

A. A. Eddy, Biochemist, Emeritus Professor at Manchester University and Founding Professor of Biochemistry at the University of Manchester Institute of Science and Technology - whose ground-breaking work with yeast opened the way for no fewer than seven 21st Century Nobel Prize Winners

Born 4th November 1926, St Just in Penwith Cornwall, Died: 24th October 2017, Disley Cheshire.

Alan Eddy, who died age 90, was appointed Professor of Biochemistry and Head of Department at the University of Manchester Institute of Science and Technology (UMIST) in 1959 at the age of 32 and was in the vanguard of the transformation of Manchester Institute of Science and Technology into a leading university.

Alan's father worked as an assayer in the Botallack and Levant tin mines and his mother as a primary school teacher supporting and providing early schooling to Alan and his twin sister. Alan won a scholarship to Devonport High School initially in Plymouth and later Penzance to avoid the teeth of the Blitz. Ultimately as head boy, his early academic promise was fulfilled when he won an open scholarship to Exeter College Oxford, electing to study chemistry.

At Oxford he rowed for the college and took part in athletics. As Sir Roger Bannister a contemporary of Alan's recounts in 'Exeter College: The First 700 Years', there was a brief moment when Alan overshadowed Roger as the two of them prepared for a meeting of the college athletics club. After a few circuits, the Exeter groundsman engaged them in conversation, recalling the prowess of the 1936 1500m Olympic Champion and Exeter Alumnus, Jack Lovelock, before complimenting Alan on his running style and all but dismissing Roger's.

Alan graduated with a first-class degree in 1949 and was awarded his DPhil in 1951. He remained at Oxford to continue his research as an 'ICI Fellow', in a department run by the Nobel Prize winner Sir Cyril Hinshelwood. For Alan's DPhil project, Hinshelwood offered him the choice of the Kinetics of the Gas Phase or the Kinetics of Yeast. Alan chose yeast, and it remained his principal experimental organism for the rest of his career. As a consequence he joined the Brewing Industry Research Foundation (BRF) in 1953 where he cut a dashing figure, commuting on his 500cc BSA motorbike. A year later Alan married Susan, an architecture student he had met while at Oxford.

While at BRF, Alan and his colleague Don Williamson developed a technique that used juice from snails' guts to digest away the tough cell walls of yeast to produce naked 'protoplasts'. This technical advance was to have enormous consequences. Early techniques to engineer yeast with recombinant DNA exploited protoplasts, and protoplasting also enabled the isolation of the membrane-bound compartments of the yeast cells (including the vacuole in Alan's own laboratory), which had been impossible if yeast cells were lysed by mechanical shearing. This opened the way for yeast to become the leading model for molecular cell biology, with no less than seven 21st Century recipients of the Nobel Prize working with the organism.

In 1959 when Alan was approached by Lord Bowden to gauge his interest in a biochemistry post at UMIST Alan retorted; "but I don't know anything about biochemistry" to which Lord Bowden said "don't worry you'll pick it up". Pick it up he did, and Alan became a pioneer in the study how molecules were transported into the cell across the plasma membrane. He was particularly concerned with the role of ion gradients, including those of protons, in transport processes. Alan was one of the first people to understand, and promote, Peter Mitchell's chemiosmotic hypothesis.

At UMIST, Alan led and nurtured a thriving department, attracting an array of talent that would eventually comprise 35 academics including several with world-leading reputations. Research was central to Alan's life but teaching and mentoring to inspire others was also of great importance and many former PhD students fondly remember the support and guidance he gave. In the late 1960s and early 1970s he contributed to the Open University, in a series of lectures broadcast on television. Despite official retirement in 1994, Alan continued to conduct laboratory research and to publish research papers until 2012 - by which time he had witnessed the merger of UMIST into Manchester University. During this time his work was in part funded by a Leverhulme Trust research grant and sustained by his undimmed quest to further his chosen field.

Beyond work, Alan was very widely read and his interests were reflected in his home which was filled with books. He travelled widely but maintained a lifelong love of Cornwall, the Peak District and France.

Alan is survived by Susan his wife of 63 years and by two sons, four grandchildren, and one great-grandchild.