PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY B BIOLOGICAL SCIENCES

Alan F. Williams: An Appreciation

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The papers in this symposium form the proceeding of the Royal Society's Discussion Meeting held in March 1993. As co-organizers and editors, we trust that we have put together a timely, enterprising and enlightening volume which provides a fitting tribute to Alan Williams.

It was Alan who first promoted to the Royal Society the subject of CD4 as a topic for one of the Society's Discussion Meetings and who agreed to be cast in the role of organizer. After Alan's untimely death, as co-organizers we were given the choice of proceeding with the meeting or not, and it was decided to proceed as a memorial to Alan. We are certain that it was exactly what Alan would have wanted us to do.

Alan Williams will be long remembered for his bluntness, perceptions, prejudices, singlemindedness and his arguments. Most importantly, he will be remembered for his numerous seminal contributions to molecular immunology, especially in relation to the biochemical characterization of T lymphocyte surface molecules and the designation of the Immunoglobulin Super Family.

Alan was born in Melbourne in 1945, took his first degree in Agricultural Sciences at Melbourne and then went to Bill Elliot's Biochemistry Department at Adelaide to do his Ph.D. In 1970 Alan joined Rod Porter's MRC Immunochemistry Unit in Oxford. At this time, the question was hotly debated whether T lymphocytes expressed on their surface a form of immunoglobulin referred to as 'IgT'? In general, most persons were persuaded that IgT existed. Alan, together with his colleague Jens Jensenius, became embroiled in this topic, performed some enlightened and definitive experiments and, much against the current trend, concluded that T cells do not utilize cell surface immunoglobulin to recognize antigen. He argued his case with passion and conviction but, we are sorry to say, failed to convince those committed to IgT. It was the latter who had to eat humble pie some 15 years later when the T cell antigen receptor was ultimately cloned, and Alan legitimately could look pleased. After this first excursion into the T cell surface, he extended his interest to another hot favourite surface molecule of the time, namely the Thy-1 antigen. In the early 1970s he visited, together with his colleagues Michelle Letarte and Ron Acton, the National Institute for Medical Research laboratories at Mill Hill, London to see how we purified lymphocyte membrane glycoproteins. While Michelle carried out the actual experiments, Alan sat on the bench making perceptive comments which challenged the current dogmas. His visits were always refreshing and stimulating. They were quickly followed by the isolation and characterization of the Thy-1 antigen. This in turn led to the first description of a mammalian membrane protein bound to the membrane via a GPI anchor, as well as the first detailed carbohydrate analysis of a cell surface glycoprotein. It came as a great surprise to many of us that the carbohydrate composition of Thy-1 from the thymus and brain differed markedly, and it was these studies, as much as any other, which provided the basis for the concept that the same polypeptide chain is glycosylated differently in different cell types. He was among the first to derive and use monoclonal antibodies as reagents to designate T lymphocyte subsets and to purify cell surface molecules. Among the first three monoclonal antibodies he derived, in association with Cesar Milstein, was one against the rat homologue of human CD4. He had catholic interests and is associated with the characterization of a veritable host of lymphocyte surface antigens extending from CD2 to CD45. Given his spectrum of profound contributions, it is somewhat invidious to highlight one in preference to the others. However, if we were asked to identify the contribution for which he will be most remembered, then it has to be the designation of the Immunoglobulin Super Family. This was a consuming passion to which he devoted, over an extended period of time, much of his thoughts as well as his analytic and persuasive attributes. The designation of a new family member was associated with the celebrations which are ordinarily reserved for a birth.

Alan was appointed as Director of the MRC Cellular Immunology Unit, following on from Jim Gowans, at the very young age of 31. He was elected to the Fellowship of the Royal Society in 1990 and was due to become Professor of the Dunn School of Pathology in October 1992.

Alan faced his lung cancer with considerable courage, fortitude and humour. He remained immersed in science up to the day he died. We have lost a most distinguished colleague and many of us have lost a very dear friend. He will be sorely missed.

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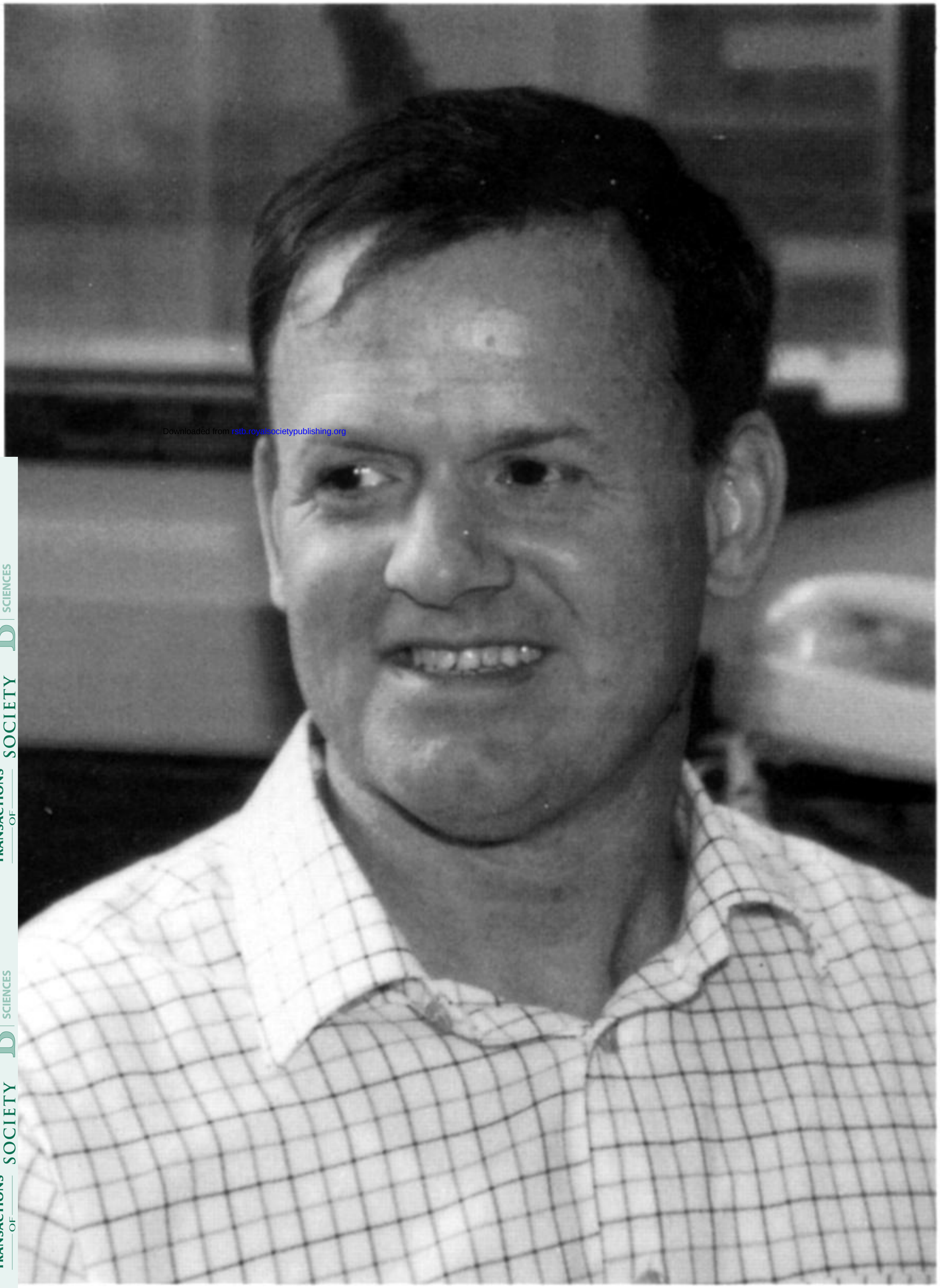

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