



In Memoriam

Jean Édouard Desmedt:**Scientist, Clinical Neurophysiologist and President of the International Federation of Clinical Neurophysiology****February 2, 1926 – November 23, 2009**

J.E. Desmedt has been for more than a half century a major contributor to the progress of Clinical Neurophysiology. He was trained in the Laboratory of Prof. Frederic Bremer at the Free University of Brussels; he also benefited from the teaching of Sir Alan Hodgkin and Lord Edgar Douglas Adrian in Cambridge University and of that of Prof. A. Earl Walker in John Hopkins University.

His long and productive scientific career began in 1948 with studies on muscle physiology and neuro-muscular transmission, rapidly followed by his seminal contribution to the understanding of Myasthenia Gravis pathophysiology, which was the topic of his Aggregation Thesis obtained in 1956 six years before his nomination as full Professor at the Free University of Brussels. His interest in neuro-muscular transmission culminated in the sixties with the description of clinical testing procedures of neuro-muscular transmission that are still used in all laboratories of clinical neurophysiology for the diagnosis of Myasthenia Gravis. In parallel with his work on neuro-muscular transmission J.E. Desmedt conducted research on the cortico-fugal projections from temporal lobe onto peripheral acoustic pathways, which he was the first to describe in cats in collaboration with Professor Michel Jouviet in 1956, and hypothesized that these projections might play a role in discrimination of auditory inputs. This hypothesis was confirmed by numerous experimental and clinical studies showing that the cortex exerts a feed-back control on sensory inputs processing. From 1964 to 1999 J.E. Desmedt developed the averaging technique of electroencephalographic signals and applied it to the recording of somatosensory and cognitive evoked potentials in normal human subjects and patients affected with focal lesions of the central nervous system. His major contributions in that field concern the identification and source localization of spinal, brainstem and cortical responses to stimulation of peripheral nerves as well as the recording and interpretation of cognitive cortical responses associated with attention, and of those related with discrimination, indexation and memory storage of sensory inputs. Most of his views on the cortical generators of somatosensory evoked potentials are still valid 25 years after their first publication. In particular intra-cortical recordings of the human brain have recently confirmed his view, questioned by numerous reports based on electric and magnetic fields recordings and on functional magnetic resonance activation studies, that the frontal cortex might be able to generate early somatosensory evoked potentials not associated with any somatosensory perception. His last contributions aimed at demonstrating that non-invasive electrophysiological recordings can give access to the intimate mechanisms of human consciousness.

J.E. Desmedt was a member of numerous scientific societies among which the Belgian Royal Academy of Medicine, the French Academy of Medicine, the British and American Physiological Societies, the British Royal Society of Medicine and the New York Academy of Sciences. Among the innumerable distinctions he received he was particularly proud of the Prize of the Franqui Foundation that he received from the hands of the King of Belgium in 1972.

J.E. Desmedt has been during the 1985-1990 period one of the most active Presidents of the International Federation of Clinical Neurophysiology (IFCN), a name which, during his Presidency, replaced the former 'International Federation of Societies of Electroencephalography and Clinical Neurophysiology', thus emphasizing the importance of Electromyography and Electroneuronography as core disciplines of clinical neurophysiology. As President, he imposed his view that the IFCN should be globalized worldwide and promoted the representation of Asian and Latin American Societies in the governance of the IFCN. He also defended his conviction that Clinical Neurophysiology should remain deeply rooted in basic neuroscience.

All clinical neurophysiologists worldwide are using everyday techniques that J.E. Desmedt developed and validated, even though the younger of them are often unaware of what they owe him. As one of his collaborators during the eighties I keep of him the memory of an inventive, ingenious and enthusiastic neuroscientist deeply concerned about the benefit that neurophysiology should bring to patients.

Prof. François Mauguière
Past President of the IFCN