

An Outstanding Ophthalmologist-Scientist

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The 100th anniversary of the birth of the outstanding scientist, founder of the Azerbaijan Scientific School of Ophthalmology, academician Zarifa Aliyeva is widely celebrated in our country. The Azerbaijan National Academy of Sciences celebrates the jubilee of academician Zarifa Aliyeva due to her great services in the field of medicine development, as well as her valuable scientific contributions to the development of Azerbaijani medical science, at the level of the celebration of science in modern times.

Academician Zarifa Aliyeva lived an honorable and meaningful life. She was raised in an excellent educational school, in the family of Aziz Aliyev, a prominent statesman and scientist of Azerbaijan, and received higher education at the Azerbaijan Medical Institute named after Nariman Narimanov. Zarifa Aliyeva, who started working as a practical ophthalmologist, was also engaged in scientific activities, defended PhD and doctoral dissertations on current topics, and rose to the level of an academician of the Azerbaijan National Academy of Sciences (Fig. 1). She was recognized and accepted as an outstanding scientist who brought innovations to medical science throughout the former Soviet Union and beyond. Academician Zarifa Aliyeva's authority was multifaceted and covered various fields of medical science, the medical profession, and social activities. In each of the areas she was engaged in, she showed high professionalism and an example of true citizenship belonging to the people of Azerbaijan.

First of all, it should be noted that Azerbaijan's medical science has specialized mainly in the fields of treatment, therapy, and surgery for many years. In our country, both medical science and treatment work in areas such as neurology, eye diseases, oncology, and others have begun to develop since the sixties-seventies of

the XX century. In particular, ophthalmology was one of the lagging fields during this period. Thanks to the effective scientific and practical activity of the outstanding scientist, academician Zarifa Aliyeva, Azerbaijan has become one of the main scientific and medical centers developed from a republic that provided primary medical treatments.

Thanks to the efficient and tireless work of Zarifa Aliyeva as a doctor, the flow of patients forced to go from Azerbaijan to other allied republics due to eye diseases was stopped. Zarifa Aliyeva also prevented the flow from the region to the capital for the treatment of widespread eye diseases, including trachoma. Under her leadership, a team of doctors specializing in trachoma went to the regions of Azerbaijan and provided necessary assistance to patients on the spot. The team of doctors headed by Zarifa Aliyeva showed a real example of an organized fight against trachoma in Ganja city, Alibayramli (now Shirvan), and Salyan regions. The treatment work of her medical team fighting trachoma in Baku city, Baku villages, the Absheron region, and other regions was highly appreciated by thousands of people.



Fig. 1. Zarifa Aliyeva (second from the left in the 2nd row) with her colleagues, 1951 year

The treatment method developed and conducted by Zarifa Aliyeva, whose effectiveness was proven both theoretically and practically, played an important role in eradicating trachoma as a social disease.

Besides, academician Zarifa Aliyeva created a special laboratory for the treatment and research of eye diseases in the industrial enterprises of Baku for the first time, and in this way, she removed the barrier between the field of production and medical science. Thus, Zarifa khanim Aliyeva managed to gain the name and reputation of a real people's doctor with her selfless efforts.

Proximity to people and life enabled Zarifa khanim to write works of real scientific and practical importance based on the results of her experience in the field of eye diseases. Zarifa Aliyeva is the founder of Azerbaijani ophthalmology, which was established on the basis of experience reflecting the realities of the country in the science of eye diseases in Azerbaijan, rooted in general and abstract theoretical information. The generalized theoretical propositions in her research were not based on ready-made scientific schemes, but on the basis of scientific conclusions arising from experience and real observations. Zarifa Aliyeva's PhD dissertation, dedicated to trachoma diseases, is a scientifically based medical map of eye diseases in Azerbaijan. Besides, Zarifa Aliyeva's doctoral dissertation on "The condition of the visual organ of employees of some enterprises of the Azerbaijan chemical industry" defended with great success is highly valued as the first perfect and systematic scientific work dedicated to this problem in the former Soviet Union.

Academician Zarifa Aliyeva is recognized as a scientist who created a new field of ophthalmology - the scientific direction of occupational diseases in the former Soviet Union and beyond (Fig. 2). Academician Zarifa Aliyeva's valuable scientific works dedicated to occupational diseases are theoretical and practical training that is an example of true professionalism in the science of ophthalmology. Based on her experiences in production facilities where eye

diseases are more common, such as the chemical industry, she studied the secrets of occupational diseases in the Baku Tire Plant, through the treatment-diagnostic laboratory organized by the chemical-technological institutions of our country, and performed successful treatment based on scientific diagnostics. The academician discovered important regularities in the effect of low-intensity harmful substances and some physical factors on the visual organ in production.

It should be noted that the doctor's dissertation, which is an excellent scientific work written on the basis of the unity of experimental materials and scientific-theoretical analyses, is also dedicated to occupational diseases, the important results of this work have been repeatedly confirmed in practice.

These innovations are reflected in her books and monographs such as "Occupational Pathology of the Organ of Vision", "Prevention of Occupational Diseases in the Iodine Industry", "Ophthalmic pathology during chronic iodine intoxication", and "Occupational Pathology of the Eye in Tire Production".



Fig. 2. At the conference of Ophthalmologists of the USSR, October 18, 1977

The application of the scientific achievements of Zarifa Aliyeva in the field of viral diseases of the eye led to important progress

in the differential diagnosis and treatment of many diseases. Books and tutorials written by the scientist in this field such as "Herpetic eye disease", "Acute viral conjunctivitis", etc. are important sources of knowledge for students and young doctors.

Zarifa Aliyeva learned the possibilities of preventing and controlling eye injuries. She analyzed the existing methodological approaches to the surgical treatment of the consequences of eye damage and gave a number of useful recommendations for their improvement.

Zarifa khanim paid attention to the diagnosis and treatment of some malignant tumors of the eye, and at the same time studied the features of the clinical course of ocular melanoma. Her monographic works on dactriology - "Physiology of tear drainage", "Modern methods of surgical treatment of tear discharge", and "Preventive surgery of tear ducts" have become deskbooks not only for ophthalmologists but also for physiologists. With these works, the scientist laid the foundation of Azerbaijani lachrymology.

Rare monographic works written with her co-authorship "Therapeutic ophthalmology", "Basics of iridodiagnostics", "Actual problems of ophthalmology", "Tuberculosis of the organ of vision" are still of great interest to practicing ophthalmologists, teachers and students. It should be noted that the worldwide books on iridodiagnostics were first written by or with the participation of academician Zarifa Aliyeva.

A significant part of Zarifa Aliyeva's successful scientific path was connected with the Academician Abdulla Garayev Institute of Physiology of the Academy of Sciences of the Azerbaijan SSR. In 1979, under the initiative and direct leadership of Zarifa khanim, the laboratory of "Physiology of the visual organ and occupational pathology" was established in that institute for the first time in the USSR.

Academician Zarifa Aliyeva received the highest award of the Academy of Medical Sciences of the USSR in the field of ophthalmology in 1981 - the award named after M.I.Averbakh for the successful results obtained from the above-mentioned studies and published in her monographs (especially for the "Occupational pathology of the eye in tire production") (Fig. 3). It is remarkable that Zarifa

Aliyeva was the first among female specialists in the former USSR who received this award.

Zarifa Aliyeva studied the effects of toxic substances and some physical factors on the functional state of the retina, free radical processes, and the level of neurotransmitters. The results of those studies arouse great interest among specialists even today.



Fig. 3. Zarifa Aliyeva was awarded the Averbakh Prize, February 12, 1981

The study of the age-related changes of the organ of vision and the vision analyzer also occupied a special place in the field of scientific interest of Zarifa Aliyeva. Zarifa Aliyeva's book "Age-related changes of the eye and the path of the optic nerve: morpho-histochemical studies" marked the beginning of ophthalmological gerontology.

The observations and conclusions of Zarifa Aliyeva on heredity issues in eye diseases are also some of the important innovations for the medical world.

Thanks to the services of academician Zarifa Aliyeva, Azerbaijani science in the field of ophthalmology was recognized as one of the main centers. Academician Zarifa Aliyeva raised

Azerbaijani ophthalmology to the level of Moscow and Petersburg schools that gained fame in the former USSR. Large scientific forums dedicated to the actual problems of eye diseases held in Baku, meetings and discussions of well-known world ophthalmologists at scientific events of the international level organized in Azerbaijan are real embodiments of the great reputation gained by academician Zarifa Aliyeva in the ophthalmology.

In the seventies of the 20th century, the laboratory created by the Azerbaijan Academy of Sciences at the Institute of Physiology named after Abdulla Garayev and the treatment-diagnostic laboratories for rare eye diseases established by the Baku Tire Plant and the Household Air Conditioners Plant became research centers that had no analogs in the world medical science. The transfer of research on eye diseases from the Ministry of Health to the Academy of Sciences and industrial enterprises is connected not only in Azerbaijan but also in the Soviet Union in a broad sense with the name of academician Zarifa Aliyeva. Thus, in 1979, the scientific analysis of the results obtained in the laboratory at the Institute of Physiology brought academic weight to the field of ophthalmology, which is somewhat experimental in nature. By organizing the treatment of eye diseases in the regions of Azerbaijan, creating opportunities for treatment and diagnostics in industrial enterprises, bringing the topic of medicine to the academic scientific environment, and by multifaceted scientific and practical activities in those directions, academician Zarifa Aliyeva showed that she was a true ally of the outstanding statesman Heydar Aliyev, who fought resolutely for the development of the country as the head of the Azerbaijan Soviet Republic in those years.

Zarifa Aliyeva, who faithfully served her profession, showed an example of loyalty at every step of her family life and in the society of Azerbaijan. Zarifa Aliyeva was a real example of being the loyal lifelong friend and worthy ally of Heydar Aliyev, a world-famous prominent statesman. Zarifa Aliyeva, along with an incomparable Father, the National Leader Heydar Aliyev who gave her child, the President of the Republic of Azerbaijan, Ilham Aliyev, one of the world leaders, to our country, became an example

of the greatness and unattainability of being a real Mother.

Contemporaries describe her as a caring person who showed simplicity, politeness, respect, and sincerity in relation to people. The book "High conviction: medical ethics, the purity of the doctor's heart and thoughts" published in 2003 based on her articles, not only revives the image of Zarifa khanim as a real doctor but also draws attention to her calls to future doctors.

The scientific community of our country remembers Honored Scientist, academician Zarifa Aliyeva as a well-known public figure with great respect. The work she did through the Peace Protection Committee, the "Bilik" Society, the Scientific Society of Ophthalmologists, and the events she implemented, still bear the indestructible traces of her multifaceted scientific and social activities.

The services of academician Zarifa Aliyeva, who had extensive scientific and social activities, were highly appreciated. Academician Zarifa Aliyeva was awarded the title of Honored Scientist of Azerbaijan and the Order of the Red Banner of Labour.

The name of Zarifa Aliyeva, an outstanding ophthalmologist scientist and well-known public figure, has been immortalized in Azerbaijan. Today, the National Ophthalmological Center of the Ministry of Health of the Republic of Azerbaijan, named after academician Zarifa Aliyeva, is recognized as one of the prestigious medical institutions and one of the main centers of medical science in our country. An award named after academician Zarifa Aliyeva was established at the Azerbaijan National Academy of Sciences. One of the biggest streets in Baku and a school-lyceum are named after Zarifa Aliyeva. Today, the steps taken forward by the science of eye diseases in the Independent Republic of Azerbaijan are echoes of the ongoing scientific ideas of academician Zarifa Aliyeva, the founder of the National Scientific School of Ophthalmology.

The Decree of the President of the Republic of Azerbaijan Ilham Aliyev "On the celebration of the 100th anniversary of Academician Zarifa Aliyeva" dated November 3, 2022, is another expression of the great care shown at the state level to the education of new generations in the

example of academician Zarifa Aliyeva and the continuation of progressive scientific ideas in medical science.

The ideas of prominent scientist and well-known public figure, Zarifa Aliyeva, selfless work in the field of Heydar Aliyev's path and women's movement are successfully continued by the First Vice-President of the Republic of Azerbaijan, Mehriban Aliyeva.

A unique artistic image of academician Zarifa Aliyeva was created in Azerbaijani literature and art. Academician Zarifa Aliyeva's statue called "Elegy" in Alley of Honor, authored by People's Artist Omar Eldarov, is one of the masterpieces of Azerbaijani sculptural art. A perfect artistic image of Zarifa Aliyeva was created in the poems of the People Poets of Azerbaijan, Suleyman Rustam, Bakhtiyar Vahabzadeh, Mirvarid Dilbazi, Fikret Goja, and others.

National Leader of the Azerbaijani people, Heydar Aliyev, highly appreciated the multifaceted activities, scientific services and moral values of Zarifa Aliyeva, his companion in life and ally in the struggle: "Since my youth, my life has been related to government work. I have dedicated my whole life to this... I think that my family situation played a big role in my efficient and successful work on this path. I was happy that I had a wife like Zarifa khanim and that she created a very high moral environment in my family... She fulfilled this duty with honor, loyalty, and great skill (Fig. 4).

"Zarifa khanim was a great scientist. When we got married, she had already been on the path of science... Her scientific activity is known. She was a very talented, very kind, very simple person. I can talk a lot about her, today I bow in front of the grave of Zarifa Khanim for the survival of my family, for reaching these days, for the education of my children, and for her irreplaceable role in my life".

The President of our country, Ilham Aliyev, also pointed out that the multifaceted services of the outstanding scientist and public figure, academician Zarifa Aliyeva is an example for generations: "Zarifa Aliyeva was a great doctor, a great scientist.

She made a valuable contribution to the

Azerbaijan School of Ophthalmology, she was very active in the training of young personnel.

As a scientist, Zarifa khanim was able to reach great heights. Her works and scientific monographs do not lose their relevance even today.



Fig. 4. Academician Zarifa Aliyeva with her husband Heydar Aliyev, The National Leader of the Azerbaijani people

For every person, his parents, his mother are dear and sacred... I am very happy that I had a mother like Zarifa khanim.

The bright image of Zarifa khanim is always in our hearts. Those who know her and those who don't know her, and those who read about her in books and articles, I think, always keep her bright image in their hearts. Zarifa khanim was a great doctor, a great scientist, and a great person. Her bright memory will always live in the hearts of those who knew her."

An outstanding scientist, academician Zarifa Aliyeva, the founder of the national science of ophthalmology, the lifelong friend and ally of the outstanding world-class statesman, Heydar Aliyev, Mother of the President of the Republic of Azerbaijan Ilham Aliyev, one of the outstanding leaders of the 21st century, has become a legend and continues to live in the hearts and memories of our people.

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