## Vladimir Albert Lovrić

MBBS SydU 56, FRCPA 62, DipClinPath SydU 62, FRCPath ENG 67, FRACP 74 (June 14, 1926 – October 14, 2015)



The haematologist Vladimir Albert Lovrić, originator of the 'Lovric–Wisdom circle pack', a storage system for donated blood, has died peacefully after a short illness. Lovrić's innovations in component separation and anticoagulant solutions fundamentally altered blood banking in Australia, enabling up to five patients to benefit from any single blood donation.

Lovrić was born on June 14th 1926 in Belgrade, capital of the former Yugoslavia. He was the first son of a prosperous family; his brother, Ivan, was born two years later. His father, Erwin Lovrić, was born in 1892 in Osijek, Croatia; his mother, Sofia Herzl, was born in 1902 in Zemun, Serbia.

A comfortable life in Belgrade with much continental travel was suddenly interrupted by World War II: deadly bombings by the Luftwaffe on April 6th 1941 and the arrival of German troops a week later. The family fled the city, spending the war in a village in the mountains.

Lovrić entered military service in the (Partisan) People's Liberation Army in Valjevo on September 3rd 1944. Still a teenager, he was put in charge of a cavalry unit of 200 men, 100 horses and three canons. He explained that he had been so commissioned because he was the only soldier educated enough to calculate canon trajectories. Lovrić would later acknowledge that the experience of war had a profound impact on the rest of his life. Decorated for bravery, he was finally discharged in January 1948 holding the rank of lieutenant.

Sofia Lovrić did not survive the war. Erwin married a widow, Jelena, in 1946. With the marriage, a step-sister Mira also came into the family.

Lovrić had completed four years of medicine at the University of Belgrade when he had what he described as a personal disagreement with the political regime. He and his extended family moved in 1951 to Australia, where he was accepted into the third year of the medical course at the University of Sydney. He graduated with a Bachelor of Medicine and Bachelor of Surgery in 1956 and began a two-year residency at the Royal Newcastle Hospital. It was there that he met his wife Barbara, with whom he would have five children.

He returned to Sydney, working as a resident medical officer, registrar and then staff haematologist at the former Royal Alexandra Hospital for Children ('the Children's Hospital') in Camperdown, later becoming head of the Department of Haematology.

Lovrić spent 17 years at the Children's Hospital. As well as his clinical duties, he undertook research into anaemia, haemophilia, childhood leukaemia and sickle cell anaemia, subjects on which he would publish extensively, producing more than 80 scientific papers and articles.

He gained his Graduate Diploma in Clinical Pathology in 1962 and a Graduate Diploma in Public Health in 1974, both from the University of Sydney. In the same year he was made a fellow of the Royal Australasian College of Physicians. In 1967 he was appointed a fellow of the Royal College of Pathologists (UK).

At the Children's Hospital, he saw many cases of erythroblastosis foetalis. Before the introduction of rhesus immunization, the only treatment for the condition was exchange transfusion. His work in that field brought him into regular contact with the Australian Red Cross Blood Service and in 1975 he moved to the Sydney Blood Bank, where he was appointed Deputy Director and Director of Country Blood Banks NSW under Gordon Archer.

His position entailed making regular visits to the state's 29 country blood banks, rationalising and networking the state's facilities. One of his drivers in this work was ensuring an efficient supply of blood for haemophiliacs. To this end, he was instrumental in both changing health policy and securing funding to permit the production of separate components by the regional centres, with surplus material being sent to Sydney to meet chronic metropolitan shortages.

Back in the Sydney laboratory, he devoted himself to research, developing new methods of blood utilisation and storage. His quadruple-bag system, developed in collaboration with other specialists at the Blood Bank, became known as the Lovric–Wisdom circle pack. It allowed for better component collection – mainly plasma for immunoglobulins, clotting factors and platelets. He was by then also improving the physical and biochemical properties of packed red blood cells, thereby facilitating surgical transfusions and increasing shelf-life and usage. Up to five patients could, as a result, benefit from every donor's individual contribution.

He also developed new testing techniques for hepatitis C. His position at the Blood Bank in the early 1980s put him in the front line at the time of the AIDS crisis. The Blood Bank was picketed in 1983 when it was announced that the homosexual community should refrain from giv-

ing blood until a fully workable solution was found to the possible transmission of HIV via transfusion. In 1985, Australia became the first country in the world to screen its entire blood supply for the HIV-1 virus.

In 1990, his wife, Barbara, an anthropologist, died of cancer.

He retired from the Blood Bank in 1991, though he continued as a consultant pathologist in the hospitals within the South-East Health Region and also with his clinical work as a Visiting Medical Officer in Haematology at the Repatriation General Hospital, Concord.

Throughout his career he was a significant contributor to the education of young specialists, supervising PhD candidates, as well as lecturing and teaching undergraduates and postgraduates at the University of Sydney. Later in life he acted as a consultant to pathology companies and again took on a teaching role.

He shared a passion for Indonesia with his wife Barbara, whose work focussed on medical anthropology in Bali. He served as Secretary-General of the Asian-Pacific division of the International Society of Hematology from 1975 until 1982. From 1977 until his retirement, he undertook numerous consultancies and teaching assignments for the World Health Organization (WHO) in South-East Asia and Geneva. WHO first sent Lovrić to Jakarta in 1989, on a project to deal with HIV transmission. For more than 15 years, he ran courses in transfusion techniques in various Indonesian cities, even organising the recycling of equip-

ment from Australia. He also taught in Thailand, the Philippines and Korea.

In 1998, Lovrić received the Distinguished Service Medal of the Australian Red Cross, the highest award of the Society.

Until his death, Lovrić remained active in the Haematology Society of Australia and New Zealand and in the Australian and New Zealand Society of Blood Transfusion.

Since the 1970s, 'Doc' was a well-known figure at the Gordon's Bay Amateur Fishing Club. Lovrić loved fishing but had an aversion to eating fish himself. Instead, on successful trips, he would phone family members from his tinny to announce the imminent arrival of a fish supper.

In his private life, Lovrić took pleasure in classical music, theatre, literature and cake. He enjoyed the Australian countryside as much he loved the sea. In his retirement he undertook many solo camping trips into the bush in his four-wheel drive.

He maintained an interest in his country of birth, reading Serbian newspapers online. His accent retained certain Serbo-Croatian resonances six decades after his arrival in Australia. His sense of humour was robust and black, like the coffee he brewed in a professional machine at home.

He is survived by his brother Ivan, his step-sister Mira; his five children, Michelle, Kathryn, Jenny, Melissa and Michael and three grandchildren, Miko, Zaia and Kio.

Michelle Lovric