



## Dr. Satyavati Motiram Sirsat

**Holistic education along with arts, dance and culture rooted in our country's ethos widened Dr. Satyavati's outlook.**

**S**atyavati was born in a Gujarati family in Karachi a hundred years ago. As her father was involved in shipping ventures, their family had to move and stay at different places. Though this was not easy, it helped little Satya to appreciate many cultures and learn many languages. As members of the Theosophical Society, her parents chose Besant Memorial School in Chennai founded by the vibrant visionaries Rukmini and George Arundale. Holistic education along with arts, dance and culture rooted in our country's ethos widened her outlook. "During my early teens, I read a fascinating book by Paul de Kruif, *The Microbe Hunters*, which left a lasting impression on me. Along with formal education, I

also had the advantage of a cultural heritage," reminisced Satyavati about her school days in her biography.

She earned a bachelor's degree in microbiology studying at St. Xavier's College in 1947. Recalling her laboratory days, "My first look through an optical microscope at a smear of a mixed gram-positive and negative culture of micro-organisms gave me an emotional thrill I can never forget," she exclaimed. After her graduation she went to meet Dr. Khanolkar, the chief of laboratories and the chief pathologist at the Tata Memorial Hospital for Cancer and Allied Diseases. "No phone calls, no appointment - I just stood there waiting to see him.



After a two-hour wait, he called me in and we had a long chat. I did not realise that this was his way of interviewing the young. I acquired a broad-based scientific and artistic vision from him," observed Dr. Sirsat with gratitude. Thus started her research journey in the department of pathology, which made an impact in the life of millions.

In 1948, when the Department of Pathology was made into a full-fledged Cancer Research Institute, this senior doctoral student eventually became a founder-member of the new research centre. Three researchers were selected to go abroad to learn and bring back the then newly established techniques in genetics, tissue culture and electron microscopy. One among them, Satyavati recalled this enriching learning experience, "along with the methodology of science, I imbibed the scientific culture so vital to modern biomedical research. I worked and learnt in the laboratories of stalwarts of science - Hans Selye, Albert

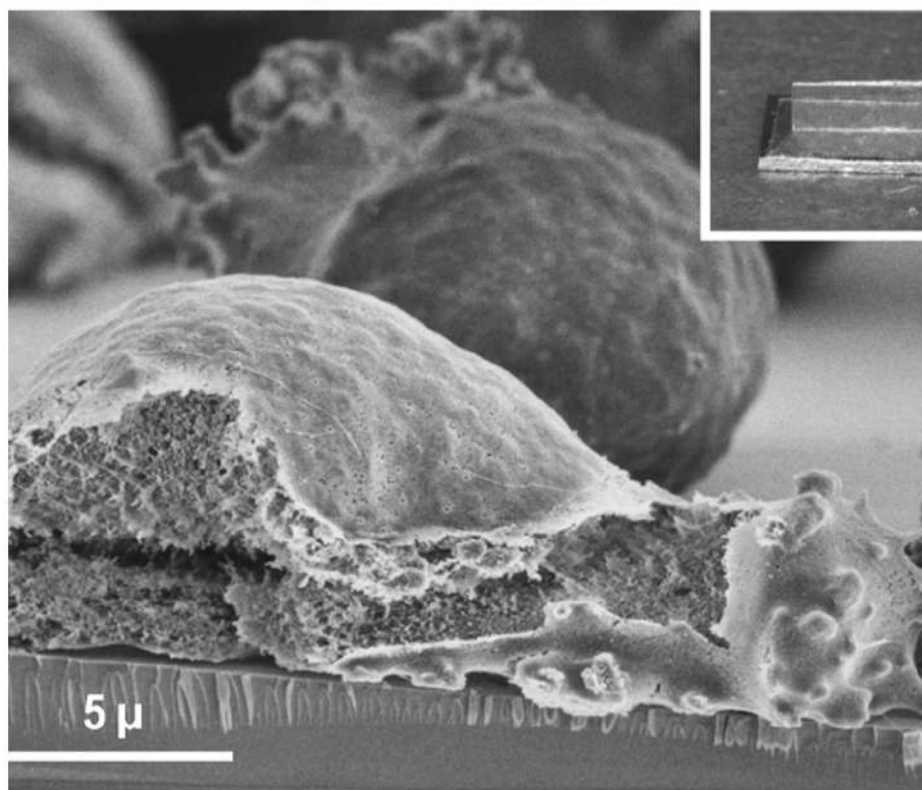
Szent-Gyorgyi, Linus Pauling, Alex Haddow, Charles Oberling and William Astbury."

Dr. Satyavati founded the first biomedical laboratory at the Tata Cancer Research Institute which became globally famous for its work. She established an electron microscopy lab paving the way for ultrastructural cytology and diagnostic molecular pathology in our country. This helped researchers to get a thorough insight on the cellular structure and improved ways for disease diagnosis by examining the condition of molecules within organs. Her group focused on understanding the transformation of cell membranes from normal to abnormal and then into cancerous cells, the secondary spread of cancer, viruses and haematological, breast and nasal cancer. Her husband Dr. M. A. Sirsat, an internationally known onco-pathologist was supportive in their personal and professional life. "He was a very popular teacher of young aspiring pathologists. Whenever I had a problem with



the complexities of this dreadful disease, he solved it with patience and affection. It was a wonderful partnership."

She founded the Electron Microscope Society of India and served as its President from 1967 to 1972. She did exhaustive study on fibre and tissue structures of human cancers. "Our main stress was on oral precancer - leukoplakia and oral submucous fibrosis — and frankly oral cancer rampant in our motherland due to the habit of lime-based paan and tobacco chewing. I was always aware of the teeming suffering humanity in the corridors of the hospital. Besides electron histochemistry, immune electron microscopy, electron auto radiography, cryoelectron microscopy, we were aware of the human aspect of our work," wrote Dr. Satyavati. Driven by passion to serve the suffering, she founded the **Shanthi Avedna Ashram (Sadan)** - India's first hospice to take care of the terminally ill cancer patients.





She worked for more than two decades with the Bharatiya Vidya Bhavan Ayurvedic Centre on ancient insights and modern discoveries. She took up research on **cancer**

**nosology of the *Vridhdhatrayi***, the three foundational texts of Ayurveda- ***Charaka Samhita***, ***Sushruta Samhita*** and ***Astanga Hridayam***. “It is mind blowing how fully these ancient scholars’ descriptions tallied with modern ones. They had vast knowledge of different tissue tumours and their biological behaviour, benign vs. malignant, bone and haematological cancers. Their only tools were close observation of the human body, the deceased individual and their intuition,” notes Dr.Satyavati based on her extensive research.

Asked about extended hours of research, meeting terminally ill patients and counselling them, “It was not a job; it was a life of *sadhana*

and *tapasya* in the laboratories of Tata Memorial Centre, and indeed the world,” was how Dr.Satyavati summarised her entire life. After her superannuation, she continued to contribute as the chairperson of the Tata Memorial Centre’s medical ethics committee.

She was a great human being having multifaceted talent including proficiency in dance, classical music, humour, philosophy and great love for book collection. She was well versed with many languages including Gujarati, Tamil, Kannada, Marathi, Hindi, English and French.

A few final words from this great scientist to young aspirants, “Do you want the honoured label of a scientist? The tenets of life are strict! Be honest to your work and true to yourself. Be disciplined. Never disparage the work of your fellow scientists. Be observant - never distort your log or show records to fit a preconceived theory. **Above all, life is to learn - so learn, learn and learn! You are on the greatest adventure - exploration of nature’s secrets!**”