

Volume 59, Issue 1, Pages 7-9 (October 2003)

Vladimir Negovsky was born on March 19, 1909 into a family of primary school teachers in Kozelts, in the Ukraine. He graduated in 1933 from the Second Moscow State Medical Institute and started to work as a physician and scientific worker in the Institute of Experimental Physiology and Therapy

In 1936, at the age of 27, he wrote a letter to the Chairman of People's Commissars of the USSR (equivalent to the western Prime Minister) requesting permission to set up a laboratory to start studying dying and revival. And, surprisingly, such a laboratory was approved and established under his supervision at the Institute of Neurosurgery in Moscow. That was the first resuscitation research laboratory in the world.

During the Second World War, in the spring of 1943, Negovsky formed front-line resuscitation teams and achieved effective resuscitation of a number of soldiers who were in clinical death, mostly from exsanguination. In 1948, his laboratory became independent as a Research Laboratory of General Reanimatology in the USSR Academy of Medical Sciences. In 1985, it was renamed Institute of Reanimatology of the USSR (since 1991 Russian) Academy of Medical Sciences.

Negovsky considered himself a pathophysiologist and neuropathologist. He originally studied in dogs and advocated clinical resuscitation by means of intra-arterial blood transfusion. But many other innovative ideas and procedures were developed under his direction, many unfortunately unnoticed in the West because of language, alphabet and political barriers. Just to name a few: in Negovsky's laboratory, since the 1940s external cardiac massage was used on animals. This was more than 10 years before the re-discovery and clinical introduction of the method of emergency artificial circulation without thoracotomy in Baltimore. His associate Gurvitch published the first external defibrillation paper in 1946, 10 years before Zoll in the USA, and the first commercial models of portable DC defibrillators began to be produced in the Soviet Union. Soboleva in 1970 successfully used hypothermia after cardiac arrest. Another of his associates, Bozhyev, described in 1971 cardiopulmonary bypass as a resuscitation method. Negovsky's laboratory group initiated the organization of mobile resuscitation teams in Moscow in 1959 to provide skilled aid to pre-hospital medical care.

Academician Negovsky regarded the concept of death as a gradual process and stressed a special role of the brain in this connection. In 1943, he presented his doctorate thesis on the "pathophysiology and reversal of death". The same year he published his first monograph "The restoration of the vital functions of the organism in the agonal state and clinical death". Already in 1951 he published in Russian his observations on cerebral changes during dying and resuscitation.

He suggested the term "reanimatology" (from the latin re, again, and anima life, breath) in 1961 to define a new medical science whose realm is resuscitation of the organism. Reanimatology includes the prevention and treatment of critical terminal states and of postresuscitation disease. He was able to develop it as a new medical discipline in the Soviet Union and trained and mentored several generations of "reanimatologists" in the communist countries, for whom anesthesiology, out-of-hospital emergency care and other acute clinical practices, became subspecialties of reanimatology. Every hospital in Russia and former Soviet Republics has a Department of Reanimatology lead mostly by Negovsky's trainees. Since the foundation of the world's first scientific institution for reanimatology in 1936 Academician Vladimir Negovsky was its director for more than half a century. Even after he stepped down as director in 1980s, he continued to come to his office regularly and maintained contacts all around the world. His successors Victor Semenov (1987–1995) and Victor Moroz (since 1995) built on his successes and educational achievements and expanded the scope of the Institute especially in the area of neurophysiology and electrophysiology of the heart. The significance of Negovsky's teaching was best documented at the scientific meeting celebrating Negovsky's 90th birthday in 1999 in Moscow. Several hundred of his students, fellows, friends and government dignitaries assembled to express thanks for his achievements.

Vladimir A. Negovsky will go into the history of medicine in general and resuscitation medicine in particular as the "father of reanimatology", called the science of resuscitation medicine in the West. During and after World War II, he inspired scientists and clinicians in many countries to understand the pathophysiologic processes that occur when the whole organism goes into clinical death, and the disease that follows emergency resuscitation. Negovsky was elected full member of the Academy of Medical Sciences of the Soviet Union (now of Russia) in 1975. For his creative work in medicine he received two State Prizes of the USSR and many other awards. The University of Pittsburgh awarded him the Certificate of Recognition for his "... visionary and pioneering research in reanimatology for more than 40 years".

He was awarded the title of Doctor of honoris causa by the Academy of Medicine in Poznan in Poland. He was a corresponding member of the Academy of Medicine in Toulouse (France) and the Slovenian Academy of Science and Art. The European Resuscitation Council made Negovsky an honorary member in 1994. He was awarded numerous medals and diplomas by the universities and academies of many countries. In 1987 he was awarded the Gold Medal of the Soviet Peace Fund.

He is the author or co-author of more than 300 scientific publications and 14 monographs. Many of his monographs have been translated into foreign languages and published in Germany, Spain, Holland, and USA etc.

As a person, Vladimir Negovsky was a warm and outgoing individual. He was kind and collegial, and sometimes tough. He was always willing to listen to other's opinions and to discuss other people's views. Despite the restrictions of Soviet system he was able to maintain communications with his western colleges and at the same time he was highly regarded in the East. His encyclopedical knowledge was amazing. As an example, at one of the dinners I hosted for him during his visit to Pittsburgh he discussed the names of the ships Columbus used during the discovery of New World. His family and friends will dearly miss him. His daughter pampered him in his last years and his grandson, a cardiologist, adored him.

As a scientist, Vladimir Negovsky was from his early years very goal oriented and willing to persevere if he believed to be right, defying all adverse circumstances. This was a characteristic he shared with Peter Safar.

Vladimir Negovsky and Peter Safar first met in Vienna in September 1962 at the First European Congress of Anesthesiology. This encounter initiated life-long lasting friendship, communications and collaborations between their groups, which prevailed throughout the cold war up to today. Peter Safar visited Negovsky's laboratory first in 1963 and six times afterwards and Negovsky came to Pittsburgh four times, initiating numerous associates' visits. Cross-fertilization of ideas between the two leaders and their associates have been important in the development of: modern CPCR methods, research into cerebral resuscitation, the multi-disciplinary specialty of critical care (intensive care) medicine, mobile ICU ambulances, emergency medical services (EMS), ethical considerations about resuscitation medicine, and disaster medicine. The Moscow and Pittsburgh research programs were the first with globally integrating approaches to resuscitation medicine (which Negovsky calls reanimatology).

Last not least we need to mention the contribution of both of these leaders to the world understanding and open scientific communications. In the 1970s, Safar and Negovsky helped Rudolf Frey of Mainz to initiate the World Association for Disaster and Emergency Medicine (WADEM), which promoted research into resuscitation potentials in mass disasters. Through mutual visitations they have practiced openness (Glasnost) throughout the cold war and jointly promoted the ideals of the International Physicians for the Prevention of Nuclear War. After the Armenian earthquake, the combined Pittsburgh– Moscow research team performed a study on disaster medicine with unprecedented access to Soviet resources and information. Peter Safar last visited Vladimir Negovsky in 1999 for his 90th birthday celebration, hosted by his successor, Professor Moroz.

There is no better way to express the contribution of these two giants to the development of resuscitation science, than to say that in 1990s, the Russian Academy of Sciences, the University of Pittsburgh and Scandinavian anesthesiology professors nominated Vladimir Negovsky and Peter Safar jointly three times for Nobel price honoring their life-long achievements.