

## A. Alan Eddy (1926–2017)

Many members of the Society will fondly remember Professor Alan Eddy of the University of Manchester Institute of Science and Technology (UMIST) who passed away suddenly but peacefully at the end of October at his home in Disley. It will surprise nobody who knew him that, despite his almost 91 years, he was active and enjoying life very much to the full right up to the end (enjoying a lunch party with friends at his house on the day he passed away). Very privileged members will remember Alan and Susan's parties for which they were rightly famous!

Alan was born in St Just in Penwith, Cornwall in 1926; his father was an assayer in the tin mines and his mother, Ellen, was a schoolteacher. Alan's father was laid-off several times, which led to him training as an accountant – later joining Burroughs Adding Machines. His mother's profession and his father's experiences left Alan with an acute sense of the 'added value' of education and the difference that scholarship funding made to his own life. Alan won a scholarship to Devonport High School in Plymouth and was evacuated to the relative safety of Penzance during the bombing. He next won an Open Scholarship to Exeter College, Oxford, to study chemistry and two additional scholarships enabled him to live comfortably. Alan found the academic environment stimulating, but his time at Oxford was not all spent in academic work: he rowed competitively for Exeter College and enjoyed athletics. One of Alan's typical dinner party recollections was when he and an unknown Roger Bannister went down to the Exeter running track to be greeted by the groundsman. He looked them both up and down and, nodding to Alan, said – you look like you have potential – at the same time dismissing Roger Bannister's prospects of ever making it as a middle-distance runner. Dr Bannister recounts the same incident 'with his friend Alan Eddy' in a reflection he wrote for the book 'Exeter, the First 700 years'.

Alan graduated with a first-class degree, and stayed at Oxford, working in the laboratory of (Sir) Cyril Hinshelwood who was awarded the Nobel Prize in Chemistry in 1956 for his work on reaction mechanisms. 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) at Lyttel Hall in Surrey in 1953. There, Alan cut a dashing figure, commuting on his 500cc BSA motorbike and, a year later, he married Susan, an architecture student he had met while at Oxford.

While at BRF, Alan and his colleague Don Williamson developed a technique to digest away the tough cell walls of yeast to produce naked 'protoplasts'. The method

employed juice from the guts of snails that he collected on the (conveniently located) North Downs in Surrey. What became of the (now strictly protected) Roman snails is not clear from the 1957 *Nature* letter, but we can suppose that Alan found a good culinary use for them! 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). 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.

At this time, Alan was recruited by Vivian (later Lord) Bowden, who was in the process of transforming the Manchester Municipal College of Technology into a fully-fledged technical university – UMIST. Bowden, a talented maverick, recognized Alan's leadership potential and asked him if he would build a department of Biochemistry from the existing Brewing Chemistry group at UMIST. Alan reportedly replied "...but I don't know anything about Biochemistry" – to which Bowden responded "...don't worry you'll pick it up". Pick it up he did, and Alan became a pioneer in the study of how molecules were transported into cells. 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 adopt, and promote, Peter Mitchell's chemiosmotic hypothesis.

Alan published much of his research in mainstream biochemistry journals, especially the *Biochemical Journal*, of which he was a champion. After retirement, he carried on working at the laboratory bench himself and published several papers in his '70s and '80s. He was working on a manuscript on the *TOK1* gene product when he died – Tok1p is a yeast outward-rectifier potassium channel of the plasma membrane, which has two pore domains in tandem.

Alan also remained a valued mentor for many PhD students and a respected and inspirational scientist. He will be sadly missed, but we can all celebrate a truly remarkable and inspiring life. ■

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### Further reading

1. Eddy, A. A. and Williamson, D. H. (1959) Formation of aberrant cell walls and of spores by the growing yeast protoplast. *Nature*. 183, 1101-1104

