MANDAYAM JEERSANNIDHI THIRUMALACHAR

(22 September 1914 - 21 April 1999)

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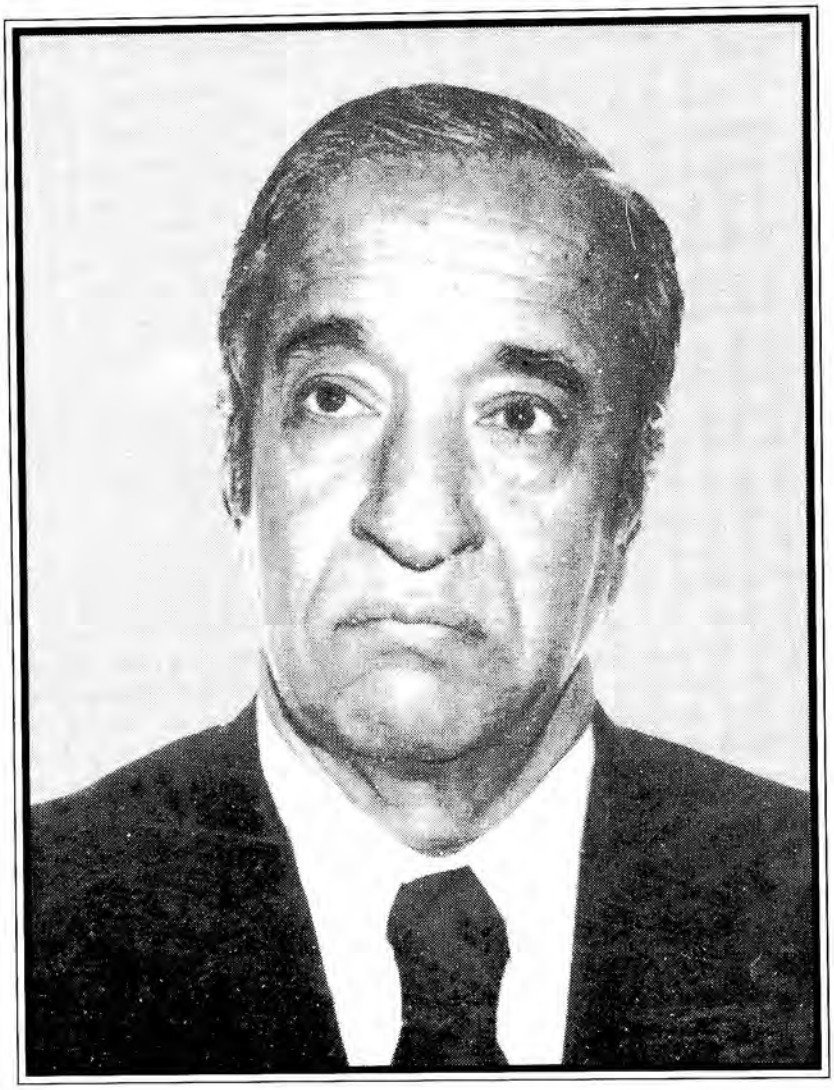

MANDAYAM JEERSANNIDHI THIRUMALACHAR

1914–1999

(Elected Fellow 1966)

EARLY LIFE, EDUCATION AND PROFESSIONAL CAREER

MANDAYAM JEERSANNIDHI THIRUMALACHAR (MJT) was born in Bangalore as the second child to Professor MJ Narasimhan and Smt. Vengadammal on September 22, 1914 in a family of high erudition and scholarship. His great grandfather Jeersannidhi Thirumalachar Swami became the head of the Yadugiri Yathiraja Mutt at Melkote founded by the doyen of Sri Vaishnava cult, Sri Ramanujachariar. A scholar of great eminence in Sanskrit, he travelled all the way to Badhrinath and attained Samadhi on his return at Rewa, near Allahabad. Even today there are his followers there. Thirumalachar got his name from the fact that he was born on the same day as the birthday of his illustrious saint great grandfather, which is observed every year in the mutt.

Thirumalachar's school education was completed in Malleswaram, Bangalore. He graduated from the Central College, Bangalore. Professor Narasimhan as an eminent botanist and plant pathologist inspired Thirumalachar's love for these subjects from the very beginning and it is remarkable that this father-son combination contributed very substantially to advances in Mycology and Plant Pathology for over twenty-five years. While on the teaching staff at Central College, Bangalore in the Botany department, Thirumalachar inspired several of his colleagues and juniors to undertake research and publish papers in international journals. Many outstanding scientists like BGL Swamy, K Subramanian, KS Gopalkrishnan, KM Safeeullah and HC Govindu had started their research career with his guidance.

His Doctoral dissertation on stripe smut diseases of temperate grasses was carried out at the University of Wisconsin, Madison, USA under the guidance of Professor James G Dickson. When he entered the university for his doctoral work, his name was already well known to most of the professors through his publications in international journals.

On his return to India, he worked with the department of Botany, Banaras Hindu University for a short period and later on moved to Patna as Plant Pathologist at the Central Potato Research Institute. In 1953 he was appointed Chief Mycologist at the newly established Hindustan Antibiotics Ltd., at Pimpri near Pune where he served for the next two decades and retired as Superintendent Research in 1975.

Throughout his scientific career with different institutions, Thirumalachar maintained a sustained interest in basic mycology and plant pathology which led to the discovery of several new genera and species of indigenous fungi from various regions of the Indian subcontinent. Notable among these are the new genera of smut fungi, Mundkurella, Narasimhania Franzpetrakia, Jamesdicksonia and Georgefischeia, rust fungi like Kernella, Acervulospora and Hiratsukamyces, downy mildew genus Sclerophthora and numerous new species belonging to diverse genera and species representing all the major groups of the fungal kingdom.

POSITIONS HELD

Professor MJ Thirumalachar started his career as a Lecturer in Botany in the University of Mysore. Subsequently he moved over to the Banaras Hindu University as a Professor of Mycology-Plant Pathology. He shifted subsequently as Chief Plant Pathologist, Central Potato Research Institute, Patna. Later on he became Chief Mycologist, Hindustan Antibiotics Research Centre in Pimpri. He was a Visiting Professor, Seed Pathology Institute, Copenhagen, Denmark and was also with the Medical School, University of Minnesota, Minneapolis, USA. He established Jeersannadhi Anderson Institute, Walnut Creek, California and functioned as its Director till his demise.

RESEARCH CONTRIBUTION

Thirumalachar has placed his footprints firmly on the sands of time. His contributions were connected with monographing the rusts published jointly with BB Mundkar (1945) Narasimhania and Franzpetrakia along with Pavgi (1952-53) and Georgefisheria (along with MJ Srinivasan and HC Govindu). Erecting Sclerophthora as a new genus of downy mildew for the destructive crazy top of corn and other graminaceous hosts (along with MJ Narasimhan and Charles Garner Shaw), establishing the morphological basis of cultural studies (along with MC Srinivasan and MJ Narasimhan) and the studies on the life cycle of an edible rust causing malformation on *Acacia eburnean* and identifying it as *Revenelia esculenta* (along with MJ Narasimhan) rediscovered sixty years after Barclay had described *Aecidium esculentum* from Maharashtra are just a few examples of his most notable contributions to mycology.

MJ Thirumalachar was an inspiring teacher and had the knack of spotting unusual specimens during field collections. During the early years when Mundkar visited Bangalore after he had received several new specimens from Thirumalachar, he was surprised that they were all from Malleswaram or Yeswanthapur in Bangalore. MJT was an inspiring teacher and the source of knowledge.

In the field of antibiotics, MJT is well recognized for his discovery of Hamycin, Dermostatin and Aureofungin which are potent antifungal antibiotics therapeutically useful in the control of human mycoses and combating fungal diseases of plants. An anti protozoal, anti helminthic antibiotic from a new species of Emericellopsis isolated by him was designated Antiamoebin and was shown to control intestinal parasites successfully in milch cattle. He continued active research leading to the discovery of bioactive compounds after he shifted to the US and established Jeersannadhi-Anderson Institute at Walnut Creek along with his son MJ Narasimhan. Among his major contributions are the development of new derivatives of established antibiotics with better performance and lesser toxicity designated by JAIMYCIN Inc. He has also focused on chemical control of plant and animal diseases and patented Phyton 27 as a non phototoxic systematic fungicide which was successfully applied for the control of Dutch elm diseases and other tree wits. MJT also developed chemotherapeutants for the control of a wide range of fungal, bacterial and mycoplasma diseases of crop plants and fruit trees. Several of these have been in various stages of development and evaluation leading to eventual commercialization.

The main contributions of MJT can be summarized thus. He discovered and developed the antibiotics Hamycin and Aureofungin now commercially produced by Hindustan Antibiotics, Pimpri. He developed KT 19827 chemotherapeutant for Dutch elm disease, fungal and bacterial plant pathogens; KT 198 and CAFN for mycoplasma and rickettsial plant diseases including sandal spike disease; organism fixing atmospheric nitrogen in corn field in soil and saving nitrogen fertilizer. He discovered human insulin producing microorganism by genetic transformation, a synthetic fuel for combustion engines, process for degrading and cleaning petroleum of oils on ships by new micro organism. He described 20 new genera and 200 new species of fungi and antinomycetes.

AWARDS AND HONOURS

Thirumalachar was elected fellow of the Indian National Science Academy in 1966. He served INSA council during 1969-71. He was the recipient of Sundar Lal Hora Medal in 1969. He received Bhatnagar Award in 1967 for his contribution in antibiotics., also received Polish Academy of Sciences Award. He was the President of the Indian Phytopathological Society. He was the first President of the Mycological Society of India when it was established in 1973. He was a member of the Editorial Board of the International Journal of Antibiotics, received the Editorial plaque from the American Microbiological Society and Tropical Dermatological Society. He established Hindustan Antibiotics Bulletin.

MJT AS A PERSON

Thirumalachar had a great liking to interact with academia and students and his discussions with them after formal lectures would bring out so many valuable points of scientific interest which would not be obtained by reading text books. These include practical techniques from his phenomenal memory he would often mention references with an accuracy to the year of publication and even page numbers which was almost unbelievable. He was a man with a deep religious fervour and had particularly great devotion to the temples at Melkote and the Sankat Vimochan temple at Banaras. While not tolerant to sloppiness and inefficiency, he was always generous to forgive. In his company high level scientific discussions would always be sprinkled with memorable anecdotes which his students and collaborators would remember for a long time.

MJT, AN ACHIEVER

Professor MJT started his career as a teacher and subsequently became a researcher. It is very rare to come across a person who translates his research into useful products. MJT belonged to this category. Besides he established a Research Institute where scientists could pursue their cherished goals. He passed away on the 21st of April 1999. In the words of his nephew Dr MC Srinivasan, FNA, formerly from NCL, Pune. 'The world of Biological Sciences has lost a veteran researcher of over 60 years whose original contributions embraced a wide spectrum of scientific disciplines like botany, mycology, antibiotic fermentation and chemotherapy of human, animal and plant infections. Best known as an outstanding mycologist of International standing his contribution to the study of Indian fungi have been phenomenal. An era has ended, but his contributions live on to inspire generations of biologists, not only to emulate the scientific success he achieved, but also to develop interest and commitment to basic biological science and, in particular, mycology and microbiology.'

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V RAMAMURTI, FNA
2 Fourth Main
Kasturba Nagar
Chennai-600 020
E mail: ramamurti@hotmail.com

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