

OBITUARY

PROFESSOR MICHAEL BRADEN

6th September 1928 - 22nd November 2017

Michael (Mike) Braden passed away on 22nd November 2017 in Harpenden, UK. He leaves behind four children: Mark, Mandy, Diana and Sue, 5 grandchildren and his brother and sisters. His funeral was held on 13th December 2017 at St Nicholas Church, Harpenden and was attended by family, friends, ex-colleagues and students. Following this, his academic career was celebrated with a gathering “Remembering Mike Braden” at *Barts and the Royal London School of Medicine and Dentistry* (BRLSMD), *Queen Mary University of London* (QMUL), on 22nd February 2018. Here many ex-colleagues and students shared their memories of him as an outstanding scientist who was generous with his knowledge and his time. Everyone at the gathering had benefitted professionally and/or personally from his friendship.

Mike was born on 6th September 1928 in Southall, Middlesex. He was adopted as a baby, and grew up as the only son of Albert and Louisa Braden. He attended North Road Junior School (1933-1940) and in 1939, as war was declared, he entered the final year. He did not gain entry into grammar school since, according to the headmaster, the lower-set children: “had no academic potential”! So, at age 13, in September 1940, during the Battle of Britain, Mike started at Dormers Wells School, where he spent some of the time in air raid shelters. His family house escaped damage, until 1944, when the blast from a V1 flying-bomb, brought the ceiling down onto his empty bed. From 1942-1946, he attended Southall Technical College. The teachers mostly had Engineering qualifications and included some Cambridge University graduates. One such was Mr FK Green who taught him Mathematics and History. He left college at 16. His first job was as a laboratory assistant at William Geipel Ltd, Alperton, Middlesex, a manufacturer of electric cables. Significantly, his work involved polymers. After obtaining a training grant he took part-time classes in Rubber and Plastics Technology at the *Northern Polytechnic* (London, 1948-1951), where he obtained diplomas in polymer science, which set his career path. Following National Service, as an RAF aircraft electrician (1946-48), he joined the *British* (now Malaysian) *Rubber Producers Research Association* (BRPRA) as a research technologist. The Director, Geoffery Gee FRS, supported his aspirations to do a Physics degree, and allowed him part-time study for a London University BSc (Special Physics), at the *Northern Polytechnic*, which he completed in 1957. He then transferred to the Applied Physics Group under AN Gent. In 1962 he obtained a PhD on *The Ozone Degradation of Polymers*. Mike was fortunate to work with some very eminent scientists, including Geoffrey Gee, LRG Treloar, RS Rivlin, AG Thomas, AN Gent and LC Bateman.

Mike married Jean Ramsey in 1957 and they had four children. In 1961, he joined the *London Hospital Medical College* (now BLSMD, QMUL) as a lecturer in Dental Materials in the Prosthetics Department, to teach a scientifically-based Dental Materials course for BDS students, and to initiate research. With minimal space (4 metres square), equipment and staff, he set about studying the chemistry and physical properties of dental materials, most notably

water absorption and diffusion in polymers. In 1965, he became *Reader* and in 1973 became *Professor of Biomaterials in Relation to Dentistry*. At the new Dental Institute, he had more laboratory space and Dental Materials became an independent department, which soon moved into the Newark Building. Under Mike's leadership, it began to grow with grants from MRC, NDRC, Government funded New Blood lectureship, DHSS and NIH. In 1991, Dental Materials became part of the *Interdisciplinary Research Centre (IRC)* in Biomedical Materials funded by SERC. Mike played a big part (along with Professor Bill Bonfield as Director and others) in its award to QMUL. Mike was Associate Director of the IRC, Project Coordinator of the *Optimised Bone Cement Project* and Lead of the flourishing Dental Programme. The latter involved novel resins for dentistry, including low shrinkage and radio-opaque polymers, polymers for drug delivery and elastomeric prosthesis materials.

In 1993 Mike officially retired but continued with the IRC at the *Royal National Orthopaedic Hospital* in Stanmore while remaining in contact with the Department at QMUL. In 1996, he returned to lead the Dental Programme in the IRC at Mile End in East London. In 2001, Mike became an honorary Emeritus Professor at QMUL. He continued to travel in and out of the university regularly until the journey became too much for him. However, he was still very involved in research projects.

Throughout his long and fruitful career, Mike made significant contributions in the science of Dental Materials and in Biomaterials. This included work on diffusion in polymers, both for fluid uptake and also drug delivery systems, impression materials and acrylics, (tissue conditioners, peripheral seal, temporary crown and bridge, denture base and orthopaedic bone cements). He supervised many PhD/MSc students, published several book chapters and in excess of 250 papers – continuing up to 2018. Awards received included: the IADR Wilmer Souder award (1993), the BSSPD Gold medal (1993), the Geoffrey Slack award, and the Chapman Gold Medal of the *Institute of Materials* (2004). He also served on numerous professional and governmental committees of the DHSS DoH, SERC, and MRC.

Some years after his adoptive parents died, he wrote to his birth mother in 1982 and they met at her home, discovering – to his delight - that he had brothers and sisters.

Away from his professional life, Mike had time for family, friends and several interests, such as his love of German, Austria, trains and music, particularly playing the piano and the organ at church every Sunday until his hands/fingers would not function, due to arthritis. From his youth he was a committed Christian and an active member of the Evangelical Wing of the (Anglican) Church of England. He saw no conflict between his scientific work and his profound religious beliefs, which gave him strength and motivation for his scientific work and in facing the common trials of life.

Mike spent his last year or so in a residential home. His mind remained sharp and he enjoyed visits and phone calls from family and friends almost until the last. His passing is a great loss for the scientific world and his family and friends. He will be greatly missed by all who knew him.