PREFACE

The quest to learn the intricacies of nature led me to tread the path of life sciences. These thoughts persuaded me to have a post graduate degree in the subject of Zoology. During the course of my studies, it became evident that genome of an individual holds the key to one’s being. It also dictates the outcome of important individual responses to various environmental stimuli including susceptibility to diseases. These observations prompted me to pursue my research work in a field that includes genetics and molecular biology. For this, I was introduced to Prof. PK Sehajpal, Department of Molecular Biology and Biochemistry, Guru Nanak Dev University, Amritsar, by one of my friend Dr Kuljinder Singh. That was the instance when my transition started from Zoology to Molecular Biology.

I belong to Himachal Pradesh, a small beautiful hill state, in the foothills of Himalayan Mountains. Since my childhood, I always wanted to know why some of the patients are advised to visit hills and remain in isolation for long periods of time. With time, I came to know the real reason and found that breath of fresh air and even pure water of hills have medicinal values, especially for infectious disease like Tuberculosis (TB). Even, the great Indian leader Subhash Chandra Bose got healed from TB at Dalhousie, a small town of this hill state. This could be the reason that many TB sanatoriums were built in Himachal Pradesh. The earliest one and the first of its kind was built by Britishers at Dharampur, HP. It has been the central point for patients from all over North India. The long isolation of patients might crumble their families; push them into deep poverty; separate a person from near and dear ones and much more. These thoughts prompted me to explore the intricacies of human diseases. I wished to understand the biology behind TB so that the pain and misery associated with this disease could be minimized.

My metamorphosis from a student of Zoology to Molecular biology was well pampered by my revered supervisor Prof PK Sehajpal. He told me to select the disease on which I wished to work and never forced his opinions on me and let my thoughts to fly free, so that I can grow as a researcher and not become a technician, which he always insisted in his talks. I then realized that my wish was going to be fulfilled.

After due deliberations with my supervisor and physicians, my deep rooted desire to work on TB was on. During various discussions, I found that it is not only a disease but a social stigma that can haunt a person for life time. It separates the families; friends and people fear the company of those with TB, thinking that the disease might affect them because of its infectious nature. On having further discussions with my supervisor, I became aware of the role played by genetics in susceptibility to TB. At that time the topic for my doctoral work was decided, to ascertain the role of key cytokines in susceptibility to TB in North Indian Punjabi population.
Moreover, I wish to write, as a token of gratitude to all sources instrumental in shaping-up my research efforts into the present ensemble. I am greatly indebted to my supervisor Prof PK Sehajpal, for introducing me to the intricacies of scientific research. His assiduous attention and expert guidance over the period of my work are the forces which led to the successful culmination of this thesis. I found him ever motivating, encouraging and making me explore my strengths. His honest criticism and critical comments helped me to reach my desired goals. I don’t think, words will ever be enough to acknowledge his contribution in helping me achieve my targets and making me a better human being.

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(VijayKumar)

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