**Program: Plant Biology / Botany**

In October 2000, just one month after I was matriculated into XX, I made a decision which would have seemed extraordinarily ludicrous to almost everybody—switching from the much-sought-after computer major to the biological science major. Others might describe my decision as preposterous for apparently understandable reasons—that to received specialized education in computer science and technology at that time (and even now) is regarded as a guarantee of lucrative a job and stable income, especially so when I had great potential for it as I entered XX with very outstanding performance during the highly competitive national university entrance examinations. Nevertheless, against the remonstrations on the part of my parents, friends and former middle school teachers, I persisted with my decision. For me, there was but one explanation underlying my change of mind—my profound love for the biological science.

However, greater difficulties followed. Although, moved by my sincerity and determination, the dean of the College of Biological Science reluctantly agreed to accept my application, he posed to me two prerequisites. By the end of the first semester, I must first achieve the highest score in my grade at the School of Computer Science; and meanwhile, I must manage to be in the top 5% during my trial study in the College of Biological Science. Those were two harsh conditions, but I was not daunted. With double efforts re-doubled, I achieved top scholastic performance not only in terms of my computer subjects but also in terms of my biological subjects, completing in one semester the coursework usually for two semesters. Although those were the most challenging days in my life heretofore, with an average of 5 or 6 hours of sleep a day, I enjoyed making relentless efforts. By the time when my trial study came to an end, I felt that I have taken the most important step on the way to realize my aspirations.

The College of Biological Science of XX is one of the most prestigious biological institutions in China, where you can find many of the best minds of the country’s youth in the field of biology. Naturally, the academic competition is fierce in this college. Still, although I was transferred to this college in the middle of the first academic year, I attained an academic performance which is characterized with gathering momentum. Throughout my undergraduate program so far, I have been ranked first in a total of 93 students in my grade and was admitted into our College’s National Experimental Class of Scientific Subjects. Diligence and perseverance can explain my high GPA, but the real underlying factor is my deep love for biology as a scientific discipline. Those factors are combined to enable me not only quickly digest and absorb what has been taught in class but also to immerse myself in extensive extracurricular readings of latest publications. As an undergraduate, I have won first-class scholarship, special-class scholarship, and the XX Scholarship from the United States. In addition, I received third prize at the national English contest for university students, and excellence awards for my Band-IV and Band-VI National College English Proficiency Tests, the latter being the most difficult standardized English proficiency test for Chinese college and university students in majors other than English language.

The world of biology represents a totally different world from that of computer in that the former is vibrantly alive, rich and colorful. It is ever so fascinating to explore the wonders of various life processes. Among a rich variety of course selections, I have been most interested in plant biology, genetics, biochemistry, molecular biology, cell biology, plant physiology, and advanced microbiology. They have allowed me to gain insightful understandings of the foundation, development, differentiation and proliferation of life on the molecular and cellular levels. While informing me of important knowledge, those courses have also exposed me to many fields of which man is still ignorant, hence my intensified desire to probe into those unknown but exciting realms. I have also sought various extracurricular opportunities to enrich my knowledge and broaden my perspectives. I have participated in an exchange program with the students from the College of Biology of XX City University and attended the summer workshops and seminars on plant molecular biology held in XX University. Those activities have been as informative as they are rewarding.

While laying a solid theoretical foundation, I have made conscious efforts to improve my hands-on abilities. Due to my distinguished academic performance and with strong recommendation from my advisor, I entered the XX Laboratory of Plant Physiology and Biochemistry based in our College to carry out my Undergraduate Research Program (URP). For more than one year, I have been performing experiments in my lab, acquiring useful experimental skills and improving my ability to analyze experiment results. For instance, in doing Northern experiment on molecular hybridization, I acquired the skill of RNA extraction, and developed a tentative mastery of the extraction and filtering of toxin, FPLC，electrophoresis, congenial grafting, hyperfiltration, lyophilization, and other techniques. In the tree transformation experiment, I practiced the process and the methods of the carrier configuration . Doing labwork has considerably enhanced my imagination and creativity, my active thinking, as well as analytical and problem-solving abilities.

Having entered the last year of my undergraduate program, I am busy preparing my thesis—a study on the disease resistance of plants. Based on a wealth of technical literature I have gathered, I will study the interplay between pathogenic bacteria and plants, how the toxic proteins of the pathogenic bacteria combine with receptors in plants, and how some signal molecules in the lower signal system are activated to create a defense mechanism in plants. By researching on the disease resistance reactions of the type plant Arabidopsis Thaliana, we can gain insights into the plant’s disease resistance processes and mechanism. Part of my research findings can be applied to food crops and cash crops and my advisor Prof. XXX has expressed his full appreciation of my research proposal.

In the forthcoming epoch, life science will achieve unprecedented headway. I feel fortunate for being part of the human efforts to decipher the mysteries of life. Toward this objective, I deem it necessary to receive more advanced academic training. This motivates me to apply for a Ph. D. program in Plant Biology/Botany from XX University, one of the Ivy League universities in the United States. Its College of Agricultural and Biological Sciences enjoys top ranking in its category, and its knowledgeable professors are doing some of the leading researches in the world. Your academic reputation and sophisticated research facilities are two main factors that motivate my application.

In my proposed program at XX, I hope to deepen my study of advanced experimental techniques such as genetic chip technology，binary differential electrophoresis and other vital experimental skills that are currently absent in China. I also wish to keep abreast with the latest academic developments, and draw effective academic research concepts from my prospective advisor and teachers. Finally, I wish to produce important experimental and research findings to be part of my dissertation. I would like to focus on the study of the plant mechanisms on the molecular level by means of molecular biology and hopefully to apply my research results to the production improvement of farm crops and cash crops. Upon my graduation, I will come back to China to take up a teaching and research position in a major university or research institute.

Life is beautiful and the process of exploring its mysteries is equally beautiful. My role model is Prof. Yuan Longping, a Chinese plant geneticist known as “Father of the Hybrid Rice” in the world. In him, I see how an individual can contribute to the welfare of the human society as a whole. His footsteps are what I must follow.