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A born dreamer

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I began my journey at the age of four in a small village called Khamerbaria in West Bengal. My mother sent me to the only school nearby, where the sole teacher had to look after all the children from classes one to four. The teacher did not appreciate the idea of taking care of a four-year-old girl, as that was odd in those days, especially in rural areas. The teacher, being very clever, agreed to admit me only if somebody could take care of me in school. My grandmother came to my rescue. I was very happy – I was the only student whose grandmother was allowed in.

I always followed my mother around with a book. I loved to study and I would read while staying close to my mother. Therefore, almost all my books were spotted with *haldi*. “Do you cook your books?”, my teacher used to tease. My mother inspired and encouraged me to believe that education was the only way to fulfil one’s dreams in life. My father used to come home once a week on Saturday nights. It was difficult for me to be awake at that late hour and to read by a small kerosene lamp. But that was my only opportunity to impress my father with my progress in studies. He was keen to keep track of my education, and I passed class four with impressive marks.

My father worked for the government. Although a brilliant student, financial constraints prevented him from pursuing

higher education. My mother devoted her entire life to her five children. Her devotion, intelligence, and kindness were always focused on us. However, she was very adamant about our education. Having not received formal education, she used to tell us that education was the only real thing in life, which would open many doors for us. The family's dream was to see us receiving higher education. At home, reading story books, newspapers, school books and novels was always encouraged. I used to read anything printed that I could get my hands on. Reading was, and still is, my real joy. We were always encouraged to do anything related to books.

My mother protected me from child marriage, which was very common in the village. After I completed the fourth grade, my mother took a very bold decision – to move from that remote village to a nearby town for my further education.

I was admitted to a missionary school in Bankura, West Bengal. Ever since I was a child, I wanted to be a doctor. After finishing high school, despite my mother's strongest support, other family members opposed my entering Medical College. However, my dream was fulfilled when the family's attitude changed for my sister. After completing eleventh grade, I was admitted to Bankura Christian College with Chemistry Honours and thoroughly enjoyed the subject. Our teachers were very good. Being the only girl, I used to get a lot of attention from them. I am a born dreamer.

During college, I read about Madam Curie, and wanted to spend my life like her – immersed in science. My interest in science, I think, came from reading books. I used to think scientists are like God and could cure any disease if they wanted to. I dreamt of becoming a scientist to solve the mysteries of the culprits responsible for diseases. I wanted to learn the chemistry of diseases.

After graduation, I left my hometown, as there was no university there. Again there was a storm in the family regarding my higher education. But by this time I also had a strong and confident voice and convinced them that this was my strongest wish. I got admission for my master degree in Chemistry, at Burdwan University. I was lucky to have a group of dedicated teachers who kept alive my passion for science. I loved to spend time in

the practical classes; this gave me immense pleasure.

My journey took me farther and farther away from home, to the Indian Institute of Science (I.I.Sc.), Bangalore. The entrance exam was very tough, and the mental pressure was enormous. In those days, going from Bankura to Bangalore, more than 3500 km away, entailed a four-day journey by bus and two nights and three days by train!

Getting admission in I.I.Sc. was the most important turning point in my life. Bangalore was a completely new world for me! This was my first opportunity to mix with students from other provinces, whose languages were so different! It seemed that the whole world was opened to me. The library used to remain open seven days a week. When I got my own key to the organic chemistry department, I was thrilled. Now I could spend as much time as I wanted in the laboratory.

In those days, in India blending the physical sciences and the biological sciences was very rare. The opportunities at I.I.Sc. aroused my enthusiasm to learn not only chemistry but also biology. Accordingly, I was keen to pursue research in immunology during my post-doctorate training. As an organic chemist; I thought if I could utter the words 'antigen-antibody' I would be an immunologist! I was determined to join a top-class molecular immunologist, though I did not know much about immunology. Fortunately, I was selected to join the laboratory of Prof. Fred Karush at the University of Pennsylvania. My experiences in molecular immunology opened a much wider door for me to study cell surface molecules, proteins, glycoproteins and their alteration in diseased conditions. During this time, lots of exciting scientific events were happening. People were developing monoclonal antibodies using Nobel Prize winning technology invented by Kohler and Milstein. I too was keen to learn this technique. I never stopped dreaming of learning new things and conducting new experiments.

I always wanted to pursue my career in India and I joined the Indian Institute of Chemical Biology (I.I.C.B.) as a young scientist. Now I wanted to blend my knowledge of immunology with chemistry and was ready to switch gears. I wanted to combine basic research with applied aspects, which was extremely un-

common in those days in India. Prof. B.K. Bachhawat, director, inspired me to continue such research. Even today, my ongoing research is in this direction, related to diseases.

I still love to dream and I think being a scientist is the best profession, as you are paid to fulfil your dreams. This is the profession where you can have new and unexpected experiences through hard work and you cherish extraordinary moments which cannot be realized in a job with big salary. I had an overwhelming satisfaction when I realized that my simple diagnostic kit would help many poor unfortunate patients suffering from kala-azar and infected with a life-threatening parasite. When I inform the parents of children suffering from acute lymphoblastic leukemia that there are no cancer cells left as minimal residues of the disease, I feel satisfied.

Finally, I believe, with passion and sincerity it is possible to fulfil one's dream despite difficulties, which women face. However, I was extremely lucky to have a full support from my life partner, a brilliant scientist, who had a passion for science. He is the one who inspired me to go further in my education than I had ever dreamt. He is my collaborator throughout my research career. The true aim of a scientist is to understand the world. I used to tell stories of my laboratory to my little son. Whether he understood or not, he felt as if he was a part of it. I am happy I did that, and he never felt dissociated from his mother's dream. A successful engineer, still he is with me. The support from my husband and son give me the strength, power and courage to proceed in my scientific work.

I urge young women researchers never to give up hope and never to forget to dream but always be open to problems in life, research and elsewhere. I sincerely believe that Indian women have a lot of power to fulfil their ambitions. As a woman, I have had to face many difficulties. But I never gave up. The more I struggled, the greater was my desire to do my work. In the end, nothing could stop me. My fight went on.

I cannot remember a time when I did not want to go to my lab – it is my dream place and I never feel bored. In view of my experience, I am sure if I had to do it all over again, I would do the same thing. I do not think I have been disappointed with myself and I have never regretted the choices I made.