

# **Motivated since childhood; family of Physicians; High School Hospital Volunteer; High School Student Council; Resident Advisor; Research Experience in Cloning and Gene Therapy**

**Accepted at: Harvard Medical School**

Dr. Lewis described medicine as “The Youngest Science” because insightful discoveries in basic research have led revolutionary innovations in clinical therapy that have improved the quality of life. We are in the midst of an exciting era in which our knowledge about the molecular aspects of medicine is growing each day. I feel that the medical profession uniquely integrates my passion like no other profession; it wholly captures my intellectual ideals and humanistic values.

I have been curious about medicine since childhood. To learn about the profession, I would pose questions to the physicians in my own family. Eager to gain hands on experience, I volunteered in high school at the St. Joseph’s Hospital in (hometown). I had the opportunity to escort patients from one area of the hospital to another prior to diagnostic tests or treatments. Through interactions with many patients, I discovered the therapeutic and comforting effects of an encouraging smile and friendly conversation. From observing patients with simple correctable problems, such as a hernia, to those with chronic problems, such as rheumatoid arthritis, I gained an understanding for a physician’s daily challenges. Each patient presented a complex array of symptoms that require specialized attention. In order for a physician to help a patient cope with an illness, it was important for him to consider the patient’s emotional needs. Especially in stressful situations, I appreciated how the reassuring confidence and warmth, conveyed through a physician’s bedside manner, gradually transformed a patient’s immediate fears into strength and hope.

Medicine offers diverse opportunities to interact with others. In the past, I have found service-oriented activities to be particularly rewarding. In high school, I felt that I could most effectively contribute to my local community by participating in student government. As Student Council President, I interacted with individuals with a variety of personalities to ensure that my peers had the opportunity to express their ideas and opinions freely. At (Name) University, I discovered that the most vital component of campus life living in the residence hall. Therefore, after my freshman year, I decided to become a Resident Advisor (RA). One of my personal goals was to encourage each resident to take full advantage of our unique living situation. As a diverse community, we had many experiences to share with each other. I enjoyed organizing activities such as discussions, educational programs, and study breaks that helped form an interactive and supportive community. For the past two years, some of my most rewarding experiences have emerged from my dynamic role as a peer counselor and resource figure. One of the most challenging situations that I encountered was when our floor custodian informed me about the packaged bags of regurgitated food that he found in the woman’s bathroom over several weeks. By consulting fellow staff members and recruiting the help of health professional, my co-RA and I organized educational programs about eating disorders to address this sensitive situation. Fortunately, there were no further occurrences. By helping my peers cope with the stresses of college life as an RA, I not only gained valuable interpersonal skills, but also formed lasting friendships.

Another interest that I have explored is my fascination with the creative and unpredictable diversity of living organisms. With a fervent interest in biology, I joined the genetics laboratory of Dr. X. in my freshman year. After learning about the biology of the ciliated protozoan, *Tetrahymena thermophila*, I focused my efforts on understanding the mechanism of strain-specific, age-dependent micro nuclear degradation. With the support of the Howard Hughes Scholar Program for undergraduates, I cloned transposon-like elements in *Tetrahymena* that may cause chromosomal rearrangements associated with age-dependent micro nuclear degradation. The multitude of puzzles that I encountered in the laboratory challenged my creativity and fostered intellectual development that I could not attain in a classroom. By critically analyzing experimental obstacles, I gained invaluable problem solving skills. In my senior year, I will further investigate this intriguing model of aging as part of my honors thesis.

Because my research Experience has added a unique dimension to my education, I feel that it is important to support the research interests of others. As an executive board member of the (name) Undergraduate Research Board, I have assisted students in finding faculty members with similar research interests. This past year, I took part in organizing a forum for students to present their research findings to the Cornell community.

This summer, I have engaged in an internship that has enhanced my understanding of the relationship between basic research and medicine. By working with Dr. (name) at the Memorial Sloan-Kettering Cancer Center, I discovered the excitement that surrounds the emerging science and technology that will lead to future innovations in medicine. A long-term goal of Dr. (name)'s laboratory is to develop retroviral-mediated gene therapy for patients with chronic hemolytic anemia due to a severe deficiency of glucose-6-phosphate dehydrogenase (G6PD). I tested the efficiency of replication-defective retroviral vectors that are capable to transferring the human G6PD gene to cells in vitro. The existence of inherited diseases such as severe G6PD deficiency, cystic fibrosis, adenosine deaminase deficiency, and others that are clinically manageable, but incurable, presents a unique problem to the medical community. Ideally, I wish to be involved in both the traditional primary care of these patients and investigative research that may lead to more effective therapy.

I aspire to become a physician because to me, it is the world's most vibrant and rewarding profession. The practice of medicine offers a daily sense of fulfillment that is rare. Basic and clinical research enhances our understanding of disease and provides us with the tools to improve the lives of many. As a lifelong commitment to society, the medical profession most completely encompasses my career goals and moral values.<sup>1</sup>

*\* From Barron's Essays That Will Get You into Medical School*

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<sup>1</sup> Essays that will get you into Medical School, Barron's, Ref. Pg. 76-79