

SRINIVASA RANGASWAMI

(15 June 1912 – 24 November 2000)

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S. Rangaswami



SRINIVASA RANGASWAMI

(1912-2000)

Elected Fellow 1960

FAMILY LIFE AND EARLY EDUCATION

SRINIVASA RANGASWAMI was born on 15th June 1912 to Shri N Srinivasa Iyengar and Smt Alamelammal at Kalyanapuram, Tanjavur district, Tamil Nadu. He had his early education up to elementary level in Kalyanapuram itself. He pursued his high school education at Thiruvaiyaru, a place famous for Shri Thyagaraja Aaradhana, for six years. During his formative years in the school, he was in the company of pious people at home, at school and in the community in general. This laid the foundation for his disciplined and rigorous religious life in his later years. He did his intermediate from Bishop Heber College, Tiruchi and his BA (Hons) from Presidency College, Madras in 1936. He obtained his Ph D degree from Andhra University under the research supervision of (late) Professor TR Seshadri in 1938 and his D Phil from University of Basel, Switzerland under the research supervision of Professor T Reichstein in 1948.

He had the honour of working with Professor BB Dey during his Post Graduation, with Professor TR Seshadri, the only living Fellow of Royal Society at that time, for his Ph D degree at Andhra University, Waltair and with Professor T Reichstein, Nobel Laureate at Basel, Switzerland for his D Phil degree. Throughout his school and college education, he was getting either the Government or University Fellowships.

PERSONAL LIFE

Dr S Rangaswami married Smt Lakshmi in the year 1932. He was blessed with two daughters and a son. The first daughter, Smt Komala is married and settled in USA as a professional biochemist. Their son, Shri Srinivasan, is retired as chemical engineer from Exxon Mobil Corporation, Singapore. He currently lives in Chennai. The last daughter, Smt Prema, lives with her husband in Mumbai.

PROFESSIONAL CAREER

Dr Rangaswami joined the Chemistry Department, Andhra University, Waltair, as a lecturer in 1942 and was elevated as reader in 1944. He became a full fledged Professor in 1949 and served as the Head of the Department of Pharmacy till 1963. He moved to Advanced Centre for the Chemistry of Natural Products, Delhi



University as Professor and continued till 1977. He shifted to Hyderabad as Advisor, R&D, IDL Chemicals.

SCIENTIFIC CONTRIBUTIONS

His main research area of interest was organic chemistry, which has its genesis in the study of naturally occurring substances thus serving as a constant source of information and intellectual challenge. His interests also include natural product chemistry and pharmaceutical chemistry. He worked on benzopyran chemistry for his doctoral work and on glycosides of *nerium odorum* in his D Phil programme. During his independent research career, he worked extensively on coumarin chemistry with synthetic reactions involving the carbonyl group, the double bond and reactions involving interconversions between coumarins, chromones, benzopyrones and flavones. Natural product chemistry was very close to his heart. This branch of chemistry deals with the isolation, identification, structure elucidation and study of the chemical characteristics of the substances produced by living organisms. He has extracted several interesting organic compounds from plant root-barks, stems, flowers, lichens, fungi, ferns etc. Prominent amongst them are the cardiac glycosides saponin bearing drugs and other vegetable drugs obtained from various plant sources. He was able to chemically identify several plant insecticides from plant sources.

He initiated work on chemistry of cardiac glycosides, saponins and wood-rotting fungi for the first time in India. A superior cardiac drug, a peruvoside, glycoside, was isolated from yellow oleander and its therapeutic potency was established. His research group identified saponins as physiologically active ingredients in several indigenous drugs used for treating bronchial affections. His work on wood rotting fungi led to the isolation of several new type of tetracyclic and pentacyclic triterpenes and sesterpenes.

Polyphenols are found in plants, characterized by the presence of more than one phenolic group. These polyphenols are responsible for the colouring of plant leaves and flowers. They have potential antioxidant properties. His contribution in the isolation and characterisation of antioxidants is very significant.

MEMBERSHIPS AND HONOURS

He was elected as a Fellow of the Indian National Science Academy in 1960 and served as its Treasurer for four years from 1969-72. He was elected as a Fellow of Indian Academy of Science and served as its council member for six years. He was a Fellow of Chemical Society, London and Royal Institute of Chemistry, London. He was the Chairman of its North India section for eight years. He was President of Indian Pharmaceutical Association for two years. He also served as a member of the Bureau of the International Union of Pure and Applied Chemistry from 1969-1977.



He was also a Fellow of Indian National Community for Chemistry 1968-72. He was a member for eight years of Pharmacy Council of India, a member of Drugs Technical Advisory Board and All India Council of Technical Education. He was the Chairman of a sub-committee of Indian Pharmacopoeia for 26 years, Board member of Indian Homeopathic Pharmacopoeia and Ayurvedic Drugs Technical Advisory Board. He was also Member/Chairman of several committees under CSIR, ICMR, ICAR, UGC, CCRIMH and Ministries of Education and Health. He served as Secretary of Indo-Soviet Symposium on Chemistry of Natural Products in New Delhi in 1970 and Secretary General of International Symposium on the Chemistry of Natural Products in New Delhi in 1972. He was a recipient of Silver Jubilee Medal of the INSA and he was chosen for Acharya PC Ray Memorial Lecturer of the Indian Chemical Society in 1973. He was in the Editorial Board of the Journal of Pure and Applied Chemistry and Wealth of India.

After completing his term as a Professor of Chemistry, Delhi University, he shifted to Hyderabad in 1977 as Advisor, R&D, IDL Chemicals. Thereafter, he moved to Chennai where he lived until he attained divinity in November 2000 at the age of 89 years.

ACKNOWLEDGEMENT

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