

OBITUARY

## Dr. V. Jagannathan (1921–2015)

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Dr. (Mrs.) Mala Rao, former CSIR Emeritus Scientist superannuated as Chief Scientist in 2007 from Biochemical Sciences Division of CSIR-NCL. Dr. (Mrs.) Vasanti Deshpande superannuated as Senior Principal Scientist in 2004 from Biochemical Sciences Division of CSIR-NCL. Mala Rao and Vasanti Deshpande were associated with Dr. Jagannathan almost for five decades right from their student days while they were post graduate students in Pune University. As an external examiner he used to interact with them and inspired them a lot. Both of them joined CSIR-National Chemical Laboratory, Pune for their doctorate degrees in 1967. Vasanti Deshpande joined with Dr. Jagannathan whereas Mala Rao joined with Prof. K Venkataraman. Mala Rao did part of her thesis work under the supervision of Dr. Jagannathan. Later she joined him in 1973 to work on cellulose project and continued to work with him till his retirement. The association continued even after V.J. moving to TERI, New Delhi and also later part of his life.

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Dr. V. Jagannathan, Ph D, Stanford, F.N.A, F.A.Sc., fondly called by colleagues and students as V.J., was an internationally and nationally reputed biochemist.

Dr. V. Jagannathan was born in Tanjore District Tamil Nadu. He joined the chemistry department, Presidency College, Chennai and obtained the B.Sc. (Hons) in 1940 with First rank in university. In his words, he was faced with the choice of a career. It was generally expected at that time for a person with a good academic record to consider a post in the administration services. He was however inspired by the example of Sir C.V. Raman. He was also strongly influenced by the statement of Swami Vivekananda, that in a country which could not even manufacture safety pins science was high priority. He was also advised by Swami Yatishwarananda “India has enough Sadhus. What we need are scientists. It is a noble profession.” He decided to devote himself to a scientific career with equal emphasis on basic and applied research.

He joined the Biochemistry Department of Indian Institute of Science, Bangalore and after obtaining the A.I.I.Sc (Master degree) proceeded to Stanford University, California to work with Dr. J. Murray Luck for PhD. His problem was on phosphoglucomutase, an enzyme involved in carbohydrate metabolism. He purified the enzyme and made the surprising discovery that it contained a phosphate group which could reversibly exchange with substrates. He received his PhD degree in 1949. He was then invited by the distinguished biochemist Dr. David Green, to work at the Enzyme Institute in Madison, Wisconsin where he undertook studies on pyruvic oxidase an important enzyme in glucose metabolism.

He then joined NCL, Pune in 1951 where he became the head of biochemistry dept. in 1956 till his retirement at the level of director in 1981. Here he established two pioneering research groups in enzymes and plant tissue

culture. He and his group discovered several new enzymes such as NADP-glycerol dehydrogenase, hydrogenase and a hexokinase, acetylcholine esterase and NaDase of brain and purified them to homogeneity for the first time. An inhibitor of proteolytic enzymes such as papain was found to occur in many plants and several isoinhibitors were obtained in pure form.

Dr. V.J. and Dr. G.N. Ramachandran, the distinguished Indian physicist decided to collaborate on a project which could be of national importance and a long term project for the utilization of cellulose for the production of fuel and protein food was initiated. Cellulose is the most abundant natural product and its conversion into glucose and alcohol would yield fuel. This area is also one of the great current interests in view of high petroleum prices.

Dr. Jagannathan started a school of research in plant tissue culture which was one of the first in the country that put the CSIR-NCL firmly on the map of the world in the field of biological research. He published more than 100 research papers and guided more than 30 students for their research work for M.Sc. and Ph.D. degrees.

His contribution to the area of plant tissue culture is of exceptional scientific excellence and of established national economic benefit. The most novel being the development of a virus-free sugar cane which has increased the yield significantly.

After retirement he continued as an Emeritus scientist at NCL till 1984 and then moved to Delhi at the invitation of Mr. Darbari Lal Seth to work on plant biotechnology at The Tata Energy Research Institute till 1992. He established up-to-date research facilities in areas of genetic engineering and molecular biology and applied it along with tissue culture for plant biotechnology. He returned to Pune in 1992 and was a consultant for Indrayani Biotech for a few years.

Dr. V.J. was a very spiritual person and had a keen leaning towards Buddhism. He was of the opinion that

meditation is a way of life. He was a voracious reader. His choice of books ranged from John Grisham to Dean Ornish to Eckhart Tolle.

Dr. V.J. was attached to his niece Hema and her son Jaideep. Although, he was unmarried, he considered them as his family. Hema took great care of him till end. During past one year he was physically weak but was mentally very sharp and alert and used to discuss with Mala Rao, one of the authors, cellulases, metabolic pathways and meditation which were his favourite topics.

Dr. V.J. had received many prestigious awards and honours such as the Distinguished Alumnus Award of the Indian Institute of Science, VASVIK Award (1978) and Shri Om Prakash Bhasin Award (1988). He was also awarded with the Heart Foundation Fellowship to work in Dr. David Green's laboratory at the Enzyme Institute, Madison (1950–1951).

Dr. Jagannathan was a Fellow of Indian National Science Academy, New Delhi, the Indian Academy of Sciences, Bangalore, the National Academy of Sciences, Allahabad and also Maharashtra Academy of Sciences, Pune. He was the past president of Society of Biological Chemists and founder member of Plant Tissue Culture Association of India. He had also served on the Editorial Board of the Indian Journal of Biochemistry and Biophysics and Elsevier's journal *Biochimica Biophysica Acta*.

Dr. Jagannathan once said "I have worked with many I liked and a few I disliked but even if I disliked a person intensely, I would go all out to support him if he is good"; it shows the generosity of his heart. He had a unique personality; he was a man of great self confidence, of amazing intellectual courage and with bold visions. CSIR-NCL as a family is deeply saddened by his demise. CSIR-NCL acknowledges his significant contributions to the Laboratory and pays homage to the departed soul.