

year, volume and page and, of course, the name of the author. Writing a paper and a thesis with her was a learning experience and a great joy. She was also an artist and showed us a number of her water-colour paintings.

After retiring from CRI in 1985, she worked for 17 years at the Bharatiya Vidya Bhavan Ayurvedic Centre on ancient insights and modern discoveries. Her knowledge of Sanskrit proved invaluable while she worked on a project on cancer nosology of the 'Vridhatrayi' – Charaka, Sushruta and Vagbhatta. Post-retirement, Sirsat continued to serve her alma mater the Tata Memorial Centre as Chairman of the Medical Ethics Committee.

A great humanitarian, she was drawn to the care of terminally ill patients. She worked closely with Lucito D'Souza to start a safe haven – India's first hospice, Shanthi Avedna Ashram in Mumbai, where terminally ill cancer patients find hope for a peaceful end. She was the founder trustee-counsellor of the hospice since 1986. The hospice movement was dear to her heart and she continued to be associated with it for as long as her strength permitted.

All of us who had the good fortune to be associated with Sirsat truly admire her versatility and understanding of science, literature, music and dance, and her motherly warmth. Her passing away has created a void not only in her family, but

the scientific community that remains indebted to her pioneering efforts in modernizing cancer research in India. She has authored a book titled *Death, the Final Freedom* with Lancelot Pereira, which speaks about peaceful death. Sirsat who helped and cared for terminally ill patients in their last journey, passed away peacefully on 10 July 2010.

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## Vinod Bhakuni (1962–2011)

The Indian scientific community lost an accomplished colleague on 15 July 2011 when Vinod Bhakuni died of a sudden heart attack in Lucknow.

Bhakuni worked at the CSIR-Central Drug Research Institute (CDRI), Lucknow, where he headed the Division of Molecular and Structural Biology. Beginning as a Ph D student with C. M. Gupta, he had worked and taught at the Institute since 1984. After pursuing a postdoctoral fellowship in the laboratory of Ernesto Freire at the Johns Hopkins University, USA for two years, Bhakuni returned to a faculty position at CDRI.

Bhakuni was among the leading biophysicists of the country. He was deeply interested in understanding protein folding, intermediates and stability in order to gain insight into protein-folding pathways and their future applications. His initial work on several proteins demonstrated the importance of ionic interactions on protein stability and oligomeric conformation. He also worked on binding mechanisms of hydrophobic dyes and different alkaloids on cytochrome *c*, catalase and other proteins and deci-

phered their folding patterns and pathways. During the late nineties, a much cited work from his laboratory provided evidence for the role of the hydrophobic dye, ANS, in protein refolding. The



unique stoichiometry of the cofactor in serine hydroxyl methyl transferase (SHMT) of *Mycobacterium tuberculosis* was first demonstrated by his group. He further characterized SHMT from different sources to decipher its mechanism

of action and folding patterns. More recently, his interests geared towards understanding the mechanism of action of hyaluronate lyases (HLs) from *Streptococci* and bacteriophages. His group successfully deciphered the mechanism of action of HLs, characterized their cofactor requirements and identified suitable inhibitors.

Bhakuni's research contributions were recognized by many awards, including the CSIR Young Scientist Award in 1996, the Bhatnagar Prize in 2006, and fellowships of the three Indian science academies.

Bhakuni is survived by his parents, wife Neelam, son Abhyudai and daughter Harshita. The many students he mentored carry forward his scientific legacy.

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