Reginald James Whitney

1914 – 2001

Reg Whitney, outstanding for his research in biomechanics and human physiology and distinguished as an inventor, died on 1 November 2001, aged 86.

Born at the beginning of WWI, he lived through difficult times during the Depression and WWII, but he persisted in his academic career in the 1930s, eventually obtaining a doctorate in zoology at the University of Birmingham. He had an addiction for developing new methods and apparatus, which was put to good use in 1941 when he was directed into Army operational research engaged in problems arising for men operating tanks. Later, his focus was in gunnery which he began to develop as multi-disciplinary personnel research, an early link to ergonomics. As a senior scientific officer with the War Office his ideas and interests became more clearly defined in the study of posture and motion during normal human activities, particularly those of extreme activities such as lifting and handling heavy loads.

In 1948 he joined the MRC Climate and Working Efficiency Unit in Oxford. It was here, studying human muscle action in the forearm, that he developed the mercury-in-rubber strain gauge which has become known worldwide as the Whitney strain gauge plethysmograph used for quantifying human peripheral blood flow. He established the technique over the next two years, exploring how, for example, blood flow could be measured simultaneously in muscle and skin. His next major contribution at Oxford was the development and construction of a force analysis platform suitable for investigating whole body activities, impulsive actions, ballistocardiography and centre of mass, and studying a wide range of subjects from world class athletes to his infant son. By the late 1950s it had become apparent that the force records required to be interpreted in association with photogrammetry and electromyography, and further, by the use of data logging and computer analysis techniques, the availability of which at the time were hardly dreamt of. In 1958, he moved from Oxford to the MRC Institute for Medical Research at Hampstead to set up a laboratory in human biomechanics where he continued to analyse human posture and motion with applications in the Services, industry, sports and clinical medicine. Whole-body activities such as in sports proved too difficult to record adequately, but a more likely situation was presented by the Royal Navy with a request to investigate the effects of ship motion on human performance. Thus he embarked on the construction of a simulator which imposed conditions of a ship's pitch and roll. When the Hampstead Unit was disbanded in 1974, he continued this work at the RAF Institute of Aviation Medicine, Farnborough and from where he retired from the MRC in 1980.

Reg's wife, Joan, died in 1966 and he was then faced with the task of bringing up his still young family alone. For the rest of his life his overriding concern was for the happiness of his four children and six grandchildren in all of whom he took immense pride. During retirement at his home in Barnes he continued to retain his interests and activity in biomechanics as well as indulging in his inherent constructional skills. Reg was an affable and modest man with unique intellectual talents, and he will be remembered with affection and admiration by all those who had the privilege of knowing him.

Ken Collins
Joe McGlade

Emmeline Lesly Jervis

Elected 1960
Died 9 October, 2002

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Ion channels: their structure, function and control

at the joint annual scientific session of the Japanese Physiological and Pharmacological Societies

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Organisers: Yoshihisa Kurachi and R Alan North

Speakers: Yoshinori Fujiyoshi, John P Adelman, R Alan North, Francisco Bezanilla, Yoshihisa Kurachi, Eric Gouaux, Lily Yeh Jan, Susumu Seino

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