

involve this cycle exclusively. Preliminary investigations indicate the presence of the hexose monophosphate shunt pathway also in green gram. Partially dialysed extracts were able to oxidise glucose-6-phosphate in presence of TPN. Pentose was detected in the reaction mixture. It was also found that ribose-5-phosphate was isomerised to ribulose ester and the pentose phosphate further broke down to triose phosphates by green gram extracts.

Although the enzymes relating to the complete glycolytic system have been intensively studied in legumes, particularly peas and green gram, no such elaborate studies were made in the case of cereals and other plant tissues. In view of the importance of the cycle in plant, a thorough investigation of the distribution of the

various enzymes throughout the plant kingdom and through the different phases of life-cycle of plants and the different organs of the plants would reveal interesting facts about plant metabolism.

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OBITUARY

HARRY JAMES DEUEL, JR.

H. J. DEUEL, JR., was born in St. Paul, Minnesota, on October 15, 1897. After graduation from Carleton College, he served for three years as a Junior Chemist in the Office of Home Economics of the U.S. Department of Agriculture and here he developed his interest in nutrition which continued during the rest of his life. This interest in nutrition had further stimulation from Lafayette B. Mendel and his colleagues at Yale, where he took his Ph.D. in 1923 and from Graham Lusk at Cornell University Medical School. After spending five years at the latter place and one year at the University of Maryland he moved to the University of Southern California at Los Angeles in 1929 as Professor of Biochemistry. Twenty years later he was made the Dean of Graduate School there and he held this post till his death.

Deuel's interest in and contribution to science, though covering various aspects of biochemistry, were mostly centered round nutrition. His earlier interests were in the digestion and metabolism of carbohydrates, and later on he became more interested in the metabolism of lipids. It is in this latter field that he became an authority. Starting with studies on ketosis that come within the sphere of both carbohydrate and fat metabolism, he engaged himself in work on metabolism of carotenoids, vitamin A, cholesterol and essential fatty

acids. The depth and range of his knowledge can easily be judged by the two volumes on *The Lipids* published by him. It is a pity that death removed him before he could complete the third and final volume. His interest and enthusiasm for research are well testified by the fact that twice he used himself as a subject of study. Once (while with Prof. Lusk) he maintained himself on a diet adequate in calories but practically free of protein for 63 days for protein metabolism studies in humans. The second time he used himself for ketosis studies in humans.

In December 1954, he developed osteogenic sarcoma and was obliged to undergo a hemipelvectomy, but on April 17, 1956, he succumbed to lung cancer. We had the proud privilege of associating with Harry Deuel and from our personal experience we can say that his kind heart, warmth of friendship and endless energy and enthusiasm will not be forgotten for a long time by anybody that has come in contact with him. He was not only a top nutritionist but he was a real human being.

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