

A Tribute to Prof. Ivan M. Logai (01.01.1933-17.02.2020)

Ivan Mykhailovych Logai, Dr Sc (Med), Professor, a recipient of the State Prize of Ukraine, Honored Worker of Science and Technology of Ukraine, Director of the Filatov Institute from 1985 to 2003, a distinguished scientist, ophthalmologist, teacher and public figure, passed away on March 17, 2020.

He was born on January 1, 1933, into a poor peasant family living in the village of Goronda, district of Mukachevo, Transcarpathian region. Here Ivan completed the seven-year school.

In 1951, he graduated with honors from the Medical Assistant School in the town of Beregovo, Transcarpathian region, and was admitted to the Medical School at Uzhgorod State University (USE) without entrance examinations. From his third year at USE until he graduated, he combined his education at the Medical School with work at the Eye Department of the Regional Hospital as a male nurse. After graduating from the university in 1957, Logai worked as Head of the Rural Hospital at the village of Komiaty, district of Vinogradiv, Transcarpathian region.

He entered the post-graduate school of the Filatov institute in 1963, and cast in his lot with the institute and the city of Odesa. After completing his post-graduate training in 1965, he joined the institute as a junior research scientist before being promoted to a senior research scientist. It was at the institute that his dream came true. He was given an opportunity to conduct research and practice in the field of ophthalmology under the guidance of such distinguished teachers as Acad. N.O. Puchkivska [Nadezhda A. Puchkovskaia], Prof. Z.M. Skrypnychenko and Prof. V.V. Voyno-Iasenetsky.

In 1967, Dr Logai defended his Cand Sc (Med) thesis, Features of Bilateral Partial Perforating Keratoplasty. In this thesis, he demonstrated that, in transplantation, the cornea as an avascular tissue is quite different from other tissues and organs, and keratoplasty in the second eye may be performed as early as 3 months after keratoplasty in the first eye, when postoperative inflammation resolves.

His subsequent research was associated with effects of trinitrotoluene on the eye in demolition workers from mines located in Kryvyi Rih. It was found that a prolonged contact of the eye with this substance can lead to a special pattern of cataract, with circular peripheral lens and pupil margin defects coalescing as cataract progresses. In addition, the methods for diagnosing and preventing this pattern of cataract were developed.

Together with his colleagues and trainees, Dr Logai contributed significantly to research on the pathogenesis of senile cataract and rehabilitation of patients with senile cataract. He was the first to introduce microsurgical



cataract extraction with intraocular (intraocular lens) IOL implantation in Ukraine. In 1988, he was awarded the State prize of Ukraine in Science and Technology for a series of studies on IOL implantation.

A major focus of his research was on prevention, treatment and rehabilitation of patients with ocular injuries, especially those associated with intraocular foreign bodies (IOFB). The team headed by Dr Logai developed a device and methodology for determining magnetic characteristics of an IOFB in cooperation with physicists from the Academy of Science of Belorussia, which allowed for choosing the most appropriate way to remove the IOFB. In addition, a small cobalt-samarium magnet allowing for more effective removal of a magnetic IOFB was developed in cooperation with physicists from Moscow. Moreover, a device and methodology for removing an IOFB embedded in the posterior eye have been developed in cooperation with scientists from the Academy of Science of Ukraine. The principle of the methodology was that the IOFB was electric-welded together with a probe, and the probe was removed from the eye.

Dr Logai was appointed to the rank of Head of Trauma Department at the institute in 1981, and took active part in the development of emergency ocular trauma care in Ukraine. The team headed by Dr Logai developed a System for Rehabilitation of Legally Visually Impaired or Blind Individuals in Ukraine in cooperation with Dnipropetrovsk Research Institute for Medical and Social Problems of Disability. The introduction of this system has helped to decrease the prevalence of legal blindness (especially, cataract-associated blindness) in Ukraine.

Ivan Logai was promoted to the rank of Director of the Institute after he defended his doctoral (Dr Sc (Med))

dissertation, *Diagnosis and Methods of Removal for Metal IOFB Located in the Transparent Crystalline Lens and/or Posterior Eye*, in 1985.

Over the years of his work at the institute, he became a famous medical scientist and expert in eye surgery, and performed more than seven thousands complex surgical procedures on the cornea, lens, vitreous and retina. For him the patient's interest always came first, which is an important feature for a doctor, and this was in complete agreement with the Acad. Filatov's major principle that the patient should be the primary focus of the doctor's attention.

Professor Logai was successful in various activities like eye surgery, research, administration, and teaching. He published 4 books and 358 articles on ophthalmology (including 65 articles in foreign journals), and authored or co-authored 12 patents. Nine individuals completed their Dr Sc (Med) degrees, and 23, their Cand Sc (Med) degrees, under the supervision of Prof. Logai. He participated in and presented the achievements of Ukrainian ophthalmology at numerous international conferences, and provided active support in translating the results of his research into healthcare practice. Being head of the Ophthalmology Commission under the Ministry of Health and Academy of Medical Science of Ukraine, he coordinated research on ophthalmology in Ukraine. He established and headed the Chair of Ophthalmology at the Faculty of Advanced Training of Physicians of Odesa Medical University; the chair was hosted at the Filatov institute.

During the nineties, a time of great economic and financial instability, Professor Logai, the Director of the Filatov Institute, reorganized the activities of the institute, with attraction of additional funds, sponsor's means and charity tie-ups. In addition, at that time, the institute began providing paid healthcare services to foreign citizens, training foreign specialists on a commercial basis, sending its employees to work in foreign countries, and providing healthcare services through insurance companies. This strategy allowed preserving the institute and its staff.

He initiated annual international ophthalmology conferences at the Filatov institute, which enabled integration of the Ukrainian ophthalmological community into the European and international ophthalmological communities.

From 1985 to 2003, I.M. Logai was the Chief Editor of *Oftalmologichniy zhurnal* (*Oftalmologicheskii zhurnal*), the only professional journal in the field of ophthalmology in Ukraine, promoting a high level of published papers on scientific research and clinical ophthalmology.

He retired in 2003.

Ivan Mykhailovych attributed all his achievements throughout his life to his upbringing, industry and deep interest in his profession which he gave to his children and grandchildren who have chosen medicine as their profession.

He liked to repeat: "The only impossible thing in life is not to die. All other things can be done if there is a will."

May he rest in peace.