

ELECTION OF NEW FELLOWS

Citations

Prof. Dr. Zulfiqar A. Bhutta (elected 2004)

Dr. Zulfiqar Ahmed Bhutta hails from a renowned family of physicians and educationists. After an outstanding academic record, Dr. Bhutta graduated from the Khyber Medical College, University of Peshawar, in 1978 as the “Best Graduate of the year”. Following training positions in Peshawar, Karachi and Lahore, he proceeded for higher professional training to UK and obtained the membership of the Royal College of Physicians in Paediatrics, followed by the Fellowship of the College of Physicians and Surgeons (Pakistan). Dr. Bhutta has held successive academic positions in the Department of Paediatrics, the Aga Khan University, Karachi, since 1986, and is currently the Husein Lalji Dewraj Professor of Paediatrics and Child Health. He also holds fellowships of the Royal College of Physicians (Edinburgh) and Paediatrics & Child Health (UK). He obtained his PhD from the Karolinska Institute in Stockholm, Sweden. He has received a number of research awards, travel grants and scholarships from several international agencies such as the Swedish Institute, Royal College of Physicians, Paediatric Research Society, Nestle Foundation, COMSTECH and the International Union of Nutrition Scientists.

Over the last 18 years, Dr. Bhutta has contributed extensively on several fronts in the field of clinical and academic Paediatrics in Pakistan. As an educator, he was instrumental in setting up and running a model-training program in paediatrics, culminating in the recent development and recognition of the first subspeciality in graduate-training program in neonatal paediatrics in Pakistan. He is the past Chairman of the National Neonatology Group

of the Pakistan Paediatric Association and is the President elect of the Commonwealth Association of Paediatric Gastroenterology and Nutrition (CAPGAN) and the Federation of Asia Oceania Perinatal Societies. In recognition of his contributions to education and research, the Government of Pakistan awarded him Tamgha-i-Imtiaz in 1999. He was also awarded the President of Pakistan Gold Medal for contributions to Child Health in Pakistan by the Pakistan Paediatric Association in February 2004. His accomplishments as a teacher are also evidenced by numerous invitations to lecture within Pakistan and abroad.

Dr. Bhutta's major forte has been in the field of medical research. With two books and over 130 papers and chapters to his credit, Dr. Bhutta is now a recognized international authority in childhood nutrition, newborn care and infectious diseases. This is evidenced by memberships of several international committees, editorial boards and invited lectureships in international conferences. He was the recipient of an incentive award by the National Book Foundation for international medical publications in 1997. Dr. Bhutta was recognized as the highest-ranking scientist from Pakistan in the field of Health Sciences by the Pakistan Council for Science and Technology in the year 2000. At the national level, Dr. Bhutta is advisor to the Pakistan Medical & Research Council and the Chair of the Committee on Health Sciences' Biotechnology Projects of the Ministry of Science & Technology. He is a member of several national health policy and planning committees and the Chairman of the national Vaccine Development Task Force of the Ministries of Science & Technology and Health. He is also a member of the Technical Steering Committee of the Child and Adolescent Health Division of the World Health Organization (WHO). In recognition of

his contributions, the Director General of WHO appointed Dr. Bhutta to its highest academic body, the Advisory Committee for Health Research in 2000, a position which has just been renewed for a further 5 years.

Prof. Dr. Mohammad Qaiser (elected 2004)

Dr. Mohammad Qaiser, Professor and former Chairman, Department of Botany, and Dean, Faculty of Science, University of Karachi, has spent about 37 years in teaching and research. He was awarded the degree of M.Sc. in Botany (1967) and Ph.D. (1976) by the University of Karachi. The title of his Ph.D dissertation was "Biosystematic study of the family Tamaricaceae from Pakistan". He started his professional career as Assistant Lecturer in Botany at the University of Karachi (1967-69) and served as Assistant Professor in Botany, Al Fateh University, Tripoli, Libya (1979-82). Dr. M. Qaiser is recipient of Alexander von Humboldt Post Doctorate Fellowship (1984-85). He has also worked at the Botanical Garden and Museum, Berlin; Frei University, Berlin, Germany; Herbarium Universitatis Florentinae, Florence, Italy; Herber Institut de Botanique, Montpellier, France; Herbarium, Royal Botanic Gardens, Kew, England, and British Museum of Natural History, London, England. He has contributed to the Monograph of the genus *Phagnalon* (Cass.) Asteraceae-Inuleae on worldwide basis. He has recently been awarded Gold Medal by the Pakistan Academy of Sciences in the field of Botany (2004) for his outstanding contributions in Plant sciences.

Prof. Qaiser has successfully completed research projects dealing with taxonomic studies of Vascular Plants of Pakistan (PL 480 Project, 1981-94), Pollen Flora of Pakistan (NSRDB Project, 1989-93). Currently, he has been awarded research projects on Aerobiology by Pakistan Science Foundation and on Flora of Pakistan (co-principal investigator) by Missouri

Botanical Garden, USA. Four students obtained Ph.D. degrees and a number of students (about 30 students) completed theses and research projects for their Master's degree under his supervision. He has participated and presented scientific papers in many national and international conferences at home and abroad (International Botanical Congress, Berlin, 1987; International Symposium on Plant Life of South Asia, Karachi, 1990; 3rd International Symposium on Plant Life of South West Asia, Berlin, 1990; International Symposium on family Labiatae, Kew, 1991; International Workshop cum seminar on Legume database of South Asia, Lucknow, 1994; Plant Life of South West Asia Symposium, Izmir, 1995; International Seminar on the family Apocynaceae, Chittagong, 1997).

Dr. Qaiser has published 120 research papers in scientific journals of repute. He has discovered four genera, twenty eight species and many infraspecific taxa of the flowering plants, which are new to science. His researches include his monumental contributions to Flora of Pakistan as an author (19 families including some families having over hundred species) and as a Co-editor (17 families including several ones having over hundred species) and to the Flora of Libya (as an author). He continues to serve as the Co-Editor of Flora of Pakistan. Dr. Qaiser's own contribution to Flora of Pakistan includes the treatment of 170 genera and 501 species. Several peer reviews of Flora of Pakistan have acknowledged it as an outstanding contribution and it is highly recommended for the identification of local and regional plants. The Flora of Pakistan is also considered as a standard source of identification of Plants of S. W. Asia. The Flora is providing a base for the development of other regional Floras. Dr. M. Qaiser has also made significant contribution in the field of Botany dealing with biodiversity of flowering plants, chemotaxonomy, phytogeography, palynology and genecology. Dr. Qaiser is an internationally renowned plant taxonomist and known

internationally for his contributions to flora of Pakistan and flora of Libya. He is considered one of the leading taxonomists of South West Asia and North Africa. Dr. Qaiser has also been instrumental in developing the first palynological laboratory in Pakistan. The laboratory has a collection of several thousand slides of pollen grains of plants and now serves as a reference center. He has already published 45 research papers (with various co-authors) on the pollen flora of Pakistan. Dr. Qaiser used scanning electron microscopy and chemical data for taxonomic purposes for the first time in Pakistan. Thus, he has clearly demonstrated originality and added new knowledge to science. The impact of Dr. Qaiser's contributions is immense and multifold. Flora of Pakistan has been providing critical baseline information on the type, distribution and status of plant biodiversity of Pakistan. This information could be utilized for multiple purposes including conservation of fast depleting biodiversity, control of different types of allergies caused by airborne pollen and extraction of life saving drugs.

**Prof. Dr. Muhammad Nawaz Chaudhry
(elected 2005)**

Prof. Dr. Muhammad Nawaz Chaudhry did his B.Sc. Honours in 1963 and M.Sc. (Geology) in 1964 from the University of Punjab, securing first positions with gold medals. He received Ph.D. degree in Mineralogy in 1967 from Kings College, University of London, and Post Doc in 1996 from ETH, Zurich, Switzerland, in Structure and Tectonics. He has been teaching at the University of the Punjab since 1969 and was appointed Professor in 1988. He has successfully supervised studies of 8 Ph.D. and 150 M.Sc. students. He has also worked as Guest Scientist at the University of Leicester, UK and ETH, Zurich, Switzerland. Prof. Chaudhry served as Director, Institute of Geology, from 1997 to 2001, Director Centre for Integrated Mountain Research from 1999 to 2000 and Director, Post-

graduate Centre for Earth Sciences from 2001 to 2002. He has been working as HEC Professor since 2003. He has published 179 research papers in national and international Journals, presented 118 papers/posters at international and national conferences, symposia and workshops, and has authored 363 technical reports.

Dr. Nawaz Chaudhry specializes in Himalayan geology, mineralogy, economic geology and geological materials. As research team leader, he has made outstanding contribution in the fields of tectonostratigraphy, regional and economic geology of north-western Himalayas of Pakistan where he has discovered new shears and tectonostratigraphic subdivisions, documented Hercynian tectonometamorphic events, discovered eclogites in Kaghan, and participated (with scientists from ETH, Zurich, and MontPellier, France) in developing new dynamic modeling for the evolution of the Kohistan Island Arc Complex. He also, for the first time, provided evidence for affinity of the tectonostratigraphic of Karakoram plate with the Indo-Pak plate and constrained the initial contact of India with Asia through Sedimentology/Biostratigraphy. He has described relations between physical parameters, and also between physical parameters and cell dimension of some minerals. He presented for the first time some postulates on the tectonomagmatism, tectonostratigraphy and economic potential of Kirana-Malani Basin with implications for occurrence of petroleum there. He has developed new ideas on process-related predictive statistical modeling based on mineral distribution patterns and introduced truncated distribution for mineral distribution in rocks. He has also made an important contribution by discovering pressure temperature divide separating deleterious and non-deleterious reactive low grade metamorphic aggregates that are used in the construction industry.

At present, Prof. Chaudhry is supervising HEC and Punjab University Ph.D. scholars and

carrying out research in the field of Earth and Environmental Sciences. In recognition of his outstanding research work, he was awarded Gold Medal by the Punjab Geological Society in 1992, Gold Medal by Pakistan Academy of Geological Sciences in 1997 and Gold Medal in Earth Sciences in 2001 by the Pakistan Academy of Sciences. He was elected fellow of the Pakistan Academy of Geological Sciences and is also working as its Senior Vice President.

Prof. Dr. Azra Khanum (elected 2005)

Prof. Dr. Azra Khanum was born on 9th February in 1949. She obtained her early education in Karachi, which culminated in the degree of M.Sc. in Chemistry from the University of Karachi. Immediately thereafter, she developed interest in application of biochemical sciences in the understanding of biological processes. She achieved this objective by studying for M. Phil degree in Biochemistry and Molecular Biology. During the same period she held several research positions at the University of Karachi, Karachi and Quaid-i-Azam University, Islamabad. In 1982, she was awarded the Ph.D degree in Biochemistry and Molecular Biology by Quaid-i-Azam University, Islamabad, for her excellent study of chromatin-associated acidic and basic proteins. This led to a better understanding of the role of these proteins in the mechanism of gene regulation.

Her sustained publications in national and international journals and scientific presentations in national and international conferences attracted the attention of world scientific community. In particular her studies on the mechanism of action of human chorionic gonadotropin (hCG) in mouse Leydig cells have been internationally acclaimed and she was invited to work as post-doctoral fellow (1984-1987) in the leading hormone laboratory of Professor Dr. Maria L. Dufau at National Institute of Health (NIH), Bethesda, MD, USA. There, she held the

positions of Post doctoral Fellow (1984-1987), Adjunct Scientist (1990, 1993) and Visiting Scientist (1995-1997). She also worked at another internationally well known institute, the Netherlands Cancer Institute, Amsterdam, The Netherlands, as a Guest Scientist (1993-1994).

Her teaching positions have included Lecturership (1979-1984) and Assistant Professorship (1984-1991) at Quaid-i-Azam University, Islamabad. During this period she was instrumental in raising the quality of education in Biochemistry and Molecular Biology, not only as a teacher but also as a research guide for a number of M. Phil and Ph.D. students. At present, she is working as Professor in Biochemistry and Chairperson, Department of Biological Sciences at the University of Arid Agriculture, Rawalpindi. She is providing modern techniques and cutting edge knowledge to the graduate and post-graduate students studying in various disciplines of Agriculture and Biological Sciences. She has also played an important role in starting M.Sc. degree program in Biochemistry and Ph.D. degree programs in Biochemistry, Botany and Zoology at this University.

Her studies on the mechanism of action of hCG in receptor-ligand interaction has been quoted extensively in the literature. Using forskolin as an analytical tool, she has successfully investigated the role of adenyl cyclase in mediating hormone-receptor inter-action. Her novel studies on angiotensin II in Leydig cells and effect of receptor phosphorylation in signal transduction, essential role of ATP in activation of 17 β -hydroxysteroid dehydrogenase and its cloning are some of the landmarks achieved by her. Her more than forty (40) research publications in international and national journals of repute have been rated very highly in citations.

She has been a TOKTEN consultant and has also earned the prestigious international Fogarty Post-doctoral Fellowship. She is recipient of

HEC Best Teacher Award (2001) and of a Biotechnology Project grant (RS 29 million) sponsored initially by the Ministry of Science and Technology and then Higher Education Commission, Government of Pakistan (2002), PAS Gold Medal in Biochemistry (2003) and Fellowship of Pakistan Academy of Medical Sciences (2003). In the social sector, she has played an active role in the Institute of Overseas Pakistanis (IOP) as a member of Board of Directors and as a member of Executive Committee of Overseas Pakistanis Educational Network (OPEN).

Dr. Azra Khanum is member of American Association of Advancement of Science, USA, New York Academy of Sciences (USA), American Society of Biochemistry and Molecular Biology (USA), Endocrine Society (USA), National Geographic Society (USA), Society for Biochemistry and Molecular Biology (Pakistan), and Zoological Society of Pakistan.

Prof. Dr. Mustafa Shameel (elected 2005)

Dr. Mustafa Shameel was born on 3rd July 1941 at Rudauli (near Lucknow). He obtained the M.Sc. degree in Botany from the University of Karachi in 1962, securing 1st division and 2nd position. He earned Ph.D. degree in Marine Botany in 1972 from the University of Kiel, Germany, under the German Academic Exchange Scholarship. He also completed a 14 month Post-doctoral research assignment in 1977 at the University of Kiel, Germany, as Alexander von Humboldt Fellow. Dr. Shameel joined the Department of Botany, University of Karachi, and served as Lecturer (1962-1972), Assistant Professor (1972-1973), Associate Professor (1978-1979), Professor (1985-1999) and Meritorious Professor (1999-2001). He is now serving as HEC Professor since 2003. He was Director, Institute of Marine Science, from 1994-1998 and Director, Centre of Excellence in Marine Biology, University of Karachi, from 1999-2001. He was President of Pakistan

Botanical Society from 2001-2003.

Prof. Shameel has more than 42 years' experience of teaching and research. He is an internationally recognized authority on marine benthic algae. He has published 155 scientific research papers in journals of international repute with emphasis on marine algae of the Baltic, North Mediterranean and Arabian Seas. Dr. Shameel has participated in several national and international conferences and presented scientific papers. He has successfully supervised research work of 10 Ph.D. students. Dr. Shameel presented a new concept of barobiology of seaweeds in 1972 and reported, for the first time, the effects of high hydrostatic pressure on the physiology and biochemistry of marine algae. Apart from taxonomic accounts of 15 new taxa of marine algae, Dr. Shameel has isolated and described 24 new sterols, terpenes, glycosides and other secondary metabolites of algae. He introduced the concept of phycochemistry in Pakistan 1990. In 2001, he proposed a new classification of algae by creating 17 new taxonomic groups.

Dr. Shameel has been a member of the Editorial Board of Pakistan Journal of Botany, Pakistan Journal of Marine Sciences, Marine Research (Journal), Biological Research Journal and Journal of Natural History & Wildlife. He served as Editor-in-Chief of Pakistan Journal of Marine Biology and is now serving as Chief Editor of International Journal of Phycology & Phycochemistry. He received 'Meritorious Research Award' of the University of Karachi in 1997 and Agha Hasan Abedi Gold Medal in Botany from the Pakistan Academy of Sciences in 1998. He was assigned 10th National Ranking in Biology in 1999 as well as 2000 in the booklets published by Pakistan Council for Science & Technology. In recognition of his outstanding contributions to scientific research, Prof. Shameel was honoured with the Presidential awards of Izaz-i-Fazeelat in 2000 and Tamga-i-Imtiaz in 2001.

Dr. Ahmad Mukhtar Khalid (elected 2005)

Dr Ahmad Mukhtar Khalid obtained Ph.D in Biotechnology from the University of New South Wales, Australia, in 1978. He has nearly 25 years of post-Ph.D. experience. He joined the National Institute for Biotechnology and Genetic Engineering, Faisalabad, in 1989 as Principal Scientific Officer. In 1999, he was appointed as Director of National Institute for Biotechnology and Genetic Engineering (NIBGE), Faisalabad, which has been declared as Centre of Excellence in Biotechnology. His earlier visits to National Institute for Agricultural Biology (NIAB), Faisalabad, helped this Institute in developing strong research programmes in industrial biotechnology and bioleaching of low grade uranium ores and in development of feasibility for bioleaching of Saindak ores, (now active areas of research at NIBGE). At NIBGE, he has also established research in Biotechnology of fossil fuels involving biodesulfurization of coal and furnace oil in order to develop low-sulfur coal and furnace oil. He is also actively involved in biotechnology of extremophiles, microbial diversity, development of biosensors and nanobiotechnology and genetic engineering of industrially important microorganisms.

On the strength of his expertise, he was appointed on the International Advisory Board of International Biohydrometallurgy Symposium, Wymoing, USA. Dr. Khalid served as a member of Pakistani delegation that visited Kazakhstan in connection with Protocol of Intent on Mutual Collaboration between the Ministry of Science and Technology, Government of Pakistan, and the Ministry of Science, Academy of Sciences, Republic of Kazakhstan. The Ministry of Science & Technology (MoST), Government of Pakistan, appointed him as leader of Biotechnology Delegation from Pakistan that visited Syria to establish linkages in Biotechnology. Dr Khalid is also a member of Biosafety Committee, Government of Pakistan, and is the focal point

of FAO for Biosafety and GMO Crops in Asia. He has represented Pakistan at several scientific meetings in Bangkok and Iran.. He is also member of Senate and Member of Academic Council of the University of Agriculture, Faisalabad.

Dr. Khalid has published numerous research papers in national and international scientific journals, which are based on research carried out in the field of Biotechnology and Molecular Biology at NIBGE and abroad. He has been personally supervising the LAN/INTERNET and IT at NIBGE and now is instrumental in establishing a Bioinformatic Cell at NIBGE. He has been accredited Ph.D. supervisor by MoST and Higher Education Commission of Pakistan, and has also been awarded a productivity allowance.

Dr. Khalid developed curricula for M.Phil and Ph.D. degree programmes in Biotechnology being offered by NIBGE in collaboration with Quaid-i-Azam University, Islamabad. He has also written B.Sc (Hons) curriculum in the Biotechnology, which has been accepted and is presently being published by ISESCO. This curriculum has now been translated in French and Arabic for implementation in ISESCO countries. He has been recently nominated by ISESCO/ UNESCO for writing a textbook on Biotechnology. He is also the author of Government of Pakistan's National Industrial and Environmental Policy. He has also been nominated as Liaison Officer for International Centre for Biotechnology and Genetic Engineering, Trieste, Italy. He has served on the Board of Governors of this prestigious organization. The Pakistan Council for Science and Technology, Ministry of Science & Technology, Government of Pakistan, appointed him as member of the Biotechnology Commission of Pakistan as well as S&T Expert Committee on Biotechnology and Genetic Engineering. Dr. Khalid is also Vice President of the Pakistan Society for Biotechnology.