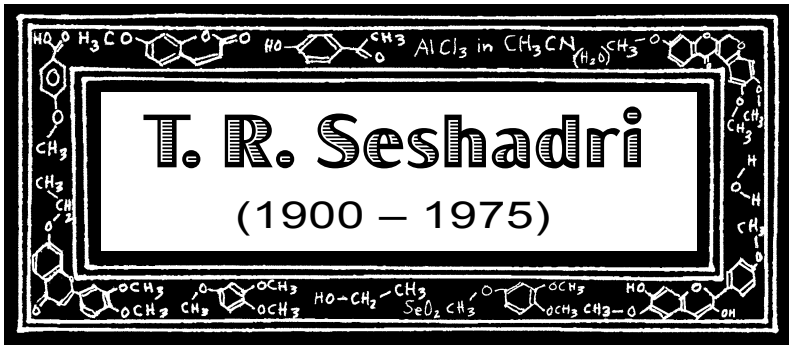
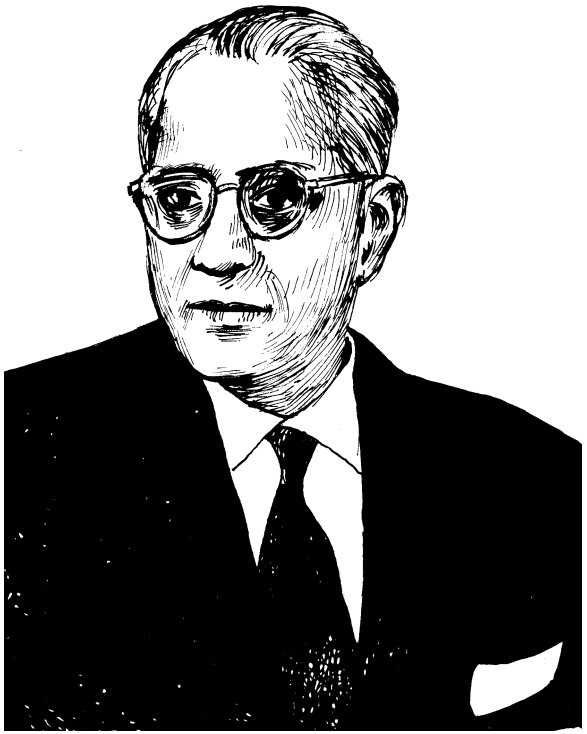


"Money and materials alone do not secure good research, they are only adjuncts and it is the human element behind them that matters."
– T. R. Seshadri



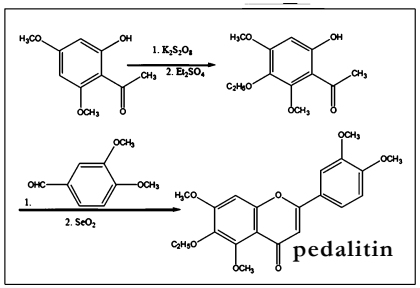
T. R. Seshadri was born on 3 February 1900 in Kulitalai, a small town situated on the banks of the river Kaveri in Tiruchirapalli. His father T. Iyengar was a teacher in a local school. Seshadri went to school in the temple town of Srirangam and Tiruchirapalli. His teachers instilled in him a sense of duty, obligation to society, love of humanity and thirst for knowledge. In 1917, Seshadri joined the Presidency College, Madras to do BSc chemistry. While studying at college he stayed at Sri Ramakrishna Mission's student's home. The spiritual values he learnt from the Mission Monks remained with him throughout his life. At Presidency College he was

taught by B. B. Dey and P. Narayana Iyer, whom he revered and remembered for the rest of his life. After finishing BSc he worked for a year with the Ramakrishna Mission. Later he joined the Chemistry Department of the Presidency College as a researcher. His outstanding work on chemical synthesis won him two prizes from the University of Madras – the Sir William Wedderburn Prize and the Curzon Prize.

In 1927, Seshadri was selected for a scholarship awarded by the Government of Madras for higher studies in England. Here at the Manchester University he worked under Prof. Robert Robinson, FRS a very distinguished organic chemist, who later became the President of the Royal Society and also received the Nobel Prize. Seshadri did pioneering work on new anti-malarial drugs and synthesis of compounds. Based on his research the Manchester University awarded him a PhD in 1929. Working with Prof. Robinson was cherished by Seshadri as the most important event in his research career.

After his PhD, Seshadri worked for a few months in Austria with Nobel Laureate Prof. Fritz Pregl, famous for his work on organic micro-analysis. He also worked with Prof. George Barger, FRS at the Department of Medical Chemistry of the University of Edinburgh. In 1930, Seshadri returned to India.

In 1934, he joined the Andhra University, Waltair as Reader and Head of the Department of Chemistry. Here he worked hard, built new laboratories, framed new courses and established an active research school. The University entrusted upon him the additional responsibility of setting up new Departments of Chemical Technology and Pharmaceutical Chemistry. All this while he pursued his own research and could be seeing bicycling to the Biochemistry Department of the Andhra Medical College located 5 km away at Vishakhapatnam. His devotion to work inspired many young students to take up research and make it their life long profession. Soon Andhra University became the most active centre for original chemical research in the country.



Seshadri developed a way to synthesize pedalitin, a flavanoid found in sesame.

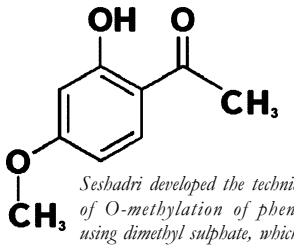
The Second World War disrupted Seshadri's work. Chemicals and equipment which came from Europe were difficult to get. Also, the army took over the chemistry

department building at Waltair. Seshadri had to move first to Guntur and then to Madras but all this while he continued with his research. After the war the labs at Waltair were rebuilt and Seshadri returned.

In 1949, Seshadri was invited to head the Chemistry Department of the Delhi University by its Vice Chancellor Sir Maurice Gwyer. Seshadri took up the challenge and established from scratch, in a very short period of time, a research school in the chemistry of natural products comparable to the best anywhere in the world. Students from all over the country and in later years from other parts of the world came to work under his guidance. His large research team included postdoctoral scholars from England, France and Germany. He trained over 160 PhD students and published more than 1000 papers. A good number of his students occupy senior positions both in India and abroad in teaching and research establishments. He authored the book titled *Chemistry of Vitamins and Hormones*. On attaining the age of superannuation in 1965 he was appointed as the first Emeritus Professor of the University.

Seshadri had a particular attraction for the variety and range of floral and animal colouration. His early work was on the pigments of the cotton flower and on different species of the hibiscus. Apart from explaining the structure of new compounds he evolved new procedures that have now become routine in the study of chemistry. He was fascinated by biosynthesis and did pioneering work in this field. He was the first Indian to initiate chemical studies on lichens from the Himalayas.

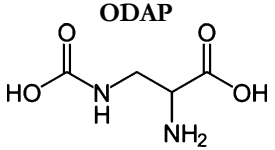
Professor Seshadri's expert advice and mature wisdom were frequently sought by a large number of organisations – CSIR, ICMR, ICAR and DAE. He headed several expert committees dealing with education, health, science, agriculture and defence. He was also a member of the scientific advisory committee to the Cabinet and UNESCO. He received numerous honours and awards. Seshadri was elected a Fellow of the Royal Society in 1961 and conferred honorary doctorate degrees by several Universities. He was the general president of the Indian Science Congress and the president of the Indian National Science Academy. He was on the editorial boards of the international journals – *Tetrahedron* and *Phytochemistry*. The Government of India conferred on him the Padma Bhushan in 1963.



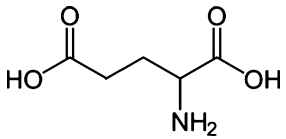
Seshadri developed the technique of O-methylation of phenols using dimethyl sulphate, which is now widely used. Here is a compound that can be synthesized using this technique: 2-hydroxy-4-methoxyacetophenone.

Seshadri did research on the toxin in the pulse, khesari (Lathyrus sativus). Khesari contains varying amounts of the neurotoxin, ODAP, which can cause paralysis in humans and cattle, if taken in large quantities. The toxicity of ODAP is thought to be because of its structural similarity to the neurotransmiter, L-glutamate.

ODAP



L-glutamate



Prof. Seshadri rose to his eminent position by virtue of his deep devotion to duty. However, the one thing that he cherished most was the affection of his students. He helped them in every way possible including giving financial assistance in times of need. To remain with his students he declined the post of the Chairman of the University Grants Commission. His students showered their love on him by bringing out commemoration volumes on his 60th, 65th, 70th and 75th birthday. They also set endowments to perpetuate his memory. Even after retirement Seshadri continued to teach and guide research students and was always available to them. His research school in Delhi consisted of half a dozen laboratories in three different buildings in which more than 25 students worked at a time. He found time to visit them at least four times a day and discussed their problems. He hoped that chemistry would secure for him the resources to live a simple life. In 1965, he donated his entire personal library to the Delhi University's Department of Chemistry. He thought of working peacefully in the Department till the end of his life. However, the new University rules promulgated in 1972 prevented him from receiving any remuneration whatsoever. This brought financial ruin… He was left with no research grant or means of subsistence…Thus ended the life of this great son of India on 27 September 1975.