



## CHRONICLE AND INFORMATION

## In memoriam: Victor I. Danilov (1936–2014)

Victor Danilov, a pioneer of quantum biophysics, died in Kiev on January 9<sup>th</sup> of 2014. The cause of his death was heart attack. Victor has been a prominent figure internationally as a leading expert in applications of quantum chemistry to biology. Specifically, he made seminal contributions into quantum mechanical studies of DNA bases and their interactions with water and with each other.

I wish to share here with the readers of *Biopolymers and Cell* my very personal recollections about Victor, with whom I have been a close friend for 50 years. We first met in Leningrad, in 1963, at the 1<sup>st</sup> All-Union Biochemical Congress. I was still a student at that time but we immediately became friends since we shared passion for DNA and for modern physics. Soon after our first meeting, we became unofficial members of a small community, dispersed throughout most of the Soviet Union, of DNA biophysicists. There was an intense exchange of ideas within this community existing behind the Iron Curtain, which was almost completely separated from the rest of the world, before the Iron Curtain was dismantled by Mikhail Gorbachev in 1989. Victor was our major representative in Kiev, others represented the community in Leningrad, Kharkov, Yerevan, Tbilisi, *etc.* As everything in the Soviet Union, the DNA biophysics community centered in Moscow. A wide geography allowed us not to feel too claustrophobic, while we were artificially separated from the world scientific community.

I cannot say how many times I visited Victor in Kiev. One of these visits was especially memorable. On April 26<sup>th</sup> of 1986, I was visiting Victor and we walked through the forest in Pheophania, near the Institute of Theoretical Physics, where Victor worked at the time. The spring weather was absolutely beautiful. We learned only later that a major nuclear accident happened that day in Chernobyl and Kiev got its share of radionuclides. When I returned to Moscow and subjected my jacket to the Geiger counter, it clicked like crazy.

It was not that we talked only about DNA. Victor was a quintessential representative of the Soviet intelligentsia, who could never come in terms with the repressive Communist ru-

le, and we exchanged with our very critical opinions about the regime. We also exchanged with news about the underground literature and other unofficial cultural events.

Very early, Victor established working contacts with his Eastern European colleagues, mostly in Poland, and, since for them more contacts with the West were allowed, Victor gradually established links with his Western colleagues. I remember a very fruitful international meeting on quantum biochemistry and biophysics in late 1970s in Kiev, which was organized by Victor and his Kiev colleagues. Also very memorable, was a visit in mid 1980s to Kiev of Rama Sarma and his wife Mukti, the organizers of the famous Albany Conversations on Biomolecular Stereodynamics. The late Valery Ivanov and me came to Kiev from Moscow, and Victor marvelously hosted all of us. Such personal contacts with Western colleagues paid off later, after the collapse of the Iron Curtain, and made it possible for our DNA biophysics community to quickly incorporate itself into the world community. Victor, and the rest of us, presented a sharp contrast with the frightened official Soviet visitors to the Western laboratories, most of whom were the KGB agents, and who, as a colleague here in Boston once noticed to me, were ready to jump out of the window when were asked most innocent political questions. Victor was never afraid of speaking his mind with anybody, whether it was science or politics and whether he spoke to a Soviet colleague or a foreigner.

Victor, with his enormous erudition in the field of nucleic acids and quantum chemistry, greatly benefited from the openness followed the collapse of the Communists rule. He started extremely fruitfully collaborating with colleagues all over the world. He continued to work very productively to the very last minute of his life. His signature feature has always been the uninhibited devotion to science.

I will sorely miss Victor, as, I am sure, his many colleagues, friends and former students.

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