

## BIOGRAPHIES

### **G.P. Ayers**

Dr Ayers received his B.Sc. Honours (1972) and Ph.D. (1976) from the Monash University, Melbourne. He started as a Research Scientist at the CSIRO Division of Cloud Physics, Sydney, in 1972 and in 1982 moved to the CSIRO Division of Atmospheric Research, Melbourne where he is currently Principal Research Scientist. Dr Ayers was invited to the Dahlem Conference on Atmospheric Chemistry at Berlin, 1982; the SCOPE Conference on Tropical Acidification at Caracas, Venezuela, 1986; and the BAPMoN Workshop on Background Monitoring at Sofia, Bulgaria, 1989. He is at present Coordinator of the IGAC Debit Project. Dr Ayers has considerable experience in the chemistry of rain and atmospheric transport processes and a strong interest in tropical acidification.

### **H.L. Bami**

Dr Bami received his Ph.D. degree in organic chemistry (1949) from the Indian Institute of Science, Bangalore. He carried out post-doctoral research at the National Institutes of Health, Bethesda, USA including extensive study tours to institutions dealing with pesticides, drugs and forensic analysis in USA, UK and Europe. Dr Bami has held senior research, analytical and development positions at the Malaria Institute of India, Delhi; the Central Drugs Laboratory, Calcutta and the Synthetic Drugs Plant. He became Director, Central Forensic Science Laboratory, New Delhi in 1968 from where he retired in 1982. He is at present a consulting forensic scientist. Dr Bami has published nearly 100 research papers in addition to numerous reviews, several of which were presented at international meetings. Dr Bami is a Fellow of Royal Society of Chemistry, Institution of Chemists (India), Indian Standards Institution and Indian Academy of Forensic Sciences, and is professionally associated with a number of scientific bodies.

### **M.S. Chadha**

Dr Mohindra S. Chadha obtained his Master's in chemistry (1951) from Panjab University and Ph.D. in organic chemistry (1955) from Cornell University, Ithaca, New York. He carried out post-doctoral research at Cornell and at the University of California, Berkeley. He was also a recipient of Senior Resident Research Associateship of NASA, USA. Dr Chadha's interests relate to bio-organic

chemistry, biotechnology, chemical and biochemical evolution. He worked at the Bhabha Atomic Research Centre for 30 years and retired from there in 1988 as Director, Biochemical Group. Currently he is the Principal Investigator of two research projects in the area of chemical and biochemical evolution. Dr Chadha has published more than 100 research papers. He has edited or co-edited 5 symposium-proceedings. He is a fellow of a number of scientific bodies including National Academy of Sciences (India) and Indian National Science Academy.

#### **T.S. Clarkson**

Dr Clarkson is an atmospheric chemist for the New Zealand Meteorological Service. His principal research interests are in the measurement of trace components in the clean troposphere, particularly light hydrocarbons and fluorocarbons. He is also involved in monitoring of ozone. Although most of his monitoring activity has been in New Zealand, measurements are made from regular flights of a research aircraft throughout the southwest Pacific as far north as the Equator, and monitoring is also undertaken in Antarctica. Dr Clarkson has an active interest in the protection of the ozone layer and in 1987 was head of the New Zealand delegation participating in negotiations leading to the Montreal Protocol.

#### **A.G. Darnley**

Dr Arthur G. Darnley received Ph.D. from Cambridge University following research work as an exploration geologist in the Zambian Copperbelt. After 9 years with the Atomic Energy Division of the British Geological Survey he joined the Geological Survey of Canada (GSC) in 1966 as the Head of Remote Sensing Methods and was responsible for the development of airborne gamma-ray spectrometry. From 1971 to 1986 he was Director of GSC's Resource Geophysics and Geochemistry Division, where he initiated systematic national radiometric and geochemical surveys. He is currently Senior Advisor, GSC. He has been chairman of many international technical committees concerned with uranium exploration methods and standards, and served as Senior Advisor for mineral development projects in Brazil and Thailand. He has been General Chairman of international exploration conferences in Vienna in 1976, Ottawa in 1977 and Paris in 1982. Dr Darnley has published many papers pertaining to the application of geophysics and geochemistry to mineral exploration and geological mapping.

#### **T.M. Florence**

Dr Florence received his M.Sc. (1961) and D.Sc. (1974) from the University of New South Wales (NSW), Australia. His D.Sc. was the first ever awarded in analytical chemistry at an Australian University. He is currently Senior Principal Research Scientist and Manager of the Centre for Advanced Analytical Chemistry, CSIRO Division of Fuel Technology, Lucas Heights, NSW. Dr Florence's present research interests cover ecotoxicology, environmental chemistry, electroanalytical chemistry, free radical chemistry and occupational hygiene. He has published 150

scientific papers. He has been a visiting professor at the University of Gothenberg, Sweden, Chanchung Institute of Applied Chemistry, China and the University of Canterbury, England. He received the RACI Analytical Chemistry Division medal in 1985 and has given numerous invited plenary lectures at international conferences on analytical and environmental chemistry.

### **I.E. Galbally**

Mr Ian Galbally received his B.Sc. from Monash University, Melbourne (1965) and M.Sc from University of Melbourne (1970). He joined the CSIRO Division of Atmospheric Research, Melbourne as a research scientist in 1967 and is currently Principal Research Scientist. Mr Galbally has been a member of several national and international committees including SCOPE/UNEP International Nitrogen Unit (1978-82); National Committee for the Environment, Australian Academy of Science (1980-82); Australian Department of Science and Technology, Cape Grim Baseline Air Pollution Monitoring Station Working Group (1978-present); International Ozone Commission IAMAP (1980-present); Scientific Advisory Committee SCOPE Biospheric Trace Gas Emission Project (1986-present); Commission on Atmospheric Chemistry and Global Pollution IAMAP (1987-present); Associate Editor, *Journal of Atmospheric Chemistry* (1983-present); and member of Editorial Board, *Tellus* (1987-present). Mr Ian Galbally has published 50 research papers and has edited 3 books. During the International Year of Peace (1985-86) Mr Galbally was requested to undertake reviews and original research on atmospheric aspects of nuclear war.

### **R.M. Gifford**

Dr Gifford received B.Sc. (1965) from Nottingham University and Ph.D. (1969) from Cornell University, New York, USA. From 1969 to the present Dr Gifford has been a Research Scientist at CSIRO Division of Plant Industry, Canberra, Australia. He is presently Senior Principal Research Scientist and leader of the project on "Agriculture in relation to global atmospheric change" and has authored or co-authored about 70 research publications, reviews or chapters in the area of whole plant physiology, photosynthetic physiology, energetics of agriculture, carbon partitioning in plants and carbon dioxide effects on plants.

### **K.N. Johry**

Mr K.N. Johry who specialised in inorganic chemistry, has been involved in International and Commonwealth Cooperation in Science & Technology for more than two decades. Starting as Science Attache at Indian Mission in London he, presently heads the International Cooperation Division of the Council of Scientific & Industrial Research at New Delhi. He has been closely involved in many of the Commonwealth regional collaborative programmes under CSC and in developing bilateral cooperation with major science agencies / academies in

Europe, USA and third world countries. He was, until recently, President of the Indian Society for Information Science.

#### **M.N.G.A. Khan**

Dr Khan received B.Sc. (1961) and M.Sc. (1963) from Bangladesh (formerly Pakistan) and Ph.D. (1969) from Australia. During 1964-1974 he worked for Bangladesh Atomic Energy Commission and during 1975-1987 for the Commonwealth Science Council. Dr Khan is a nuclear chemist and has extensive experience in developing and managing regional and commonwealth collaborative research activities in rural technology, standardization and metrology, alternative energy and science popularization. He has written both for the scientific journals and popular press. He is a Fellow of the Royal Society of Chemistry and a life member and patron of the Bangladesh Chemical Society and associate member of the International Union of Pure and Applied Chemistry. Dr Khan is now a Chemistry Lecturer at Loughton College of Further Education at Essex in England. Apart from science/chemical education, his current interests include S & T cooperation, chemical safety and science popularization.

#### **A. Maheswaran**

Mr A. Maheswaran has B.Sc. (Hons) and is a Chartered Chemist by profession. He is a Fellow of The Royal Society of Chemistry, London and the Malaysian Institute of Chemistry and a Fellow of the Institution of Water and Environmental Management. He retired as Director-General of Environment, Government of Malaysia in 1987 after 28 years in the field of environmental management. In view of his distinguished services, he was honoured by His Majesty the King of Malaysia with the title 'K.M.N.'. He was also awarded 'Gold Medal' by the Malaysian Institute of Chemistry for his contributions to the field of environment as a chemist. Mr Maheswaran was official representative of Malaysia at several conferences/meetings abroad which included Governing Council Sessions of the United Nations Environment Programme (UNEP). He has also actively participated in seminars and conferences and published numerous papers. At present he is an Environmental Consultant and has carried out several assignments including those by the United Nations Agencies, namely, WHO, UNDP, ESCAP, UNEP and World Bank.

#### **T. McEwan**

Dr McEwan received B.Sc. (1953), B.Sc. Honours in chemistry (1955) and M.Sc. (1959) from the University of Queensland, Australia and Ph.D. (1966) from Dalhousie University, Nova Scotia, Canada. He is a Fellow of the RACI (1974). From 1982-1988 Dr McEwan was Director, Biochemistry Branch, Queensland Department of Primary Industries and Acting Deputy Director, Division of Animal Industry and later Director of Animal Laboratories, in the same department till his retirement at the end of 1988. Dr McEwan represented his Department on the Water Quality Council of Queensland, the Agricultural Chemicals Committee



(Australian Government) and the Inter-departmental Committee on Chemical Contamination on Food. Outside Australia Dr McEwan has attended the Codex Committee on Pesticide Residues, The Hague (1986, 1987, 1988) as the Queensland representative; the Codex Committee on Residues of Veterinary Drugs in Food, Washington (1987); attended a Joint FAO/WHO Expert Committee on Food Additives in Rome (1987); acted as a consultant for FAO visiting Rome and various countries in East Africa (November 1980-81).

### **A.P. Mitra**

Dr Mitra obtained his M.Sc. and Ph.D. in physics from Calcutta University under Prof. S.K. Mitra, FRS. He was Colombo Plan Fellow in the Division of Radiophysics, CSIRO, Australia (1951); Visiting Assistant Professor and Associate Professor in Engineering Research, Pennsylvania State University, USA (1952-54); Secretary, Radio Research Committee, National Physical Laboratory (NPL), CSIR (1954). He served the NPL from 1954 in various capacities and was Director of the Institute from 1982 onwards till February 1986 when he was appointed Director-General, CSIR and Secretary to the Government of India, Department of Scientific & Industrial Research, a position which he currently holds. Dr Mitra is a Fellow of the Royal Society of London and Fellow of numerous National and International Academies and Societies. He is recipient of innumerable awards, prizes and distinctions including Padma Bhushan awarded by President of India in 1989.

### **B.N. Noller**

Dr Noller received B.Sc. (1971) and M. Chem. (1973) from the University of New South Wales, Australia and Ph.D. from the University of Tasmania (1978). Following a brief period at the Research School of Chemistry, Australian National University, Canberra, Dr. Noller became Research Scientist for analytical chemistry and environmental chemistry at the Alligator Rivers Region Research Institute, Jabiru, Northern Territory, Australia. Dr Noller is currently Senior Research Scientist and has undertaken research on the impact of uranium mining on the tropical ecosystem including several studies on natural physico-chemical processes in freshwater systems. Dr. Noller had represented the Royal Australian Chemical Institute at Federation of Asian Chemical Societies executive meetings and is currently Secretary-General, FACS.

### **G.I. Pearman**

Dr Pearman received both his B.Sc Honours (1963) and Ph.D. (1968) in biology from the University of Western Australia. Following post-graduate research at Madison, Wisconsin. He joined CSIRO, Australia where he is currently Assistant Chief of the Division of Atmospheric Research. He is also coordinator of the CSIRO Climate Change Programme. His early work with CSIRO involved the measurement of CO<sub>2</sub> fluxes into wheat crops, and from this he developed a strong interest in the global carbon cycle. He was the main thrust behind the establishment of the Australian Baseline Monitoring Station in Tasmania. He was the editor of the

CSIRO book, *Greenhouse: Planning for climate change*. He is currently coordinator of the INRE programme. Dr Pearman has been the member of several national and international committees: Australian Academy of Science (1986); National Committee for the International Geosphere-Biosphere Programme (1987); Chairman, International Global Atmospheric Chemistry Programme (1987-88). In 1987, Dr Pearman was convenor of the Greenhouse 87 Conference held at Monash University. For his contribution to the science and management concerning greenhouse research, Dr Pearman was awarded the CSIRO Medal in 1988. He was elected to Fellowship of the Australian Academy of Science in 1989. For the work of his group in public communication, he received a United Nations Environment Programme Global 500 award in 1989.

### **T. Ramasami**

Dr Ramasami obtained B. Tech. and M. Tech in leather technology from University of Madras and a Ph.D. in physical inorganic chemistry from the University of Leeds, UK. His research training includes homogeneous catalysis, inorganic reaction mechanisms and synthesis of coordination compounds and environmental chemistry. He is currently a senior scientist at the Central Leather Research Institute, Madras and heads Physical and Inorganic Chemistry and Biophysics Divisions. He has published 76 scientific papers and 27 other technical reports and articles.

### **G.S. Sidhu**

Dr Gurbachan Singh Sidhu obtained M.Sc. and Ph.D. from Lucknow University in organic chemistry. He spent most of his research career (1949 to 1981) at the Central laboratories for Scientific and Industrial Research, Hyderabad, which was renamed as Regional Research Laboratory and subsequently as Indian Institute of Chemical Technology. Dr Sidhu was the Director of this Institute from 1963-1981. He became the Director-General, Council of Scientific and Industrial Research, New Delhi (1981-1984) and Chairman of the Board of Directors of National Research and Development Corporation (1981-1983). Dr Sidhu's R & D interests have centered around, naturally occurring quinones, industrial organic chemistry related to drugs, pesticides and intermediates and coal conversion. He is currently working as an independent Consultant.

### **R. Simpson**

Dr Simpson is a Senior Lecturer in the Division of Australian Environmental Studies at Griffith University, Brisbane, Australia. He has worked as a Research Scientist in the CSIRO Division of Atmospheric Research and, since his arrival at Griffith University in 1976, has published widely in the air pollution literature. He is presently Secretary of the local branch of the Clean Air Society of Australia and New Zealand and will shortly publish a book on air pollution in Brisbane.

### **V. Subramanian**

Mr Subramanian obtained M.Sc. in physics from Madras University in 1984. At present he is a Senior Research Fellow (CSIR) at Central Leather Research Institute, Madras working on mathematical modelling of different aspects in molecular physics. His main areas of interest are molecular mechanics' and molecular orbital calculations. He teaches quantum mechanics, classical mechanics, mathematical physics and polymer physics to post-graduate students at the Madras University.

### **G. Thyagarajan**

Dr Gopalakrishna Thyagarajan obtained M.Sc. and Ph.D. in organic chemistry from Osmania University, Hyderabad, India. He did his post-doctoral research in Organic Chemistry at the University of California, Berkeley, USA (1964-65) and was Visiting Scientist at the National Institutes of Health, Bethesda, MD, USA (1969-71). He held various positions in scientific research and science management at the Regional Research Laboratory (RRL) between 1957 and 1974. Since 1975 he has headed three of India's national laboratories in Jorhat, Hyderabad and Madras. Dr Thyagarajan's basic research publications which number over 75 are in the areas of organic synthesis, natural products chemistry and aquatic weeds. His contributions to industrial research pertain to pesticides, synthetic drugs, industrial chemicals and petroleum rheology. His current interests have extended to chemical safety and risk analysis and management of technological change. His contributions to Indian industrial development won him several coveted awards. Professional body affiliations include American Chemical Society, International Union of Pure and Applied Chemistry, International Science Policy Foundation, Indian Institution of Chemists (Fellow) and Royal Society of Chemistry, London (Fellow). Dr Thyagarajan is currently Science Adviser to the Commonwealth Secretary-General and Secretary, Commonwealth Science Council, London.