

sor Section of the Army HQ at New Delhi. He supervised the doctoral works of scholars from diverse disciplines like Zoology, Botany, Geography, Geology and animal-plant interactions. He had led Indian scientific delegations to USSR and Norway and was Visiting Professor of Entomology at Tribhuvan University, Kathmandu. In a special feature in the Journal *Entomologist*, Gordon Edwards of Colorado named Mani the Dean of High Altitude Entomology in 1971.

In a sense, Mani was a man of contradictions. He was always willing to spare his time for his research students. I gratefully remember his translating for me in 1968 more than 1500 pages of German text from microfilms, using a small hand-held lens. Later, he offered and taught three of us, his students, German language for six months. But it is reported that when the governor of the state vis-

ited the School of Entomology, Mani refused to 'waste my time on politicians' and asked one of his junior colleagues to show him round. On another occasion when a senior constitutional dignitary from New Delhi visited the School and on being not much impressed by the edifice remarked, 'is this all you have in the School', Mani retorted, 'we also have some asses from Delhi visiting us at times'. No wonder, national awards were rare coming, though in October 2002, he was conferred the E. K. Janakiammal Award for Taxonomy by the Government of India. But many foreign scientific academies chose him their fellow and life member years before and many post-doctoral fellows from renowned foreign universities requested for a spell of training under him.

Mani was a profound thinker with an enormous intellectual field of play. His

work has helped to put India on the global scientific map. He brought out the best in his students by providing intellectual stimulation and support. Indian biologists of all hues in future may try to emulate him but none may easily surpass him. Substituting Caesar with Mani, with Antony in Julius Caesar one may say, 'here was a Mani, when comes such another'.

His beloved wife, Rajalakshmi and other members of his family, students, former colleagues and friends rejoice in his achievements. They greatly miss this wise, modest, gentle Indian legend.

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## Claude Hélène

This is in remembrance of Claude Hélène who made several outstanding contributions towards basic and applied aspects of nucleic acids, protein-nucleic acid interactions and DNA recognition by oligonucleotides. Claude Hélène passed away on 11 February 2003. For the past four years and certainly for the past year and a half, he fought bravely and with dignity against the cancer which had invaded his body, but not his mind.

Claude Hélène was born on 29 January 1938 at Chauvigny (France). After his Agrégation de Sciences Physiques degree obtained at the Ecole Normale Supérieure de Saint-Cloud in 1962, he joined CNRS as a research fellow and started a PhD thesis with Charles Sadron, a well-known polymer chemist, in the Muséum National d'Histoire Naturelle and the Centre de Biophysique Moléculaire (CNRS) and obtained the degree of *Docteur ès Sciences* ('Energy transfer and photochemical reactions in nucleic acids') in 1966. He was promoted as Research Director of CNRS (equivalent to the Council of Scientific and Industrial Research, India) in 1974 and rose quickly as director of the Centre de Biophysique Moléculaire in 1974, and later as Chair of Biophysics in 1976. He

set up and headed an INSERM (equivalent to ICMR, India) research unit in the Laboratory of Biophysics in the Muséum until the end of 2001. He served as Scientific Advisor to many French research



institutions, INSERM, Institut Curie, Ecole Normal Supérieur, Ecole Polytechnique, to name a few. He has also served as a member of the Editorial Board of international journals such as *Biochemistry*, *Nucleic Acids Research*,

*Photochemistry and Photobiology*, *Antisense and Nucleic Acid Drug Development*, *Bioconjugate Chemistry*, *Chem-BioChem*, *Chemistry and Biology*. Till recently he served as the Chairman of Edmond de Rothschild Foundation and the Director of the program on 'Therapeutic Molecules and Targets' at the French Ministry of Research and Technology. He was a scientific consultant of the well-known French pharmaceutical company, Groupe Rhône-Poulenc from 1983 to 1990, and was its Chief Scientific Officer until the end of 1999. Claude was on the scientific board of several French companies like Aventis, Urogene and Chrysalon, Inc. He successively received several distinctions from the French government such as order of 'Chevalier' (in 1985) and then 'Officer' (in 1994) of the Ordre National de Mérite, and the order of 'Chevalier' (in 1989), then 'Officer' (in 1998) of the *Légion d'Honneur* (the highest French civilian distinctions). He was elected as a member of the French Académie des Sciences in 1988. He was awarded the *Prix Lacassagne* by la Ligue Française contre le Cancer in 1990 and the *Prix de la Fondation de la Maison de la Chimie* (shared with Peter Dervan) in 1995. He

## PERSONAL NEWS

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was conferred an honorary doctorate (Doctor *Honoris Causa*) by Université de Liège (Belgium) and the Katholieke Universiteit, Leuven (Belgium).

Claude Hélène made significant contributions to (i) the chemistry and photochemistry of nucleic acids, (ii) the development of chemical genomics, (iii) application of oligonucleotides as tools in functional biology and biotechnology and (iv) the investigation of 'nucleic acid

by low molecular weight ligands, oligopeptides and oligonucleotides, etc. Hélène was quite popular for his works on electron transfer and photochemical reactions in nucleic acids in frozen aqueous phase, studies on 'protein-nucleic acid interactions' e.g. molecular interactions between tryptophan and nucleic acids (*Nature*, 1968); Lys-Trp-Lys (the smallest endonuclease specific of DNA apurinic sites (*Nature*, 1981); nucleic acid-nucleic acid interactions and DNA recognition by oligonucleotides and oligonucleotide bridge intercalator (ONBI), using antisense, antigene strategies in developing the anticancer drugs, etc. In association with public institutions and also with Rhone-Poulenc (French predecessor company of Aventis), Isis Pharmaceuticals, Genta, Inex and many other companies, Claude

Hélène worked to realize his dream to see oligonucleotides become drugs.

Hélène has more than 450 research publications to his credit which were published in reputed international journals and he had written and edited several books. He has written excellent reviews on DNA triple helix structures, Protein-nucleic acid interactions, and many related to nucleic acids.

An International Symposium was held in honour of Claude Hélène at Paris just before his death (6-8 February 2003), where several renowned personalities in nucleic acids research like D. M. Crothers, P. Dervan, M. Gait, G. Felsenfeld, D. M. J. Lilley and J. Chaires, to name a few, attended. Hélène's last milestone lecture was delivered on 'The Future of Nucleic Acids' at his institute Muséum National d'Histoire Naturelle, Paris.

There is no doubt that Hélène's dedication and interests in all aspects of nucleic acids has helped shape this rapidly evolving field and profoundly influenced biology, biotechnology and medicine during the past forty years.

I had the opportunity to work with him and so had some other Indian scientists. Claude was very dynamic and full of life throughout the day. While he was the

Research Director at two different institutions, one at Paris and other at Orléans, I remember he used to travel every day from Paris to Orléans. However, he utilized every minute in the train for research. He was a very soft-spoken and kind natured man who loved animals and was a strong supporter of World Wild Life. He is survived by his wife, Therese Garestier, who is also very closely associated with him in research and scientific activities.

He showed a lot of interest in Indian scientific research and delivered invited talks at a number of conferences held in India including Indian Institute of Science. He was a great orator and his talks were always very inspiring.

Those who knew Claude remember his intense interest in science and his dedication to fundamental research in the structure of nucleic acids as well as in its application to health and medicine.

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