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IN MEMORIAM

PROF. DR. ARIES KOVOOR
(1926-2006)

UDC 929 Koovor A. : 57.01

It is difficult, but at the same time a great honor for me to write about my late professor, Dr. Aries Kovoor. Let me mention a few moments from the long period of our collaboration, which lasted over 40 years. Aries Kovoor was my professor, the person I cooperated with, my colleague, and a friend of my family. I remember well our first meeting in 1966 on the path lined with horse chestnuts in the "Jevremovac" Botanical Garden in Belgrade, where Prof. Mirjana Nešković introduced us to each other. She hosted his visit in Belgrade, as he wished to visit the Department of Plant Physiology of our Faculty of Biology, where I started my scientific career as a researcher. At this time I would like to emphasize his qualities as a teacher, his main achievements in *in vitro* cell and plant tissue culture (PTC), and other activities of his that resulted in the global advancement of PTC research (PTC). It is for these things that he will remembered in the world, as well as in my country.

As his PhD student, I had many opportunities to appreciate his qualities as a person and a teacher. He was fair but irreproachably diligent, strict with others but primarily with himself. Fixed working hours in the laboratory did not exist for him and his team. As a result of common agreement, we sometimes started work on an experiment at 10 p.m. if necessary. If someone became nervous during the experiment, he used to say with a smile: "Why so nervous, we all just agreed to work".

He guided post graduate and PhD students through the research process with almost mathematical precision. Once he initiated started a research project with students, he guided them all the way to its successful completion. He was a great optimist. All difficulties in the research process and problems in the laboratory he used to resolve quickly. He respected the people he worked with and was himself was very appreciated and respected by his associates and colleagues.

Professor Aries Kovoor was educated in Jaffna and graduated from the University of Madras in 1945. He joined the Botanical Research Laboratories of that university in the same year. Later he returned to Sri Lanka, joined the staff of St. Thomas' College, and began research related to the biological effects of radiation under the guidance of Prof. Homi J. Bhabha. His curiosity about new areas and scientific communities took him to Paris. On being asked why he left Sri Lanka and decided to go to Paris, he answered that by accident he found the first book on tissue culture published by Prof. R. Gautheret in 1947, which aroused in him a desire to investigate something "new". He said that while travelling by ship to France he apprehended a vision of plant tissue culture (PTC). By coincidence, I acquired my first knowledge about PTC from reading the same book. That gave us a lot of ground for discussion.

In 1952 Kovoor was appointed Assistant Professor at the Sorbonne Laboratory for PTC, where he collaborated with Prof. R Gautheret on culture of certain herbaceous plants. Prof. A. Kovoor was one of the most promising associates of Prof. Gautheret and worked with him for 19 years. After the reorganization of French Universities in 1969, Dr. Kovoor was appointed Professor of

Plant Physiology and Director of the Laboratory "Physiologie de la Differenciation Cellulaire" of Faculty VII in Paris, where he held professorial rank and retired in 1992. Our long-term collaboration on tree culture took place in this laboratory.

His work on *Scorzonere hispanica* "crown-gall" tumor tissues grown in culture *in vitro* without auxin attracted special attention. He established that DNA extracted from suspension of the bacteria *A. tumefaciens* applied to damaged tissues can develop "crown-gall" plant tumors in *S. hispanica*, which was later confirmed with other species as well. He was among the first to study the action of natural cytokinins extracted from soluble RNA of yeast, coconut endosperm, and "crown-gall" tissues on growth and multiplication of cells in *in vitro* culture. His diverse scientific contributions include development of PTC, elucidation of mechanisms involved in cell proliferation, successful research on plant tumors, advancement of recombinant DNA technology, and achievements in plant molecular biology and tropical agriculture. It can be asserted that Prof. Kovoor was one of the pioneers of plant molecular biology.

Collaborating with many researchers between 1975 and 2005, he studied regeneration by androgenesis (AN), somatic embryo genesis (SE) and organogenesis (OR) in trees. This was also the subject of our collaboration.

He held the post of Science Advisor to H.E. the President of the Democratic Republic of Sri Lanka (1996-2005).

After retirement, he worked from 1992 to 2005 on the collection and preservation of seeds of tropical trees of species used in agriculture in the wider Asian region. The collected and processed data on every species were presented in the electronic version of his book "Tree Bank Data". One of his ideas was the preservation of germplasma using *in vitro* culture to establish "live collections" of all useful species in arboretums of Sri Lanka. This was materialized by researchers at the Institute of Fundamental Studies, who developed technology for mass production of seeds of giant bamboo *(Dendrocalamus giganteus)*. He had a vision that bamboo "propagules" will became a valuable resource in a few years. Always informed about the latest developments in different biological disciplines, Kovoor worked in a local environment, but the results of his research were beneficial to global science. His research was always multidisciplinary and contributed to a better understanding of differentiation and development of plant cells and/or protoplasts in *in vitro* culture, e.g. regeneration of plantlets as a result of AN, SE, and OR mechanisms permitting the micropropagation of trees important for tropical agriculture.

At the time when he was considering founding the Plant Tissue Laboratory at the Institute of the Coconut Research and reestablishment of the Institute of Fundamental Studies, he stressed that the future long existence of newly established institutions primarily depends on their original concepts and goals. Another philosophical thought of his was that scientific, cultural, and/or historical institutions represent guardians of knowledge and the spirit of people (nations) or civilization, as well as of mankind as a whole. They represent places of permanent gathering of knowledge, the "collective memory" of achievements made so far which should be preserved for future generations. His unexpected demise on December 1, 2006, after an illiness was a shock which saddened all who knew him. He will always be remembered him as a good person and restless researcher who worked faster than breathing. His influence on my research was great, which was stressed in my lecture "Plant cell tissue culture: Alternatives for multiplication, metabolite production and biotechnology for forest tree improvement" at **The Aries Kovoor Memorial Symposium: "Innovations in Plant Sciences through Multidisciplinary Research",** March 3, 2008, Kandy, Sri Lanka.

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