



G.M. MODI AWARD FOR SCIENCE 2001

CITATION PRESENTED TO PROF. OBAID SIDDIQI FRS

The Gujar Mal Modi Science Foundation takes great pleasure in presenting the GM Modi Award for Science to Prof. Obaid Siddiqi FRS, Emeritus Professor of Molecular Biology at the TIFR National Centre for Biological Sciences at Bangalore. Professor Siddiqi is a well-known geneticist who has made important contributions to molecular genetics and genetic neurobiology. He is widely recognized for his pioneering role in the development of molecular biology in India.

Born in January 1932, to M.A. Qadeer and Umme Kulsum in Basti, U.P., Prof. Siddiqi obtained his Masters degree from the Aligarh Muslim University in 1953. He taught at the Aligarh University for a few years and worked at the Indian Agricultural Research Institute in Delhi before going to the University of Glasgow in 1958 to work for his Ph. D. in microbial genetics. After post doctoral research in United States and England, where Prof. Siddiqi worked at the Cold Spring Harbor Laboratory of Molecular Biology, New York, The University of Pennsylvania and the MRC Laboratory of Molecular Biology at Cambridge, Professor Siddiqi joined the Tata Institute of Fundamental Research, Bombay in 1962. At the Tata Institute Professor Siddiqi set up a Molecular Biology unit, the first laboratory of its kind in the country. He remained as Emeritus Professor at TIFR until 1995. In 1991 he became the Director of TIFR National Centre for Biological Sciences at Bangalore.

Professor Siddiqi's contributions to molecular biology and genetics span a period of over 40 years. After working on plant embryology and wheat genetics at Aligarh and Delhi, he turned to microbial genetics in the laboratory of Prof. G. Pontecorvo at Glasgow. He mapped the fine structure of the *paba* gene in *Aspergillus* and made notable contributions to the study of intragenic recombination and gene suppression. In 1961 Professor Siddiqi joined Professor A. Garen at the University of Pennsylvania. Garen and Siddiqi discovered "nonsense" mutations in bacteria and their work led to the discovery of the first stop signals in the genetic code.

Professor Siddiqi continued to work on genetic recombination and gene regulation in bacteria and fungi. He and his associates showed the DNA transfer in *E. coli* can be dissociated from DNA replication and recombination and recombinant DNA molecules can arise from conserved DNA. He was awarded the Bhatnagar Prize for his work. In the seventies, Professor Siddiqi turned to behaviour genetics and neurobiology of the fruit fly *Drosophila*, a field in which he worked closely with Professor S. Benzer of the California Institute of Technology. Siddiqi and Benzer showed that paralytic mutations in *Drosophila* cause neurophysiological defects in electrical activity of nerves and muscles. This seminal work has triggered active research for over two decades on genes that control nerve conduction and synaptic transmission.

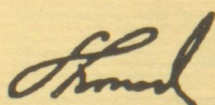
Professor Siddiqi and his students have carried out pioneering research on neurogenetics of Chemical senses in *Drosophila*. They have identified a series of genes which regulate olfactory and gustatory behaviour. Some of these genes affect the sense organs; others cause lesions in the central nervous systems; yet other genes are involved in olfactory learning and memory. This work has opened up the prospects of an integrated approach to genetic and behavioral study of chemosensory perception

Professor Siddiqi was Visiting Associate at Yale University (1964, 1966), Visiting Professor of Biology at the Massachusetts Institute of Technology (1969-70), Gosney Fellow at the California Institute of Technology (1971-72) and twice Sherman Fairchild Distinguished Scholar at Caltech in 1982 and 1986. He was Fellow of Clare Hall, Cambridge in 1994 and was elected life member of the college.

Professor Siddiqi is a past president of the Indian Academy of Sciences and a member of several academies. These include the Indian national Academy of Sciences, the Royal Society of London, the Third World Academy of Sciences, Trieste and the National Academy of Sciences, Allahabad. He has received many honours and awards, the Bhatnagar Prize, the Aryabhat Medal, the INSA Jubilee Medal, the Birla Smarak Kosh Award for Biological Sciences, the Bhasin Award and the Goyal Prize. The Govt. Of India have honoured him with Padam Bhushan. The Aligarh Muslim University and the Banaras Hindu University have conferred upon him the degrees of Doctor of Science, (Honoris Causa).

Professor Siddiqi has served on many Advisory councils and Boards, including the Prime Minister's Science Advisory council.

The Gujar Mal Modi Science Foundation is happy to recognise Prof. Obaid Siddiqi as one of the most outstanding scientists of our time in the field of Molecular Biology and genetics by conferring on him the G. M. Modi Science Award, 2001.



SATISH KUMAR MODI

President

Thursday, 9th August, 2001

New Delhi.



SATISH KUMAR MODI
PRESIDENT

Born on 19th October, 1946. Following a brilliant academic career he graduated in Electronic Engineering. He belongs to a renowned industrial family of Modis and was inducted into business by his father at a very young age. He heads a diversified business group with interest in Civil Aviation, White Goods, Banking, Insurance, Real Estate, Hotels and Financial Services for which he has collaborations with world leaders. He is also the Chairman of various reputed organisations/institutions/bodies in India and also received international recognition as Director of Companies abroad. A philanthropist at heart, he is a keen sportsman with interest in Music, Art and Theatre.