

## Venkataraman Jagannathan (1921–2015)

In science, it is not always necessary to achieve great success, but also important to conceptualize new ideas which can be taken forward by others to achieve the distinction. This philosophy was practised by Venkataraman Jagannathan, who passed away on 2 December 2015 at the age of 94. It has been said that 'those who make history are often unaware of it at the time'. In 2001, Jagannathan, wrote a letter 'G. N. Ramachandran and applied research' in *Current Science*<sup>1</sup>. He mentioned that after discussion on several research areas, both G. N. Ramachandran (GNR) and he decided to work on the utilization of cellulosic biomass for the production of single-cell protein and alcohol. Though GNR could not continue on this aspect, successful completion of CSIR Silver Jubilee and subsequently two United Nations Development Programmes (1970–2001) in the CSIR-National Chemical Laboratory (NCL), Pune is history because of the able leadership of Jagannathan. Rather, he was one of the pioneers to start biotechnology in India.

Jagannathan graduated in chemistry from Madras University, and did his postgraduation from the Indian Institute of Science, Bengaluru (1944). He was awarded Government of Madras scholarship to work for a Ph D in Stanford University under the guidance of J. Murray Luck. For his doctoral research, Jagannathan worked on purification and characterization of an enzyme–phosphoglucomutase, which converts glucose 1-phosphate to glucose 6-phosphate, a known constituent of various animal

tissues, in this case rabbit muscle. After his Ph D, Jagannathan received the Heart Foundation Fellowship from NIH, Washington and worked on pyruvate oxidase of pigeon breast muscle in Dr David Green's Enzyme Institute, Madison for a year and then joined NCL in 1951.



His group in NCL discovered several new enzymes. For the first time, enzymes such as brain hexokinase, acetylcholine esterase and hydrogenase were extensively studied. He was Head of the Biochemistry Division from 1956 to 1981, until his superannuation. Another research area he started in NCL is plant tissue culture and the contributions of his group included the first successful micropropagation of mature teak and eucalyptus, virus elimination from sugarcane, propagation of elite cardamom, turmeric and others. In 1978, he was aptly honoured with the Vasvik Award for Biological Sciences and Technology by Vividhlakshi Audyogik Samshodhan

Vikas Kendra (VASVIK), a non-profit NGO for the development of high-yielding virus-free sugarcane through tissue culture. Moreover, he was invited to set up a laboratory for plant genetic engineering at the Tata Energy Research Institute, New Delhi, where he worked as Head, Biotechnology from 1985 to 1992. He published over a 100 research papers and more than 30 students obtained M Sc by research and Ph D degrees under his guidance. He was on the editorial board of the *Indian Journal of Biochemistry and Biophysics* and *Biochimica Biophysica Acta*. In 1988, Jagannathan received the Shri Om Prakash Bhasin Award. He was a Fellow of the Maharashtra Academy of Sciences, Pune; Indian Academy of Sciences, Bengaluru and Indian National Science Academy, New Delhi.

Jagannathan was a man of great self-confidence, astounding intellectual courage and bold vision. During 1960–1985 Jagannathan along with late J. C. Sadana and C. Siva Raman took enzymology research to its pinnacle at NCL. With the demise of Jagannathan, we have lost a pioneering enzymologist.

1. Jagannathan, V., *Curr. Sci.*, 2001, **81**, 333.

M. V. DESHPANDE

*Biochemical Sciences Division,  
CSIR-National Chemical Laboratory,  
Pune 411 008, India  
e-mail: mvdeshpande1952@gmail.com*