supplied amino-acids are toxic. Individual amino-acids differ markedly in their toxicity, and in some instances the relations between toxicity and concentration are complex. Use of amino-acid mixtures has revealed 'amino-acid antagonisms', the mixtures being usually less toxic than their constituents. Very strong antagonisms have been shown between certain pairs of amino-acids of similar chemical structure.

Investigations of the nitrogen nutrition of excised tomato roots have revealed that dimethylaminoethanol, ethanolamine, glycine, choline and certain other nitrogenous compounds can replace the growth requirement of the roots for pyridoxine (vitamin B_6). These replacement effects throw some light on the part played by the vitamin in the metabolism of the roots and further illustrate the ability of the technique to expose new topics in plant physiology.

OBITUARIES

Dr. L. C. Thomson

The untimely death on October 10 of Lewis Charles Thomson in his forty-third year comes as a shock to his many friends and colleagues; for Thomson was a model of vigorous health, and the illness to which he succumbed was, mercifully, brief.

Thomson entered Guy's Hospital from Sherborne in 1932. As a medical student he gained several distinctions—the Hilton Prize for dissection in 1933, the Michael Harris Prize for anatomy and the Junior Proficiency First Prize in 1934—and held demonstratorships in histology, anatomy, bacteriology and pathology. He qualified M.R.C.S., L.R.C.P. in 1937, and M.B., B.S. in the following year.

While at the Hospital, Thomson held in succession the complete series of appointments from clinical assistant to house surgeon. But Thomson was not destined for an ordinary medical career. His interests were teaching and research. Consequently, in 1940, he joined the staff of the Medical School at Guy's, first in the Anatomy Department, and then, between 1942 and 1947, in the Department of Physiology.

During this period he worked on a number of problems, among which was the preparation of an inorganic solution which had an equal optical density for all wave-lengths within the visible spectrum (Thomson's Grey Solution). In after years he took pleasure in mystifying the uninitiated with this smoky-looking solution and was highly delighted if asked how the carbon was kept in suspension. His main contributions at Guy's, however, were to vision, and in 1948 he received his Ph.D. for a thesis on the part played by the nervous system in visual adaptation.

With such a background it was natural for Thomson to join, in 1947, the Vision Research Unit. This had just been formed at the Institute of Ophthalmology by Prof. H. Hartridge under the auspices of the Medical Research Council. In 1945, Prof. W. D. Wright had invited Thomson to collaborate on problems concerning the colour vision of small areas within the fovea. This fruitful association was continued after he had joined the Vision Research Unit and ceased only in 1951 when he assumed, on Hartridge's retirement, the directorship of the Unit, renamed the Group for Research in the Physiology of Vision.

In spite of his close attention to administrative detail, Thomson continued to prosecute his own researches with vigour, and at the time of his death had published more than twenty papers on visual topics. His more important contributions concerned the colour sensitivity and intensity discrimination of the central fovea, the influence of the light history of the eye upon the course of its dark adaptation, binocular summation within the nervous pathways of the pupillary light reflex, and the variations of hue discrimination with change of luminance level. Thomson also directed attention to the irregularities of shape in the equal-energy luminosity curve.

As a long-term project, Thomson had constructed apparatus for electro-physiological researches. He mastered the many technical problems involved in such work; but, just when it seemed that his labours were to be crowned with success, he had to lay down his tools. In the year of his death honours were coming fast to Thomson. He obtained his D.Sc. early in 1955; he delivered the twenty-seventh Ettles Memorial Lecture, and was to have been the first Edridge-Green Memorial Lecturer.

Thomson was a first-class administrator. He organized the British delegation to the Nineteenth International Physiological Congress in Montreal in 1953, and was chairman of the Colour Group of the Physical Society during 1953–55.

In spite of his intense pre-occupation with research and administration, Thomson had a number of other interests. He loved sailing, and navigated his boat across the North Sea and the Channel; he was also a keen photographer and an interested student of geology.

Thomson was a most likeable character; he was quiet, unassuming and possessed the rare blend of humility and steadfast purpose. He was a devout Christian and his life was guided by his deep religious beliefs. He will be sadly missed by his colleagues and friends. The deepest sympathy is extended to his widow, his two young sons and his widowed mother.

H. J. A. Dartnall

Mr. Alexander Gow

Alexander Gow, who died on October 13, in his eighty-seventh year, performed a noteworthy service to the cause of scientific and technological education in Great Britain by reason of his administrative work as the first secretary of the then newly constituted Imperial College of Science and Technology, serving during the period 1908–34, which bore the first fruits of the fusion of the three constituent colleges, the Royal College of Science, the Royal School of Mines and the City and Guilds College, into an academic unit. An aspirant to the teaching profession, he was educated at the Borough Road Training College and Caius College, Cambridge. His early appointments were scholastic, and he served as principal of the Municipal Technical and Secondary School, Warrington, and as director of education for Blackburn, before undertaking his *magnum opus*, the permanent value of which was signalized by his election to honorary fellowship of the Imperial College in 1946.

Then, as now, no secretary of a college could escape the continuous pressure on reserves of knowledge, of divination, of judgment, and even of sheer physical effort which a responsible share in the shaping of its educational policy exercises. So far as those then associated with him in a less authoritative position