are made directly from metabolites diverted from normal pathways. Further study of the nature and biosynthesis of proteins in multiple myeloma should aid in the elucidation of the mechanism for normal serum protein synthesis.

References and Notes

1. This work was aided by grants from the National Cancer Institute of the National Institutes of Health (C-1331-C3), the American Cancer Society, and the Lasdon Foundation. The *N*-terminal amino acid analyses were initiated in the Department of Biochemistry, University of Cambridge, with the aid and encouragement of Fred Sanger. Aiko Miyake assisted in some of the analyses.
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10. I am indebted to the following persons for specimens of purified cryoglobulins and for information on their properties: David Barr and Ella Russ, Cornell University Medical College, New York (proteins R and I), and A. S. McFarlane, National Institute for Medical Research, Mill Hill, London (protein WK). Serums containing cryoglobulins were kindly supplied by Charles B. Huggins, University of Chicago, Chicago, Ill.; Steven A. Schwartz, Hektoen Institute for Medical Research, Cook County Hospital, Chicago, Ill.; Elliott F. Osserman, College of Physicians and Surgeons, Columbia University, New York; F. W. Gunz, Pathology Department, Christchurch Hospital, Christchurch, New Zealand; and Jan Waldenström, University of Lund, Lund, Sweden.
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Arthur Berridale Keith, Student of Mankind

To live a full and useful life is one of man's most cherished desires. To make major contributions to the study of mankind is given only to the elect. To be humble when showered with honors demonstrates the inner spirit.

In these rare gifts and achievements Sir Arthur Berridale Keith was well endowed. His 88 years were indeed full. Born on Quarry Farm near Aberdeen, his pride in Scotland never left him. His delightful Scotch burr inspired all those who heard his voice. His charm of manner was beguiling.

As a medical student at Marischal College in Aberdeen, human anatomy became his absorbing interest. For dissection, he won a prize. This turned out to be Tylor's *Anthropology,* a book destined to influence his life, for now he commenced the study of mankind—a study that was to nominate him, five decades later, as the greatest living anthropologist.

His first job was as assistant for 2 months in the Murthly asylum near Perth with the special assignment of studying insanity, entertaining the deranged patients, and dissecting the scores of brains in the post-mortem room.

His next job was as assistant to a general practitioner in England. Then came the first real break. Keith was offered and accepted the position of medical officer to a British gold company in Siam, where he remained for 2 years. His first scientific publication resulted from the dissection of 32 Primates. Home in London, his main goal was "to pursue my studies into the origin and antiquity of mankind."

For 5 years he worked in the London Hospital, then became conservator of the Museum of the Royal College of Surgeons of England from 1908 to 1914. The next quarter-century was employed in research on the endocrine glands but more particularly on the physical characters of ancient man.

Keith's contributions to knowledge were recognized publicly in 1921 when King George V bestowed the title of Sir Arthur, the name by which he was known to his countless admirers and student friends. Honors and distinctions rained freely upon Sir Arthur.

Honorary degrees accoladed his writings and his lectures. Election as rector of Aberdeen University in 1930 was a crowning climax to his career. Three years later Sir Arthur became master of Buckston Browne Farm near Downe in Kent, a research center administered by the Royal College of Surgeons; he held this position until his death on 7 January 1954.

The last time I saw him was in 1950. On this cold British summer's day we sat together in his study beside a glowing fire. Sir Arthur listened to the results obtained by the Peabody Museum-Harvard expedition to the Near East in search of new data on ancient and modern man. His questions were clear, his comments encouraging. For 30 years he had guided my researches in this area.

My last impression was of a tall, spare figure enveloped in an old Scotch tweed cape leaning on a long stick as the rain beat down on his tasseled tam-o-shanter with the silver buckle. A radiant smile came over his thin, ascetic face. The rain and mist soon hid him from view.

To attempt to sum up a great man's life in a few words is a hopeless task; to reveal qualities of the inner man is even more difficult. Sir Arthur was soft-spoken, often with hesitant speech as his brain outran his words, kindly to those who sought guidance, swift and sharp to his critics, and above all generous with his time to those who needed encouragement; he well remembered his early days.

His many students, and in these I include all those who learned from his great knowledge, are forever linked together in a common bond by gratitude to their teacher, Sir Arthur Keith. Mankind is the richer for his living, the poorer for his passing.

HENRY FIELD

Coconut Grove, Florida

To do hard things without show of effort, that is the triumph of strength and skill.—A. J. Rowland.