

In memoriam



Andreas Engibarov 1929 - 2015

The eminent microbiologist, mycobacteriologist, and immunologist, the respected colleague and most loved friend Senior Research Associate Dr. Andreas Engibarov has departed from this world. We ask forgiveness from a worthy and highly erudite man, who has left a bright trace in the Bulgarian microbiology and immunology.

The pages of his countless favorite books (probably the most favorite one from his childhood was "Peter Pan") remain not completely read; the thousands records from his personal collection with the preferred works of Bach, Händel, Mahler, Wagner (with his favorite symphonic poem "Thus Said Zarathustra" by Richard Strauss) remain not listened to the end...; the conversations, lighted up by his everlasting laughter, remain uncompleted... .

A scientist with unusual inquisitiveness to nature, medicine, history, literature, music, who concentrated his scientific interests on the mycobacteria and mycobacterioses, and on the most recent and less examined issues of the specific immunological prophylaxis of tuberculosis.

Dr. Andreas Engibarov was born in Varna on May 2, 1929. Among the enates in his family were: Prof. Dr. Georgi Pavlov (1881-1945), who gradu-

ated veterinary medicine in Turin and worked in Dobrudzha (Bulgaria) - one of the founders and a chairman of the Union of Scientific Workers; Academician Stefan Pavlov (1914-1993) - a notable theoretician of the Bulgarian criminal procedural law. Andreas' childhood passed among books and music. When he was 10-year-old, his family moved to Sofia, where he graduated the First Male Secondary School in 1947. After graduating in medicine in 1954, according to his own wish he went to practice in Dobrudzha (the villages of Lovchantsi, Vladimirovo, and Karapelit) as a district doctor. He succeeded in obtaining an old radiographic apparatus from Ruse for the Radiographic Office of the small District Hospital in the village of Karapelit. He also founded a Clinical Laboratory. He appeared at a contest at the National Institute of Epidemiology and Microbiology (National Center of Infectious and Parasitic Diseases) in 1958. Still a student he worked as a demonstrator at the Department of Microbiology - he had lost his father when being a first-year man and needed to earn his living. A few were those who believed that a peasant doctor could win this consent. However, he succeeded! He specialized in the USA for a year - in the Harvard University in Boston and in the University of California in Los Angeles. After being chosen for Senior Research Associate, he became Head of the Laboratory for Specific Prophylaxis of Tuberculosis. The high quality of the Bulgarian Bacillus Calmette-Guérin (BCG) vaccine, which is exported in more than 150 countries worldwide today, is one of the greatest achievements of the National Center of Infectious and Parasitic Diseases and the Bulgarian microbiology.

The results of the studies of Dr. Engibarov on the discovery of new methods for microbiological diagnostics of infections, caused by Mycobacterium tuberculosis, as well as on the taxonomy of the mycobacteria, represented a valuable contribution for the Bulgarian mycobacteriology. In the 70s of the XXth century Dr. Engibarov made the beginning of the species identification of the atypical mycobacteria in Bulgaria, based on the classical and modern microbiological and biochemical methods. A great practical value had the epidemiological studies on infections, caused by atypical mycobacteria. Parallel with the intensive studies on

perfecting the methods of production of tuberculin preparations (together with Senior Research Associate Dr. E. Sapundzhieva), he performed studies on the properties of tuberculin active protein. His attainments in the study of tuberculin active peptides achieved wide international acknowledgement. A special interest represented the results of the joint studies with Senior Research Associate V. Kolushki on the antigens of BCG and on virulent mycobacteria. The introduction of production of purified protein derivate (PPD) of tuberculin was a major achievement of the applied microbiology. The efforts of the team, led by Dr. Engibarov, for improvement of the quality and standartization of PPD of tuberculin were permanent, and they culminated with complete success. The standartization of the skin tuberculin test had major significance for the effectiveness of the specific prophylaxis of tuberculosis.

Dr. A. Engibarov was an initiator of joint international studies on the standartization of the anti tuberculosis BCG vaccine. He worked with enthusiasm on improvement of the methods for control of vaccine quality. The new methods, developed by him, for characterization of the BCG vaccine (one of which was the fast test for measuring of the intracellular content of ATP as a method alternative to the cultural for determination of the viability) currently are an object of joint international studies, organized by the World Health Organization. Still in the 80s of the last century, Dr. Engibarov and Dr. Stoyan Bardarov, using highly efficient methods of molecular biology, laid the foundation of a new generation of anti tuberculosis vaccines. Today, 30 years later, the challenges and progress of this vaccinal strategy are widely discussed. A consent is achieved regarding the turning to a clinical assessment of the most promising "candidates" for new vaccines (modified BCG vaccine or attenuated Mycobacterium tuberculosis) (Tom Ottenhoff, Stefan Kaufman (2012); Vaccines against Tuberculosis: Where Are We and Where Do We Need to Go? PLoS Pathog 8(5):e1002607). However, the BCG vaccine is still the only one used and the only effective vaccine in the treatment of tuberculosis (and it will remain the only one in the coming years).

Dr. Engibarov had a huge contribution to the development of a BCG vaccine especially designed for immunotherapy of malignant neoplasms - Calgevax. Under his management were performed detailed experimental, pathomorphological, immunological, and biochemical stud-

ies. Upon representing the first results of clinical studies, Dr. Engibarov met scepticism in some of the members of the Scientific Council. However his ambitiousness and tenacity overcame this difficulty. Many countries show interest of this preparation today. It is applied in all types of malignant tumors, when adjuvant immunotherapy is required. Especially wide is its intravesical application in patients with superficial tumors of the urinary bladder. The observations of many years by leading oncologists (the first one was Senior Research Associate Dr. R. Ikonopisov) in patients with malignant melanoma showed the favorable results from the use of Calgevax as an agent for adjuvant immunotherapy.

Dr. Engibarov was an author of more than 180 scientific publications - articles and reviews - in Bulgarian and foreign scientific issues. He managed scientific sessions of a series of scientific forums in Bulgaria and abroad. He actively participated in the organization of the scientific life of the Scientific Society of Epidemiology, Microbiology, and Immunology, as well as of the Society of Microbiology at the Union of Scientific Workers. He was a scientist with a critical disposition towards the problems in the development of science and university education. His erudition and brilliant foreign language knowledge were amazing. The successes in the work of the Science and Information Center at the National Center of Infectious and Parasitic Diseases would never be achieved without his everyday tenacious contribution in the work of the associates of the Center.

After his retirement he participated actively in the public life. He was a municipal councilor - and a Secretary of the Metropolitan Municipal Council for a short period of time - during the hard way towards democracy in the 90s. He was a deservedly respected, honorable member of the Bulgarian Association of Microbiology.

I have asked myself many times whether he had taken that very manifested dignity and joy, that he emitted, from the thousands books he had read? He will remain for these qualities in our hearts for ever. Because "for the man is the joy, the joy and the laughter, that he has to learn", as Friedrich Nietzsche wrote in "Thus Said Zarathustra".

Let us honor with a deep, deep bow the bright memory of Dr. Andreas Engibarov!

Milyana Chuchkova