Several obituaries of Dudley Williams have appeared in the UK national press and also in the Lancet and in Angewante Chemie. The following has been adapted from the obituary written by Professor Jeremy Sanders of Cambridge University for Angewante Chemie.

Professor Dudley Howard Williams died in Cambridge on 3 November 2010 at the age of 73. He was born on 25 May 1937 and grew up in Leeds, Yorkshire. He was educated at Pudsey Grammar School and at Leeds University. After being awarded a PhD from Leeds working on vitamin D chemistry, Dudley moved to Stanford University in California to work with Carl Djerassi. In three highly productive years he showed how mass spectrometry and NMR spectroscopy could transform the way that organic chemists worked. Using a large set of related steroids, he explored fragmentation pathways in mass spectrometry, relating them to fundamental organic mechanisms, and he connected NMR coupling constants and chemical shifts to molecular geometry and substituent effects. His early studies of solvent effects on chemical shifts initiated a career-long interest in intermolecular interactions and molecular recognition.

In 1964 he was appointed by Lord Todd to a junior position in Chemistry at Cambridge University, where he remained until his retirement in 2004. He made it a condition of his appointment that the Department purchased a Varian 100 MHz NMR spectrometer and an AEI MS9 mass spectrometer. His papers and textbooks from the Stanford and early Cambridge days, including Spectroscopic Methods in Organic Chemistry (together with I. Fleming) had a major impact in organic chemistry.

Throughout his career he continued his flow of influential papers across a huge range of topics in chemistry and biology, always insisting on simple physical pictures and utmost clarity of thought from his co-authors. He was one of the most cited chemists in the UK, and was elected a Fellow of the Royal Society in 1983.

Dudley was always keen that his expertise be used for practical benefit; in the early 1970s, with Howard Morris and others, he showed how the inactive form of vitamin D that we eat is hydroxylated first in the liver and then in the kidney to the active 1,25-dihydroxy form; that work led to lifesaving therapies for patients with kidney failure. In late 1969 he was very excited about a new problem: a powerful antibiotic of unknown structure called vancomycin. He told his research group that using mass spectroscopy it would be possible to solve this...
structure in six months. Those six months turned into almost four decades of science - difficult and frustrating for several years, but ultimately successful. NMR, mass spectrometry, thermodynamics, synthesis, and molecular biology were all brought to bear by the group on the problem of understanding not only the structures of these molecules, but also the intermolecular interactions leading to molecular recognition and their antibiotic activity. Vancomycin and its analogues have now become key weapons in the fight against MRSA “superbugs”, and have saved tens of thousands of lives. But throughout that time, he also used vancomycin antibiotics and other systems as a test bed for fundamental thinking about molecular shape and flexibility, or about the thermodynamics of solvation, binding, and cooperativity.

Dudley was never afraid to challenge conventional wisdom and to think the unthinkable. Some of his potential achievements were thwarted by others: he submitted to SERC many years ago a proposal on what we would now call combinatorial chemistry, but it was years ahead of its time and was not funded. He was a compulsive scholar: no conversation with him, whether in a research group meeting, the local pub, or a dull departmental committee, would be complete without him taking a philosophical diversion into Boltzmann distributions, entropy, or the evolutionary origins of the behaviour of colleagues. That severely reduced his value on a practical committee - conveniently optimizing the time he had for research - but as a colleague and mentor he was highly supportive. Jeremy Sanders recalls that when he was Head of the Cambridge Chemistry Department he could always turn to him for wise and unselfish advice, and for his deep insights into colleagues’ characters.

Of course, most of Dudley’s results were actually obtained by his students and postdocs. The relationship between supervisor and research group is perhaps one of the greatest pleasures of academic life, and Dudley showed that we are privileged to have an academic family as well as a biological family. The influence, teaching, and learning flow in both directions in a way that is infinitely enriching and rewarding. Dudley gave his students scientific freedom while also ensuring that everything done was worth doing. He challenged sloppy thinking and lazy responses. He encouraged lateral thinking and the challenging of orthodoxy, and to have the courage to work in new areas. He insisted that having provocative and testable ideas that might turn out to be wrong was more important than pursuing boring details. He was hugely proud of his students and postdocs, and he took great pleasure in their successful careers.

Music was a life-long passion for Dudley Williams, and he was an excellent pianist and singer, exploring across the spectrum from Schubert to jazz. Together with Pat whom he married in 1963, and who survives him with their two sons, he was also a great host.

See also –
Cambridge University News website 15 November 2010 (http://www.admin.cam.ac.uk/news/dp/2010111502)  
+ letters 26 November (http://www.guardian.co.uk/theguardian/2010/nov/26/dudley-williams-obituary-letter)  
and 7 December 2010 (http://www.guardian.co.uk/theguardian/2010/dec/07/letter-dudley-williams-obituary)  
The Times December 2010  
The Daily Telegraph, 28 November 2010 (http://www.telegraph.co.uk/news/obituaries/medicine-obituaries/8166203/Prof-Dudley-Williams.html)  