

## IN MEMORIAM

**JOE MEITES  
(1913-2005)**

"The young scientists in the audience should realize that the investigators of my generation initiated their work in a world without releasing and inhibitory hormones, and were consequently confronted with the big task to try to prove or disprove the theory of their existence". This was the opening of a Plenary Lecture I gave in 1990 in Bordeaux at one of the Congresses of the International Society of Neuroendocrinology. This sentence came back to my memory a few weeks ago, when I was informed that Joe Meites, one of the major fighters in this important scientific contest, had passed away on January 31 this year. Joe was born in 1913 in Kishinev (now Chisinau), at that time one of the most peripheral cities of the Russian Empire and, at present, the Capital of the new independent Republic of Moldova, a country nestled between Ukraine and Romania. His family moved to the USA in 1919, when Joe was 6 yr old. He received his initial education in St. Joseph, Missouri, and in 1947 he obtained the B.S.M.A. and the Ph.D. degrees from the University of Missouri, where his mentor was Dr. C.W. Turner, the distinct endocrinologist who described the "Turner syndrome". During World War 2, he was a First Lieutenant with a General Military Hospital, serving mainly in England from 1942 to 1946. Upon discharge from the Army he moved to East Lansing, Michigan, to join the Department of Physiology of the Michigan State University. This School remained his home for the rest of his life. A surprising and typically European approach, which may appear in contrast with the American tradition of scientific mobility. Joe's decision was certainly based on the excellent facilities offered to him but, I believe, also on the necessity to have a fixed touching point, when returning home from his innumerable scientific travels within the US and abroad. Joe was a curious and intelligent traveller, and his beautiful house became soon a small museum of souvenirs, pictures and books originating from the various countries he and his wife Mable had visited. At Michigan State University, his teaching ability and his scientific achievements were respected and admired so that he received from his School the Junior (1953) as well as the Senior (1967) "Sigma Xi Awards of Science", which were followed, in 1970, by the "Distinguished Faculty Award". Joe was also presented with the "Carl Hartmann Award", in recognition of the novelty of his studies in the area of reproductive physiology. In 1955-1956 Joe spent a sabbatical year at the Weizmann Institute in Israel, where he was in close contact with M.C. Shelesniak, a scientist famous for his discoveries in the field of human reproduction. Joe retired in 1984, at the relatively young age of 71, after 37 yr of continuous teaching and dedicated research.

During his long and successful career, Joe served on a series of national and international committees, including the Endocrinology Study Section and the National Pituitary Agency of the NIH. He also chaired the Commission in Neuroendocrinology of the International Union of Physiological Sciences, thus bringing our new discipline to full international recognition.

For his critical approach in reading the most modern literature, Joe was selected to serve on the Editorial Boards of the major Journals in his field of research. He was associated with Endocrinology (twice, in the periods 1953-1956 and 1966-1976), with Neuroendocrinology (1967-1976), with General and Comparative Endocrinology, with Psyconeuroendocrinology, with Cancer Research and even with Endokrinologie, the major scientific Journal of the former DDR. Joe acted also as the Editor of several books, including "Pioneers in Neuroendocrinology"- two classic volumes containing the autobiographies of the investigators who have made the major contributions during the hot years of the releasing hormones saga. He was the author of many chapters in classical textbooks, in "The Annual Review of Physiology", in "Advances in Neuroendocrinology", edited by our close friend A.V. Nalbandov (another Russian immigrant), as well as in one of the two books, "Neuroendocrinology", edited, in 1966-1967, by W.F. Ganong and myself. Joining efforts with R. Guillemin, Joe was very influential in organizing, in 1961, the first meeting on Neuroendocrinology to be held in the USA. It was at that conference, beautifully orchestrated in Miami, that I met Joe Meites for the first time. Forty four yr of close friendship were the consequence of that meeting.

In the late sixties, we felt that the time was ripe for the creation of a new, independent Scientific Society dedicated to neuroendocrinology. A group of enthusiastic young neuroendocrinologists joined G.H. Harris (the discoverer of the pivotal role of the pituitary portal vessels in the neural control of the secretion of anterior pituitary hormones) in an "ad hoc" committee. B. Flerko from Hungary, D. De Wied from The Netherlands, B. Cross from the UK, L. Martini from Italy and two representatives of the US (R. Guillemin

and J. Meites) were among the most active members. Unfortunately, G.H. Harris died as a consequence of a major surgical operation before the committee had finalized its work and established the scopes and the statutes of the new society. The remaining members of the committee elected Joe Meites to act as their new Chairman. The International Society of Neuroendocrinology was eventually inaugurated in 1972, during the 4<sup>th</sup> International Congress of Endocrinology in Washington, D.C. Joe Meites was elected by acclamation to be the first President of the new organization for the years 1972-1976. He set the pace for the future presidents to follow.

Joe has been a marvellous mentor and an extremely honest scientist. Because of his exceptional qualities, he was able to attract to his laboratory a group of outstanding investigators, who have subsequently disseminated around the world his example and his research philosophy. Among these I would like to name P.K. Talwalker, an Indian student who, after long and successful training with Joe, returned to his country to fill an important position in one of the major international drug companies of that time; W. Wuttke, from the former German Federal Republic, who is presently one of the most respected European endocrinologists as well as the Director of the Department of Clinical and Experimental Endocrinology of the old, traditional University of Göttingen; C.S. Nicoll, who, in the years following his East Lansing training, became the top expert on prolactin (PRL) chemistry and physiology; M. Kurcz from Hungary and Y. Koch from Israel. But all of us, the friends of Joe, will always be happy to say that we have been among his pupils, even if we did not have the fortune to work directly under his rigorous supervision.

Because of the quality of his scientific work, Meites was never faced with the problem of poor financing. His researches were supported for many years by generous grants not only from the NIH, but also from the American Cancer Society, the National Research Council, the Michigan Cancer Foundation and many other Agencies.

The scientific contributions that Joe has left behind are described in over 500 scientific papers. At the beginning of his career, PRL was his favorite hormone: this was the time when one had to use the tedious and imprecise "pigeon crop sac method" for measuring its biological activity! Joe was the first investigator to underline that PRL was inhibited rather than stimulated by the hypothalamus and to propose that this happened because of the presence in the brain of a PRL inhibiting factor (PIF). The exact nature of this elusive hypothalamic hormone was never really cleared, but the correct assumption of the inhibitory mechanism controlling PRL secretion brought to the discovery of the role of brain dopamine in such a control. This was followed by the development of dopamine analogs, which proved to be extremely effective in the treatment of many cases of female infertility and of specific pituitary tumors.

A second area of research, extremely fertile with important results, was the study of the role played by cerebral opioids in endocrinology and neuroendocrinology. Utilizing the opioid antagonist naloxone, Joe was able to prove, with absolute priority, that brain opioids exert an important physiological role in the functioning of the central nervous system. And this was well before endorphines and enkephalins were chemically identified! Two additional groups of works put again Joe Meites among the real pioneers. He was among the first to study the relationships between the endocrines and cancer, opening the pathway to the present recognition that cancer may be hormone-dependent and consequently treated with hormones or anti-hormones; and, second, he studied the role of food and hormones on longevity at a time when everybody thought that old age was only "a gift of the gods".

A long book might be written on the role Mable, his wife, has played in Joe's life. They were married 62 yr on January 30 this year, 24 h before Joe died. Mable has participated in all events of Joe's life. Usually, she did not take part in scientific discussions, but she was not a silent shadow. One could sense that she appreciated the importance of the arguments which were put forward in support of one vs another idea. She has been with Joe 24 h a day during the long illness (a very rare cancer of the duodenum), which terminated with his death. She has been not only an affectionate and patient wife, but also a fully prepared nurse as well as an intelligent supervisor of the various therapeutic options which were proposed in the different phases of the disease. The quality of Joe's life deteriorated in the last couple of years, and this has progressively increased Mable's responsibilities: but she was fully prepared to cope with them. I was witness to all of this during a visit which I made to East Lansing only to see, for the last time, one of my oldest American friends.

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