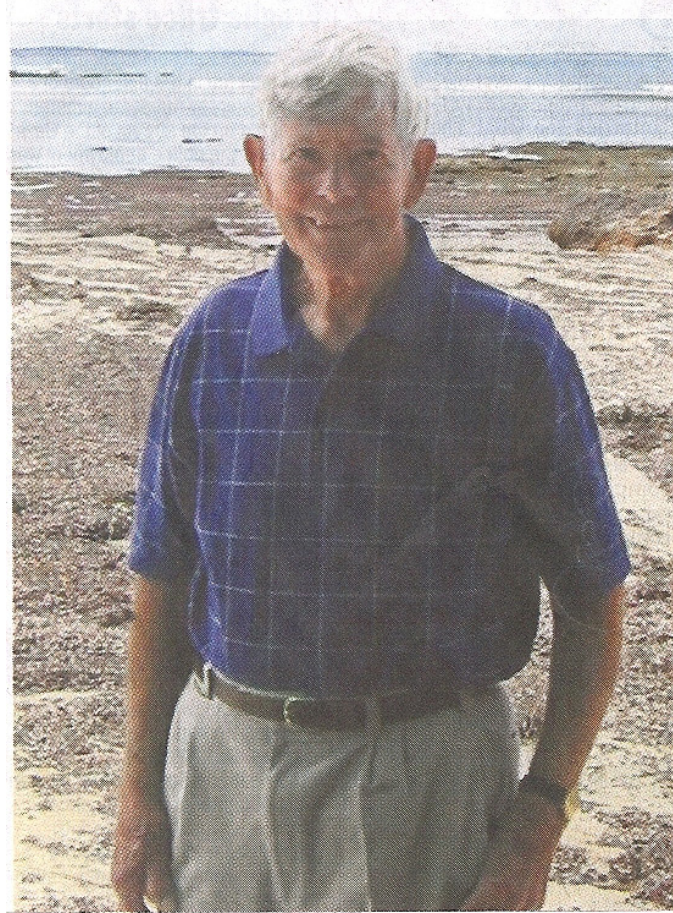




In the memory of Dr Alan W Rodwell

1917-2007





Alan W. Rodwell

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Dr Alan Wratislaw Rodwell (1917-2007)

Alan Rodwell graduated from the University of Melbourne as B.Sc. in 1939 and M.Sc. in 1940. In 1939 he joined the CSIR Division of Animal Health and Production based at the Animal Health Research Laboratory at Parkville, Victoria. He began working as an assistant to Dr A.W. Turner an outstanding veterinary scientist. Early work on toxins of clostridia with Ms C.Eales was part of a wartime program to help with prevention of tetanus in Australian troops overseas. Later he was involved with a veterinarian, Arch Campbell in work with brucellosis in cattle. They undertook experiments with the strain 19 of *Brucella abortus*, comparing the efficacy of different doses and routes of inoculation in protection against the disease.

In 1948 Alan entered the University of Cambridge and graduated with Ph. D. in 1950. This period proved to be very important in both his personal and professional life. His studies under Professor Ernest Gale, an expert in the physiology of bacteria, laid the groundwork of Alan's scientific career. No less important was the meeting with fellow student Shirley and their subsequent marriage which was blessed with their daughter, Charlotte.

Dr Turner invited Alan and Shirley in 1950 to begin fundamental studies on the causal organism of the serious disease of cattle, contagious bovine pleuropneumonia (CBPP) This micro-organism, *Mycoplasma mycoides* subsp.*mycoides* (*M. mycoides*) had been studied by Dr Turner and other CSIRO scientists who had developed a preventive vaccine from it and a serological diagnostic test for the disease. However almost nothing was known of the metabolic activity of the organism or its nutritional requirements. Such knowledge could prove beneficial by permitting superior growth media to be produced that supported higher viable counts of the organism for vaccine production. Alan's acceptance of the task was to eventuate in his becoming one of the most eminent scientists in the field of Mycoplasma research.

Alan can be regarded as a pioneer in the field of mycoplasma cell biology. Much of his experimental research was carried out with his own hands; resembling a classical, hard to find now, researcher, never leading a large research group with extensive funds. Actually, Alan considered it as a sort of advantage working away from the crowd and mainstream, making it necessary for him to solve problems by himself, leading sometimes to original solutions. One should remember that Alan worked in an era devoid of the fast communication media of today and air transport to and from Australia was rather expensive and time-consuming. Yet, Alan did not work alone. He was joined first by his wife Shirley to work on *M. mycoides* metabolism, and later by Philip Plackett and Stephen Buttery. This small team, led by Alan, enlarged its scope to include studies on lipids and carbohydrates found in *M. mycoides* and other mycoplasmas and the influence these substances had on CBPP, on serological reactions and relationships of *M. mycoides* to other mycoplasmas.

Gaining his early training with Professor Gale, at the time the world expert on bacterial metabolism, there is no wonder that the early studies of Alan on his return to Melbourne, concerned the carbohydrate metabolism of *M. mycoides*. He and Shirley were the first to publish in Nature in 1953 and then in a series of papers the comprehensive glycolytic pathway of the *M. mycoides*, noticing at this early phase the lack of the tricarboxylic acid cycle and consequently the lack of oxidative phosphorylation, emphasizing the cardinal role of glycolysis in energy metabolism of the mycoplasma. The extensive research that followed on the nutritional requirements of *M. mycoides* has led Alan to develop a partly defined serum-free medium, enabling the definition of essential nutrients, including fatty acids, cholesterol, amino acids, nucleic acid precursors and vitamins. Alan promoted the idea that the serum component in mycoplasma growth media supplies the required lipid components in a nontoxic form neutralized by the albumin component of the serum.

The last phase of Alan's work, prior to his retirement in 1982, dealt with mycoplasma cell proteins. Alan's interest in mycoplasma proteins was induced during a sabbatical leave he spent in Jerusalem with S. R. in 1966. He was working there on the reconstitution of mycoplasma membranes, becoming involved in electrophoretic analysis of membrane proteins and its possible application as fingerprints that may be used in the identification of different mycoplasmas.

Alan was the first mycoplasmologist to be awarded the prestigious Emmy Klieneberger-Nobel prize in 1980 by the International Organization for Mycoplasma (IOM) for his "outstanding and sustained contributions to mycoplasmaology". In his acceptance address he described his work on the protein fingerprints of mycoplasmas obtained by intensive work with two-dimensional gel electrophoresis. In 1998 the IOM honoured Alan with a special citation at the meeting in Sydney. He maintained an interest in IOM, attending a number of Congresses.

Alan was a modest gentleman of good taste with a warm, friendly and hospitable demeanour.

In his work Alan was patient and meticulous. To colleagues he was always helpful and encouraging and ready to advise on problems from his large store of biochemical expertise. He was held in high regard by colleagues for the standard of his research and his dedication to it.

Away from work Alan led a full life. Both he and Shirley loved music and were frequent concert-goers. Their daughter Charlotte studied music and is an accomplished clarinettist, while Alan played a concertina. Sadly Shirley passed away in 1983.

An energetic walker, Alan enjoyed many walks on the cliffs and shores of Port Philip Bay and the country around Wilson's Promontory. He was particularly interested in the bird life in these areas.

The large garden around the home at Mt Eliza extended over an additional block of land and was one of Alan's great delights and activities. Living near the beach he swam regularly in the Bay. In the home he enjoyed cooking and read widely.

During retirement Alan revisited the golf club he had played at years ago and resumed playing. He benefited by this move from the exercise and the new friendships he made. He was honoured not so long ago for being the club's oldest member still playing at nearly 90 years of age.

Some 14 years ago Into Alan's life came a friend and later partner, Judy Carroll, resulting in a very happy relationship that has brought great joy to both. Judy's family respected Alan for his scientific achievements and loved him for his character.

He will be missed by all who knew him.

Geoff Cottew and Shmuel Razin