down barriers between people rather than constructing them anew. Technological advancements must be developed in accordance with these ideas, or else there is potential for a division between those to whom technology is accessible and those to whom it is not. By completing this course at Cambridge, I will be prepared to fulfill my personal and career objectives as I work to improve international communication and understanding by developing new internet technologies.

In not more than 500 words, please describe below how your interests and achievements, both academic and extra-curricular, demonstrate a capacity for leadership, commitment to using your knowledge to serve your community and to applying your talents to improve the lives of others. Please also explain how your proposed studies in Cambridge will help you with the aims of your future career.

I strongly feel that working to better society in a manner that utilizes one's strengths for maximal effect is of the highest importance. As technology has grown ever more prevalent in our society, computer security has become critical to the safety of the international community. This digital security is necessary both to ensure the physical safety of society, by protecting sensitive information from unauthorized individuals, and also to ensure the safety and stability of the global economic community by preventing attacks upon business, which can result in devastating financial losses. By performing this research I will be working to improve the security of the global community through a role in which I can be most effective. My research will make vulnerabilities in current security protocols easier to detect and correct and those in future protocols easier to prevent. Having completed this research, I will be prepared to continue working to create a safer society as I perform further research or provide security consultation to the public and private sectors.

Throughout my academic career I have pursued this goal of improving the lives of others by using my personal strengths. During my first two years at Mythic University, much of my time was devoted to the University Swing Dancing Club, in which I served as both Secretary and President. This organization of more than 700 members promotes the sport of swing dancing and provides a valuable social, creative, and cultural outlet to the

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university community—both faculty and students—through regular dances and lessons. In this leadership role I taught lessons, organized dances, petitioned the university for funding, and negotiated contracts with nationally recognized bands and instructors. I also organized and oversaw committees delegated to specific tasks such as fund raising. As President of the club, I was also involved with a philanthropic dance marathon benefiting children with leukemia, which helped to raise over two million dollars for research. Again I was able to help others by using my individual abilities and by working with others towards a common goal.

In my home community, I have taught a series of computer literacy classes for the elderly, hoping to open to them new avenues of communication and a wealth of information as well as ease their anxiety about daily interaction with an increasingly high-tech society. At the same time I helped a local museum gain greater exposure and share its information with a wider audience by designing its website. While studying at Oxford University my junior year I was a member of the Union Society and regularly attended lectures and debates, which addressed topics such as fair trade. This transformative experience help me to stay informed on current issues that impact the international community.

It is critical as members of a global society that we remain cognizant of the challenges that plague our fellow citizens, but this is not enough. We must take action to improve the condition of humanity through whatever skills we have available. My past experience demonstrates my desire to fulfill this goal, and through education and research at Cambridge I will be able to continue this pursuit to greater effect.

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