

Dan H. Campbell

1907-1974

Dan H. Campbell, 67, professor of immunochemistry, died in Pasadena on September 16. He had been a Caltech faculty member for 32 years.

Dr. Campbell was a pioneer in the field of immunochemistry, which is the study of antigen-antibody reactions. These reactions occur when the body produces specific proteins (antibodies) in response to invasion by foreign substances (antigens). The antibodies may combat the harmful effects of the antigens, but the reactions may also produce diseases and side effects ranging from sneezes to fatal shock.

Campbell and his research group were leaders in the development of techniques for isolating and standardizing allergens and for growing in the laboratory antibodies that attack them. He was particularly interested in the mechanism of hibernation, and made extensive studies of the physiology and blood chemistry of arctic animals in both the active and the hibernating states. During World War II he developed a widely used substitute for blood plasma and was a consultant to the Manhattan Project.

A native of Fremont, Ohio, Campbell did his undergraduate work at Wabash College in Indiana, receiving an AB in 1930. In 1960 his alma mater awarded him an honorary ScD degree, and the citation noted among his distinctions that he had never fulfilled the English requirement for graduation. In fact, though his academic record was otherwise outstanding, he failed his English courses for four years in a row.

Campbell's difficulty stemmed from his inability to spell, a handicap that he dealt with by writing words phonetically (cliché, for example, was "cleesha" to him) and leaving to a succession of

devoted and competent associates the job of putting things right. For 44 years the chief decoder of his written communications was the girl he met in junior high school and married in 1930—Margaret Dorr.

For graduate work Campbell initially went to Washington University in St. Louis, receiving an MS in 1932. The University of Chicago awarded him a PhD in 1935, and he was a faculty member there until 1942, first as instructor in bacteriology and immunology and then as assistant professor of immunology. At the invitation of Linus Pauling, he accepted a position in 1942 as assistant professor of immunochemistry at Caltech. He became associate professor in 1945 and full professor in 1950.

Originally, immunochemistry at Caltech consisted mostly of Campbell himself, but his research group grew rapidly both in numbers and in output. By 1955 it was large enough to take over most of the third floor of the newly constructed Church Laboratory of Chemical Biology. For some years approximately 20 postdoctoral fellows, graduate students, and staff members worked with Campbell, and together they issued a stream of research papers. Campbell himself was the author or co-author of almost 200 of them, and of several books. He was also on the editorial boards of four journals on immunology.

Campbell received many awards, citations, and honorary fellowships for his work, was chairman of several

national and international conferences on immunochemistry, and was a member of numerous professional societies. He was president of the American Association of Immunologists in 1972-73.

In 1968, 75 of his colleagues and former students feted him at the 52nd annual meeting of the Federation of American Societies for Experimental Biology—presenting him with a four-inch-thick bound volume of personal greetings and published scientific papers. The prefatory letter read in part: "This volume is a collection of papers . . . that spans over a quarter century of time. It is a record not only of your own consummate skill and farsightedness in science but also your faith in those whom you taught, for they, in their own way, have hammered on the anvil of intellectual toughness."

Until the last few years, when ill health forced him to limit his activities, Campbell was an ardent and skilled hunter and fisherman. The walls of his office were hung with photographs of his prize trophies. Gardening was also a hobby, and he took great pride in the fruit from his home orchard.

Memorial services for Dr. Campbell were held in Pasadena on September 18, and a forthcoming issue of *Immunochemistry, An International Journal of Molecular Immunology* will be filled with papers in his honor by former students, friends, and colleagues. In addition to his wife, he is survived by his son, John, two grandchildren, and a sister. □

