

A. R. Mehta (1929–2018)

Admired as a ‘Guru’ by his students, Prof. Atul Ramakant Mehta, the revered teacher of botany died in the wee hours of 23 December 2018 at his residence in Vadodara, Gujarat. Deeply loved and respected by all those associated with him, Mehta had an illustrious career spanning about 40 years. His father, Ramakant served as an accountant in the erstwhile Gaekwad State of Baroda, and mother Jaikirtiben was a social worker.

Born on 31 August 1929 in a small town, Petlad, Khera district in Gujarat, Mehta inherited a rich culture of love for sports, classical music, apart from his altruism and benevolence for others. He graduated (B Sc and M Sc) with Honors in Botany from the Maharaja Sayajirao University of Baroda (1951 and 1953 respectively) and pre-eminently started his career as an Assistant Lecturer in Botany in 1953, which he continued for a short stint till 1956. It is an irony of fate that after doing research on pteridophytes (with T. S. Mahabale, Pune) and grasses (with A. R. Chavan, Baroda), during 1954–1960, Mehta embarked upon studies of experimental plant biology, not satisfied with the methods of pedagogy in plant taxonomy. Realizing the fascinating world of structure–function relationships, he always wondered how a single cell was able to divide and metamorphose into trillions of cells that organize themselves into different tissues and perform diverse functions during growth and development in the life cycle. He then turned to the emerging technique of plant tissue culture for his doctorate degree, knocked at the doors of Prof. Herbert E. Street, a world-renowned plant physiologist and pioneer in plant tissue culture research at the University of Swansea, United Kingdom. It is here that Mehta found his academic solace and satisfaction. After joining Street’s laboratory in early 1961, Mehta initiated the cell cultures of *Phaseolus vulgaris* and *Linum usitatissimum*. His was the first thesis at Swansea on the growth patterns in cell suspensions of normal and tumour (crown-gall) tissues. The work on cell culture dynamics of Sycamore *Acer pseudoplatanus* L. resulted in a seminal publication in experimental biology (a highly cited reference in the field of tissue culture then). After receiving his Ph D degree at Swansea, Mehta returned

to the Botany Department at M.S. University of Baroda, and by early 1963 had initiated a School of plant physiology and tissue culture with funds flowing from UGC, New Delhi. His passion for plant physiology and tissue culture coupled with devotion towards teaching and research did not stop there. Keeping abreast of the developments from his peers and contemporaries, Mehta always updated his domain knowledge and technical skills in the discipline. An inspiring teacher and a dedicated researcher, Mehta was an embodiment of nobility of character, generosity and benevolence.



After working on the differentiation of vascular elements and organs in callus cultures, his interests shifted with changing times. With a postdoctoral fellowship in Prof. John E. Staba’s laboratory, Mehta entered the College of Pharmacy at the University of Minnesota, Minneapolis, USA and initiated work on *Dioscorea* for the production of a saponin diosgenin, an important steroidal compound. With this, his focus shifted to the field of regulation of secondary metabolites; alkaloids, phenolics, steroids, etc. in plant tissue and cell cultures.

During his tenure at the M.S. University of Baroda, Mehta got UGC-Departmental Research support and undertook benchmark studies on the environmental impact of Narmada Sardar Sarovar project which helped in getting environmental

clearance from the Government of India. He became Professor and Head of the Department of Botany at the M.S. University of Baroda in 1981 and superannuated in 1989. As a member of the academic senate of the University, he contributed significantly to the academic ambience and in fine-tuning the University administrative procedures and protocols. He was recipient of the Jaikrishna Indrajit Award by the Hari Om Ashram, in 1978 and was awarded the Prof. Vishwambhar Puri Medal by the Indian Botanical Society in 1991. He was selected to deliver the Prof. Philip R. White Memorial Lecture at Jadavpur University in 1965 and the first Prof. H. E. Street Memorial Lecture at Nagpur University in 1982. He also delivered the Prof. A. R. Chavan Memorial Lecture at the M.S. University of Baroda in 1998–99. He was an elected member of the International Association of Plant Tissue Culture (IAPTC) at the University of Calgary, Canada and also its National Correspondent for many years. Mehta’s charisma attracted a number of scientists from India and abroad to the Botany Department at the M.S. University of Baroda for illuminating lectures and lively interactions. He organized an international workshop sponsored by UNESCO-International Crop Research Organization, and invited renowned scientists like G. G. Henshaw, David Walkey and Jim Dunwell, besides conducting an NBTB-sponsored National Training Programme for scholars and faculty.

Between 1990 and 1994, Mehta worked as a CSIR-Emeritus Scientist at the Department of Plant Breeding and Genetics, Gujarat Agricultural University, Anand. He has mentored 25 Ph D students and authored more than 150 research papers in national and international journals of repute, and edited a book with P. N. Bhatt titled *Handbook of Plant Tissue and Cell Culture*. He worked on a wide array of topics such as cell differentiation, organ differentiation, the role of polyamines in morphogenesis, plantlet regeneration in tree species like soapnut and recalcitrant species like guggul. He isolated many secondary plant products from cultured cells such as diosgenin, guggulsteroids, insect molting hormones, *Lathyrus* neurotoxin and several phenolic compounds. His curiosity

for unravelling the physiological and biochemical changes in haploid and diploid tissues of tobacco is exemplary. Mehta developed stable somaclones of tobacco for resistance to *Fusarium oxysporum*. He imparted excellent training skills with the same commitment to all his students during his career as a noble teacher and as a passionate researcher. To all of us, he taught and inculcated the spirit of inquisitiveness in science. Mehta served in the National Committees like DST, DBT, UGC, ICAR and CSIR as an expert member. Besides, he visited several universities and delivered lectures as a

National Professor. He was a core team member of the All India Coordinated Project on Medicinal and Aromatic Plants of ICAR.

Mehta was a fond lover of classical music and used to sing songs/ghazals. Known for his cricketing talent, he represented the M.S. University cricket team; and also the drama group. Mehta always attributed his success to his late wife Yashaswini Mehta. He is survived by a son and daughter.

We, the students and all members of the plant tissue culture fraternity will surely miss his dynamic physical pres-

ence, but his inspiration, humility and sense of humour, will remain with us for a long time.

G. A. RAVISHANKAR^{1,*}
P. B. KAVI KISHOR²

¹*Dayananda Sagar Institutions,
Kumara Swamy Layout,
Bengaluru 560 078, India*
²*Department of Genetics,
Osmania University,
Hyderabad 500 007, India
e-mail: rgokare@yahoo.co.in*