C. S. Vaidyanathan: In Memoriam

C. S. Vaidyanathan (1931–1999), the very distinguished enzymologist, who retired as Professor & Chairman of the Department of Biochemistry, Indian Institute of Science, Bangalore, passed away at his home in Bangalore on 1 September 1999.

C. S. Vaidyanathan was born in Palghat, Kerala, on 14 November 1931. He did his schooling in Vadakkancherry, his graduate programme in Chemistry at Maharaja's College, Ernakulam, and both M Sc and Ph D in the Department of Biochemistry, Indian Institute of Science, Bangalore, under the guidance of K. V. Giri, obtaining his Ph D degree in 1954. I had the good fortune of knowing him intimately since his student days in the 1940s when we were working at the Indian Institute of Science.

Vaidyanathan spent two years (1956–1958) at University College of Swansea, UK working with H. Street on plant metabolism and then returned to India. He joined as Lecturer in the Department of Biochemistry, Indian Institute of Science in 1960 and worked his way up, retiring as professor in 1992. He was also the Dean of the Science Faculty for 2 years.

Vaidyanathan's group carried out investigations mainly concerned with the metabolism of phenolic and chloroaromatic compounds in plants, fungi and bacteria. Their work led to the discovery of new reaction pathways involving these substances, utilizing, in most cases, the very recent experimental procedures in enzymology and molecular biology. During these investigations, two new enzyme systems, one catalysing the conversion of *O*-aminophenol to isophenoxazine and the other involved in the conversion of isophenoxazine to catechol, were discovered. In addition, Vaidyanathan and co-workers were the first to study isolated enzyme systems involved in the aromatic ring fission in higher plants. For instance, they isolated an enzyme from *Tecoma* leaves, which catalyses the oxidation of 2,3-dihydroxybenzoic acid, leading to the

isolation of an aliphatic product which was characterized as 2,5-dioxa-3,7-dioxobicyclo (3:3:0) octane 8-carboxylic acid. They also cloned a gene involved in the degradation of the herbicide, 2,4-dichlorophenoxyacetic acid (2,4-D) by the bacterium *Pseudomonas cepacia*. This gene was shown to be present on a 90 kb plasmid, which was then sequenced by digestion with *Bam*HI and *Hin*dIII.

In addition to carrying out his own investigations, Vaidyanathan often collaborated with other groups not only in his department but also in the neighbouring departments like Microbiology & Cell Biology. In fact, it was common knowledge among his colleagues that they could safely entrust their students to Vaidyanathan for his guidance when they went on sabbaticals. On a personal note, he took care of K. P. Gopinathan, who was working on NADase inhibitor present in *Mycobacterium tuberculosis* when I went on sabbatical in 1962 and of P. K. Asha who was working on plant tissue culture, when I went abroad in 1979, resulting in publications of their work during this period in national and international journals. His own students are now occupying prominent positions both in India and abroad.

Vaidyanathan was a fellow of the Indian Academy of Sciences and Indian National Science Academy. He was recipient of P. S. Sarma Memorial Award and J. C. Bose Award.

Vaidyanathan was acknowledged by everyone as a thorough gentleman and a sincere friend. His facile use of the English language was always a source of pleasure to his listeners, who looked forward to his presentations in meetings and symposia. In his passing away, we have lost a person of exemplary qualities, an eminent scientist and a modest and kind-hearted person. I personally have lost a very close and dear friend.

C. S. Vaidyanathan leaves behind his wife Visalakshi, a son, a daughter and two grandchildren to mourn his loss.

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