

**IN DEDICATION TO
PROF. MICHAEL D. GALE FRS**



Professor Mike Denis Gale, a world-leading plant geneticist, died suddenly on the 18 July, 2009. Mike made numerous seminal contributions to genetics and genomics research on cereals, particularly wheat.

Mike was born on 25 August, 1943, and brought up on a diary farm in the West Country of England. He went onto Birmingham University as an undergraduate where he specialized in genetics. The close connection at that time between the Birmingham Genetics Department and the Agricultural Botany Department at the University of Wales, Aberystwyth, resulted in Mike moving there in 1965 for a Ph.D. under the supervision of Prof. Hubert Rees. Mike's dissertation was on the 'Cytological and biometrical studies in the Gramineae'. Following this, he was offered a job in 1968 at the Plant Breeding Institute (PBI) in Cambridge by Prof. Sir Ralph Riley, then Head of the Cytogenetics Department. The PBI employed Mike as a geneticist and encouraged him into developmental genetics and physiology. Mike thrived at the PBI and started on a path that would lead him to make ground-breaking discoveries on the genetics of height and preharvest sprouting, and later in wheat genomics. His contributions to agricultural research led to the award of the Royal Agricultural Society of England's gold medal for research in 1994.

In the mid to late 1980s, Mike was becoming increasingly interested in genetics at the protein and DNA level and started programs to discover genetic marker polymorphisms. He started an extensive program to discover and exploit isozyme polymorphisms and published extensively in this area. At the end of the 1980s, his interest turned to DNA polymorphisms, which led to the development of the first comprehensive genetic maps of wheat.

In 1990, following the privatization of the breeding activities of the PBI, Prof. Gale, together with his colleagues on the research side of the PBI, moved to Norwich. Mike became Head of Cereal Genetics in 1988, and Associate Research Director of the new John Innes Centre (JIC) in 1994. The years that followed were the most scientifically productive of Mike's research career. Mike's research group, in collaboration with Graham Moore, extended the DNA marker work to analyze the genetic relationships between wheat and other grass species, particularly rice. This led to the seminal discovery that despite being separated by many millions of years of evolution, the genetic content and gene order in the major grasses had been conserved over time, which in turn led to the 'lego model' and 'crop circles' concepts, where the genomes of all grass species could be aligned into a common framework. For this work, he was awarded the Rank Prize in Nutrition in 1997, and with Graham Moore, the Royal Society Darwin Medal in 1998. For his accumulated scientific discoveries and achievements, Mike was elected a Fellow of the Royal Society in 1996. He also took on a greater administrative load at JIC and rose to become Director of the JIC.

Mike was always interested in international agricultural research. During the 1980s and 1990s, he had become an important figure in the Rockefeller Rice Biotechnology Program and also worked extensively for the Plant Breeding Division of the International Atomic Energy Agency in Vienna. This led him to express a passionate view that science, and genetics in particular, has a major role to play in alleviating world food shortages and poverty. Mike became increasingly involved with the Consultative Group on International Agricultural Research (CGIAR) and in 2004 was elected to the Science Council, the major group that directs the strategic directions of the CGIAR Institutes. In this role, Mike played a major role in the directions that international agricultural research has taken over the last few years with respect to crop improvement strategies.



Mike officially retired from the JIC in 2003, but became an Emeritus John Innes Foundation Professor in the Crop Genetics Department. Following retirement, he kept busy continually working or travelling for business and pleasure. As well as his CGIAR role, he worked as a consultant to numerous national and international organizations, public and private, involved in agricultural science.

Prof. Gale passed away from a heart attack while attending the Latitude Festival in Suffolk on 18 July, 2009, following a game of golf in the morning and catching up with the British Open Tournament, which he always enjoyed.