

Professor Mirośław Jan Mossakowski (1929–2001)

Professor Mirośław Mossakowski, the President of the Polish Academy of Sciences, died on 26 December 2001 after a long illness.

He was born on 23 September 1929 in Bereza Kartuzka in the eastern part of pre-war Poland. His father was a forester and his mother was a teacher. He attended primary school in the former province of Poland called Polesie. He started secondary school during World War II on a course of secret education, since official schooling was prohibited by the German occupant. After the war he completed this part of his education in Lipno (Kujawy — Northern Poland) in 1948. The same year he entered the Faculty of Medicine of the Medical University of Gdańsk.

While still a student he began his work in the Department of Anatomy of the Medical University of Gdańsk, which was an interesting beginning for a man who would go on to make a remarkable career as a leading neuropathologist. At this time he developed an interest in the central nervous system. Influenced by his master, Professor Michał Reicher, he decided to try to understand and deal with pathology in the most complex system known to man — the human brain. He graduated with honours as an excellent student in 1953. His initial clinical interest focused on medical neurology. As a young physician, he was employed as an assistant in the Chair of Medical Neurology led by Professor Zofia Majewska. Despite his strong interest in clinical medicine, he chose neuropathology as his calling and after a short period of clinical training he moved to Warsaw in 1954, where he soon proved to be an outstanding scientist.

He began his adventure with neuropathology in 1954 under the guidance of the outstanding clinician and neuropathologist, Professor Adam Opalski, who was at that time establishing the embryonic speciality of histopathology of the nervous system. This experience led to a lifelong interest in neuropathology. In the years 1954–1957 he had the status of an *aspirant* of the newly created Department of Histopathology of the Central Nervous System of the Polish Academy of Sciences. At the same time, until 1962, he



served as a part-time assistant in the Department of Medical Neurology of the Medical University of Warsaw. Here, under the guidance of Professor Irena Hausmanowa, he continued his clinical training, which would result later (1962) in the acquisition of the title of a certified specialist in this discipline. In spite of this qualification, he devoted himself exclusively to neuropathology. In 1957 he joined the newly created Department of Neuropathology

of the Polish Academy of Sciences, directed by Assistant Professor (docent) Ewa Ossetowska.

In the scientific development of Mirośław Mossakowski, a great part was played by his foreign training. He was awarded a Rockefeller Medical Fellowship and spent a year (1959–1960) in the world-famous Montreal Neurological Institute in Canada. Here he took a great opportunity to further refine his knowledge. In this Institute, directed by Wilder Penfield, he cooperated with this giant of neuroscience and with another famous scientist of Polish origin, Jerzy Olszewski. The latter was a trainee of the famous Polish neuroanatomist and neurophysiologist at Vilnius University, Maximilian Rose. One can readily speculate to what extent these great personalities exerted a strong influence on young Mossakowski.

When he completed his training in America he returned to Warsaw.

In 1960 he received his doctor's degree. The subject of his doctoral thesis was *Astrocytomas of the brain and cerebellum*. This was in fact a monograph of fundamental importance. His promoter, Professor Adam Kunicki, was one of the two founders of Polish neurosurgery and an expert in the field of the histology of brain tumours.

He soon proved to be an outstanding anatomist, microscopic diagnostician and experimenter. His intensive research was crowned in 1966 with his dissertation, *The pathomorphology and histochemistry of spontaneous and experimental encephalopathies of hepatic origin*. For this work the Medical Faculty in Warsaw granted him the right to teach at university as a docent (Assistant Professor).

In the years 1966–1967 he worked in the renowned National Institute of Neurological Diseases and Blindness in the National Institute of Health in Bethesda, USA. There he conducted studies on experimental neuropathology. It was Igor Klatzo (besides Olszewski, another alumnus of the Polish Stefan Batory University in pre-war Vilnius) who gave him directions in investigating brain oedema.

On his return to Poland, Mossakowski devoted his tremendous organisational talent to the cause of the development of Polish science.

Because of his early and substantial activity, it is not surprising that within seven years of his appointment at the Neuropathology Department of the Polish Academy of Sciences he was promoted to the position of director of the Neuropathology Service of the Experimental and Clinical Centre of the Polish Academy of Sciences. This service was set up by him from the beginning. At first he served also as deputy director of this Centre, then from 1975 until his dying day as its director. As director he was an obvious shaper of the character of this Institute and the neuropathological service there. He staffed this centre with full-time researchers in the field of neuropathology, pathophysiology, neurochemistry, immunology, toxicology and experimental biology, as well as with clinicians. Professor Mossakowski was intimately involved in the conceptual and construction phases of the new location of this Institute, which was built along modern lines and was opened in 1996.

In 1973 he was elected a corresponding member of the Polish Academy of Sciences, and in 1986 he became a full member of the Academy.

From 1968 onwards, he was one of the creators of the trends of activities of the 6th Department of the Polish Academy of Sciences, that of Medical Sciences, as its deputy secretary, then from 1981 to 1995 as secretary. During this period there were many difficult moments, when character, moral principles and resistance to political pressures were all put to the test. Professor Mossakowski passed the tests victoriously, taking these difficulties in his stride, as a man with the character and dignity of a genuine scientist. In this aspect he manifested not only benevolence but also efficiency. In this period he gained enormous respect and esteem from people, irrespective of their political orientation.

His works included clinical and laboratory studies. Professor Mossakowski's list of publications reflects a productive career, with over 260 items, including 200 original articles edited in renowned international and domestic journals. Among his

achievements were numerous reviews and chapters in monographic textbooks. Many of his scientific reports won awards. His book, *Principles in neuropathology*, published in 1981, was the earliest comprehensive work in this field in Poland.

Highlights of his scientific contributions include clinical neuropathology: the pathomorphology and histochemistry of brain tumours, genetically conditioned degenerative diseases of the CNS and pathology of the brain connected with liver diseases. Mossakowski's second major interest was the biology and pathology of glia. Here he conducted morphological, ultrastructural and immunomorphological investigations of normal and pathological neuroglia, linked with changes in the course of liver diseases (animal experimental models and tissue cultures).

Major efforts were also devoted to investigating (by experimental production) and studying focal ischaemic lesions. He studied many-sided aspects of lesions of the CNS following different types of oxygen insufficiencies (hypoxia, ischaemia, carbon monoxide and cyanide intoxication). He published widely on the pathogenesis of early and late sequels of ischaemia, in particular brain oedema, microcirculation disorders, structural vascular lesions and disturbances in the transporting activity of vessels, as well as the efficacy of the protective action of different pharmacologically active substances on post-ischaemic tissue damage. In his last years he paid particular attention to the pathogenesis of delayed neuronal death and late ischaemic encephalopathy, including its connections with the CNS's ageing processes and other topics, including neuro-AIDS.

His subjects of interest included also some neurotoxicological problems, including heavy metals and specific neurotoxins (e.g. dopaminergic ones), and mechanisms of the excitotoxic activity of amino acid transmitters.

He was one of the first in literature to report on the histochemical properties of astrocytic tumours, to characterise the pathological mechanisms of hepatogenic brain damage in the course of liver insufficiency and disorders of the blood-brain barrier in this syndrome, to investigate glycogen brain deposits and to prove a common pathogenetic link in Alzheimer's disease and brain ischaemia.

He was awarded a professorship in 1971 and became a full professor in 1979.

He launched a new journal, the highly regarded *Polish Neuropathology*, which later evolved into *Folia Neuropathologica*. From 1969 to 1972 and from 1978 to 1990 he served as its editor-in-chief.

Mossakowski received a number of awards during his distinguished career. He became associated with numerous organisations and held many leading positions. He belonged to numerous scientific and cultural societies. He was granted honorary fellowships, memberships, prizes and decorations from national and worldwide medical, scientific and general societies, as well as from the government. Among others he was decorated with the Cavalier and Commander Crosses of *Polonia Restituta*, the *Gloria Medicinæ* Medal of the Polish Medical Society, *Health Service Merit Award* and, during celebrations of the Polish Science Days in Moscow, when he was seriously sick, he was honoured by President Putin with *The Order of Friendship*. He was awarded the Polish Academy of Sciences Scientific Prize for Medical Science, the prize of the American Association of Neuropathologists, repeatedly with the prize of the Scientific Secretary of the Polish Academy of Sciences and the scientific prize of the Academy of Sciences of the former USSR.

Mossakowski was active in many scientific organisations, both domestic and international. He was elected an honorary member of several societies, among others the Polish Society of Neuropathology, of which he was one of the founders and which he served for 2 terms as its president. He was also granted honorary membership in the Polish Society of Pathology and in the Polish Histo- and Cytological Society, where he served as vice-president (1968–1971). He was a founder and the first president of the Polish Neuroscience Society.

He was a founding member and representative to the European Federation of Neuropathological Societies, which he served as president (1980–1984), and a founding member of the Pan-European Neurological Society. He was a foreign member of the Russian Academy of Medical Sciences, the Mexican Culture Institute, the European Academy of Arts, Sciences and Humanities, the World Federation of Neurology, the International Society of Neuropathology, the American Association of Neuropathologists, the International Brain Research Organisation, the Board of International Danube Symposia of Neurological Sciences. In the years 1976–1980 he was vice-president of the International Society of Neuropathology.

He received an honorary doctor's degree from the Medical University in Lublin, Gdańsk and Białystok and the very prestigious Jagiellonian University in Kraków.

He was highly appreciated and honoured for his contributions to the Polish Academy of Sciences. In 1975 he was incorporated into the Presidium of the Polish Academy of Sciences. In 1990 he was pro-

moted to the position of Deputy Scientific Secretary, responsible for international contacts and from 1996 to 1999 he was vice-president of the Polish Academy of Sciences and Scientific Secretary. This outstanding organiser of science in Poland became President of the Polish Academy of Sciences in 1999.

He developed co-operation with numerous scientific centres, being active at congresses and conferences. He lectured in 20 countries in Europe, Africa, Asia and both Americas. On his initiative, regular European Neuropathological Conferences were launched. Many of his former pupils work in scientific centres in Poland and abroad. His creative effort contributed to establishing the high position of Polish neuropathology in the world.

One can imagine that his increased administrative responsibilities took priority, but in fact this did not influence his scientific activity. His work was never ending. He mastered the art of self-organisation, which had so bewildered his fellow students while studying medicine.

There is no doubt that he was one of the major figures in Polish medicine and in world neuropathology. He represented much of what was good about the progress that was being made in this relatively new and developing field. Through diverse activities in both organisational and scientific fields he helped to build and strengthen neuropathology and helped to prepare the foundations for the development of this discipline.

He was the leading intellect of the generation of neuropathologists. His mind was comparable with the people of the Renaissance: he had an abiding interest in history, literature, film, theatre and the arts. In his lectures he often cited the classics of literature and philosophy. In one of the funeral orations, the speaker recollected how, after one of Professor Mossakowski's lectures, part of the audience could hardly believe that he was of the medical profession and not a humanist. He was also an extraordinary collocator on universal subjects.

Professor Mirosław Mossakowski was an extraordinary person and it was a privilege to have known him as a scientist, organiser, teacher, colleague and friend.

On December 26 2001, he died after a 16-month-long battle with a serious illness.

He was laid to rest in Powązki Cemetery in Warsaw with military funeral honours.

On 20 June 2002, during a solemn scientific meeting in his honour, the Institute of Experimental and Clinical Medicine of the Polish Academy of Sciences was given his name.

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