

Anatol Dowżenko: physician, scientist, educator, and father

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Figure 1. Prof. Anatol Dowżenko in his office, 1976

As a daughter, and the author of this memoir of Anatol Dowżenko, I modestly hope that I have continued my parents' medical and scientific legacy. I owe a great deal to having talked to my father about neurological issues. For me, he was an example of a caring and humble doctor, and he was a wonderful mentor. I have also heard this many times from his alumni and from neurologists all over Poland. Although it has been 45 years since his death, these memories remain alive in those who were privileged to know and to work with him.

Anatol Dowżenko was born on 2 July, 1905, in Sergeyevsky Mineral Waters in the Caucasus, Russia. His father, Timothy (a descendant of Zaporozhian Cossacks), graduated from the Law Department of Moscow University, and until 1919 was Vice President of the District Court in Lutsk. His mother, Olga, came from a noble family prominent in 19th century Russia.

At the end of the Polish-Russian war, the Dowżenko family remained in Poland.

Anatol Dowżenko graduated from secondary school in Lutsk in 1925. He began studying architecture at the Faculty of Mathematics and Natural Sciences at the University of Poznań. However, after a year, he moved to the Faculty of Medicine and graduated in 1932 with a doctor's degree in medical sciences. From 1932 to 1939, he was an assistant at the Neurological and Psychiatric Department in Poznań under the supervision of Prof. Stefan Borowiecki and Prof. Marcin Zieliński. It was at this time that he became interested in syphilis of the nervous system — an interest that continued for many years.

In September 1939, Anatol Dowżenko moved to Warsaw and was reunited with his wife, Dr. Maria Rozwadowska Dowżenko, an internist. He worked at the Neurological Department of the University of Warsaw, located in the 4th pavilion of the Baby Jesus Hospital, which was headed by Prof. Kazimierz Orzechowski, then later by Prof. Adam Opalski. As the couple did not have an apartment, the head of the clinic proposed that they live in the clinic's library and be on permanent night duty during the curfew, a function he performed until the Warsaw Uprising (1 August, 1944). It was here that he set up a laboratory for testing cerebrospinal fluid (CSF), which became his research workshop. During the occupation, universities were closed, but Dr. Dowżenko conducted neurological classes for students at the secretly active Faculty of Medicine of the University of Warsaw, Zaorski School and the University of the Western Lands.

After the war in 1947, Dowżenko received a 6-month grant from the US government enabling him to become acquainted with several neurological research centres in the USA, Canada and the UK. He then received his habilitation at the University of Warsaw based on his thesis: 'Cranial pneumoencephalography as a factor irritating the brain's blood regulation centres and its influence on the morphological composition of the bone marrow and peripheral blood' and obtained the title of Associate Professor.

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In 1948, Dowżenko returned to Poznań to become head of the neurological ward at the Department of Neurology and Psychiatry at the University of Poznań, which later became the Medical University. In 1950, he obtained an independent position as the head of the Neurological Department, which he held until 1962. In Poznań, he continued his interest in CSF and syphilis of the nervous system, and started working on epilepsy and extrapyramidal disorders. New laboratories were established that had an important impact on the further development of the department: neuropathology, led by Dr. Mirosław Kozik, and neurochemistry and immunology, led by Dr. Mieczysław Wender, who both subsequently became professors. Dr. Mirosław Owsianowski also created a modern intensive care unit at the clinic.

In 1956, Dowżenko obtained the title of full Professor. From 1953 to 1955, he was Vice-Chancellor for Affairs of Science, and from 1955 to 1957 was Chancellor of the Medical Academy in Poznań as well as a member of the Central Qualification Commission for Scientists.

In 1962, Prof. Dowżenko moved to the Institute of Psychoneurology, which had been established after the war as an independent science and research facility to conduct and coordinate research in the field of the nervous system and mental disorders, and their treatment. Dowżenko became the head of the Neurological Department. Initially, the Institute was located in the State Hospital for the Nervous and Mentally Ill in Tworki near Warsaw. In 1973, the Institute moved to Warsaw and the department was split: Prof. Dowżenko led the Department of Diagnostics and Therapy of Neurological Diseases, while Prof. Helena Nielubowiczowa headed the Department of Vascular Diseases of the Nervous System. In 1974, the Institute was renamed the Institute of Psychiatry and Neurology, and the departments were known as I and II. Dowżenko was the head of the First Department until 1975. Following his retirement, he remained a consultant at the Institute until his death aged 70 on 20 April, 1976.

Prof. Dowżenko devoted many years to the study of CSF, carrying out research on his own and setting up laboratories in Warsaw and Poznań. During the occupation, he performed several studies on CSF that were published after the war. In the 1940s, he showed that in cases of multiple sclerosis, the level of eosinophilia in the CSF may be similar to that seen in parasitic diseases. He also described protein changes in the CSF after accidental bleeding. Dowżenko explained the phenomenon of the appearance of the 'paralytic curve' in the colloidal gold reaction and Weichbrodt's reaction in the CSF in cases of subarachnoid haemorrhage, demonstrating the role of haemoglobin. He described the reactive changes caused by irritation of the meninges by penicillin administered to the spinal canal. Notably, he developed a water pressure gauge for clinical use that could measure the pressure of the CSF during lumbar puncture. In 1952, he encapsulated his knowledge about the CSF in the monographs 'Cerebrospinal fluid — investigation and diagnosis' [1] and 'Brain and spinal

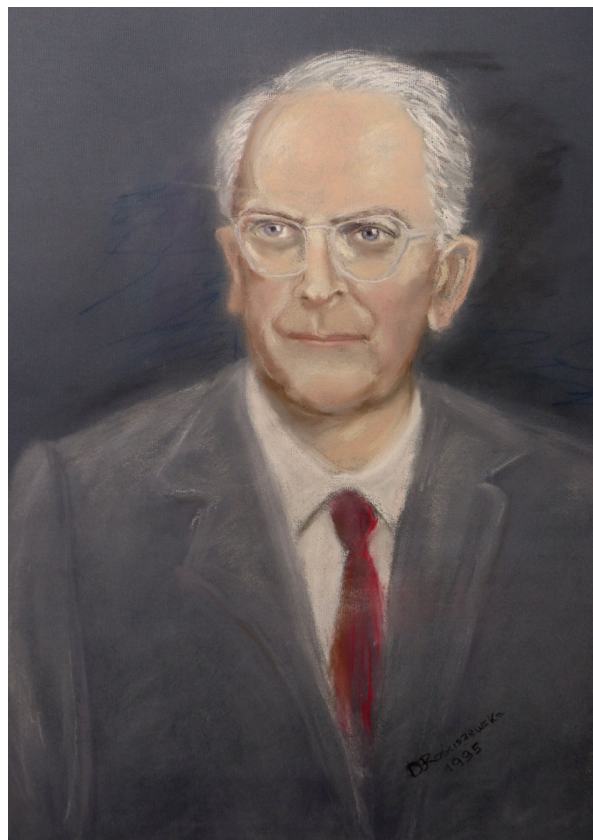


Figure 2. Portrait of Prof. Anatol Dowżenko performed by Prof. Dagnuta Rościszewska from the Medical University of Silesia in Zabrze

cord meningitis' [2]. For many years, these monographs served as the basic source of theoretical and practical information on the CSF and contributed to the establishment of several laboratories in Poland. Many doctors in the CSF field were trained under his supervision in both Warsaw and Poznań.

Syphilis of the nervous system interested Prof. Dowżenko from the beginning of his work as a neurologist. His first publication with Prof. Borowiecki in 1935 in *Polish Neurology* was entitled: 'Outcomes of the treatment of tabes dorsalis with malaria'. After the war, together with Prof. Józef Towpik, he conducted extensive research on the diagnosis and treatment of syphilis in Poland. Dowżenko described in detail the neurological symptomatology of this disease. Prof. Towpik recalled: "With the introduction of penicillin to medical treatment, Prof. Dowżenko dealt with establishing its therapeutic value in syphilis of the nervous system. There are a number of publications on this subject over the period 1940–1960 that determined the optimal methods of treatment and the principles of treatment control. He also set the criteria for cure and treatment failures, as well as indications for re-treatment".

In syphilis, both cytological and protein changes in the CSF play fundamental roles in diagnosis and treatment monitoring, and are still considered important. Having amassed considerable clinical and laboratory knowledge on this subject, Prof.

Dowżenko, together with Prof. Towpik, published the first monograph on syphilis of the nervous system in 1954 [3].

It was in the field of epilepsy that Prof. Dowżenko had his greatest scientific achievements, influencing the largest number of students. At the Institute of Psychiatry and Neurology, his department and many other units were involved in extensive research on epilepsy. Their work concerned clinical symptoms and therapy (collaborating with Dr. Maria Barańska Gieruszczak, Dr. Krystyna Niedzielska, Bożena Iwińska, Dr. Karina Witkowska, Dr. Czesław Buksowicz and Włodzimierz Kuran), psychology (Teresa Jakubowska), neuroradiology (Prof. Piotr Kozłowski and Dr. Teresa Kryst-Widźgowska), electrophysiology (Prof. Wanda Horyd and Prof. Wanda Sobczyk), neuropathology (Prof. Jerzy Dymecki and Dr. Eugenia Tarnowska-Dziduszko) and epidemiological and social issues (Dr. Janusz Zieliński). The latter research allowed not only the determination of the actual prevalence of epilepsy in the population, but also focused attention on issues regarding treatment, mortality, causes of death, problems of employment, and disability.

From 1962 to 1975, in collaboration with researchers from the Institute, Prof. Dowżenko published dozens of papers on epilepsy in the Polish and foreign literature. He established international contacts including with centres in Germany (Prof. Dieter Janz from Berlin, Prof. Ansgar Matthes and Prof. Rolf Kruse from Kork/Kehl), the USA (Dr. Ernst A. Rodin from Detroit and Dr. Cesare T. Lombroso from Boston), the Netherlands (Prof. Harry P. Meinardi from Heemstade), and the Soviet Union (Dr. Andrei Boldariev from Moscow).

In Poznań in 1957, Prof. Dowżenko, together with Dr. Tadeusz Michalski and Prof. Zbigniew Huber, formed the Greater Poland Commission for Matters Related to Epilepsy. The influence of this group on the whole of Poland was significant, as it led to the creation of many epilepsy centres, including in Katowice, Zabrze, Gdańsk and the Medical Academy in Warsaw. Broad interest in epilepsy among neurologists led to the establishment of the Epilepsy Commission of the Polish Society of Neurology and the Section for Epilepsy of the Polish Society of Neurology in 1969.

On his initiative, in 1967, the Polish Branch of the International League for Epilepsy was established. In 1971, Prof. Dowżenko was appointed to chair the Committee for Research on Epilepsy of the Committee of Neurological Sciences of the Polish Academy of Sciences. From 1960 to 1975, he organised nine national scientific conferences devoted to various issues of epilepsy, often with the participation of foreign guests. These conferences were known for their high attendances. A very significant achievement was the 1971 publication of a monograph entitled 'Epilepsy', which was the first Polish textbook devoted to this disease. Prof. Dowżenko edited and wrote many chapters of 'Epilepsy' [4].

Prof. Dowżenko also paid a great deal of attention to the problems of extrapyramidal system disorders, especially Parkinson's Disease. Together with Dr. Czesław Buksowicz and Dr.

Włodzimierz Kuran in the mid-1960s, he actively promoted the use of levodopa in Poland. He was also the author of the monograph 'Extrapyramidal diseases' published in 1958 [5].

An essential part of Prof. Dowżenko's activities was teaching. From 1935 to 1962, he conducted classes and lectures for students, and organised postgraduate training, and in later years organised and lectured in many postgraduate courses concerning neurology. He wrote 14 textbooks and monographs which have contributed to the education of generations of doctors. One such publication was 'Lectures in Neurology', which was published in 1950 by the Medical Academy in Poznań. From 1951 to 1964, together with Prof. Władysław Jakimowicz, Dowżenko prepared four editions of the only Polish textbook for students at that time: 'Diseases of the Nervous System' [6]. In 1974, he edited and co-authored a textbook for neurologists entitled 'Clinical Neurology' [7]. Two further editions of the book appeared in 1980 and 1987 edited by Prof. Ignacy Wald and Prof. Anna Członkowska. Dowżenko was the promoter of several doctoral dissertations and a research tutor encouraging the scientific activities of many independent employees, including professors. His scientific achievements include 92 original and case studies and he endeavoured to associate clinics with laboratory work.

From 1958 until his death, Prof. Dowżenko was Editor-in-Chief of the Polish Neurological Society and the Polish Society of Neurosurgeons' journal 'Polish Neurology and Neurosurgery'. He was known for his extraordinary diligence and attention to the very highest scientific standards.

In a fitting tribute, Prof. Wald said of Prof. Dowżenko: "He taught us neurology, how to speak and write about neurology, but he also taught us to care for the sick and to have a proper attitude towards patients and colleagues. He was extremely hard-working and demanding of himself and others, but he was demanding in an incredibly gentle way, almost apologetic. He cared for younger colleagues, not only in relation to their efficient scientific development, but also about their various life problems: he was a warm and humane man. The professor gained not only respect, but also the love and affection, of his students and colleagues. His life's passion was neurology".

As a daughter, I would like to add a few words about our family.

As I have already mentioned, my mother, Maria Rozwadowska Dowżenko, was an internist. In 1938, she became the first female PhD student of Professor Witold Orłowski in Warsaw and obtained the habitation in Poznań Medical Academy in 1957. For several years, she was in charge of the Third Department of Internal Diseases of the Medical Academy in Poznań. From 1962, she was head of the Department of Internal Medicine of the Central Railway Hospital (now the Międzyzyleski Hospital) in Warsaw. In Warsaw, she was unable to continue her research work. However, she was actively engaged in teaching her co-workers and developing her hospital. On her initiative was established there one of the first diagnostic isotope laboratory and dialysis centres in Poland.



Figure 3. Prof. Dowżenko and his family photographed in Poznan in 1960. Left to right: son Anatol, wife Maria Rozwadowska Dowżenko, Prof. Dowżenko, and daughter Anna (now Członkowska)

My parents were highly cultured, and pursued these interests as far as their professional and scientific work allowed. They had many interests related to the arts: they collected porcelain and graphics, they visited numerous countries, the house was full of books and records, and they often went to the theatre. In my father's youth, his passions were photography and walking the Tatra Mountains.

My parents were also very gregarious. The house was open to numerous guests with different interests, people in educational and professional positions – it is impossible to list them all. Many were outstanding people from the fields of science and culture, including Professors: Jan Czekanowski (anthropologist), Alfons Klafkowski (lawyer), Tadeusz Cyprian (a lawyer who shared an interest in photography with my father), Gerard Labuda (historian), Roman Drews (surgeon), and Adam Kunicki (neurosurgeon). We had regular visits from different writers (including Ludwig Hieronim Morstin, Roman Brandstaetter, Kazimiera Iłakowiczówna, Jerzy Kierst, Jan Parandowski, Andrzej Kuśniewicz, Julian Strykowski and Andrzej Szczypiorski) and theatre directors (for example Erwin Axer, Ewa Starowiejska, and Lidia Zamkow). I remember people visiting our home and having a huge impact on my development. Although there was an age gap, they stayed in contact for many years.

Despite all the distractions, both my father and mother considered their medical work to be paramount. When needed, my parents, but mainly my mother due to her speciality, healed

family members and friends. Myself and my brother, also called Anatol Dowżenko, shared their professional interests. My brother worked as a professor at the Medical University in Warsaw, at the Institute of Psychiatry and Neurology in Warsaw, and at the Medical University of Olsztyn. He was an outstanding interventional neuroradiologist, and was the first in Poland to introduce intraarterial methods for treating aneurysms. He sadly died in 2020.

Selected publications (in Polish)

1. Dowżenko A., Cerebrospinal fluid – investigation and diagnosis. (PZWL, Warsaw, 1952).
2. Dowżenko A., Brain and spinal cord meningitis. (PZWL, Warsaw, 1952).
3. Dowżenko A., Towpik Józef., Syphilis of nervous system. (PZWL, Warsaw, 1954).
4. Dowżenko A. (editor and co-author) Epilepsy. (PZWL, Warsaw, 1971).
5. Dowżenko A., Extrapyramidal diseases. (PZWL, Warsaw, 1958).
6. Dowżenko A., Jakimowicz W., Neurological disease. Textbook for students. (PZWL, Warsaw, 1951 and four updated editions until 1966).
7. Dowżenko A. (editor and co-author) Clinical neurology. (PZWL, Warsaw, 1974 and two updated editions until 1987).
8. This text is partially based on memoirs written by E. J. Herman, I. Wald, J. Towpik, M. Wender and J. Zielinski published in *Neur Neurochir Pol* 1977, 11, 1–14 and by J. Kulczycki and M. Barańska-Gieruszczak in *Neur Neurochir Pol* 2011, 45, 611–612. A full list of publications by Prof. Dowżenko can be found in *Neur Neurochir Pol* 1977, 11, 122–128.