



OBITUARY

Natalia Evgenievna Belyaeva (1945–2025)A.B. RUBIN⁺ and G.YU. RIZNICHENKO⁺*Faculty of Biology, Lomonosov Moscow State University, 119992 Moscow, Russia*

Natalia Evgenievna Belyaeva, a renowned scientist in the field of photosynthesis and author of a series of elegant models for the process of photosynthesis, passed away on 25 February 2025. She was born on 16 September 1945 in Moscow, Russia. She graduated from the Biophysics Department of the Faculty of Physics of Lomonosov Moscow State University. In 2004, she defended her PhD thesis “Generalized Model of Primary Processes of Photosynthesis” under the supervision of Prof. Galina Riznichenko and Prof. Andrey Rubin.

The kinetic models developed by Natalia Belyaeva and her co-authors describe, in depth, the electron transport and the coupled processes in the thylakoid membrane and allow us to identify the regulatory links between these processes. See “References” for a list of her few selected papers (Belyaeva *et al.* 2008, 2011, 2014, 2015, 2016, 2019, 2020, 2024). The uniqueness of Natalia Belyaeva's photosynthesis models lies in the fact that they describe not only qualitatively but also quantitatively the induction curves of chlorophyll *a* fluorescence (the OJIPSMT transient) and the redox transformation of the photoactive pigments of PSI for many species of green plants, green algae, and cyanobacteria in a wide range of time from milliseconds to minutes, as well as in providing information on the key parameters of the elementary stages of the processes under different light conditions. Natalia Belyaeva was a true scientist – thoughtful, purposeful, and possessing enormous scientific erudition, and she was passionate about her work. She taught

“Mathematical Models in Biology” and “Biophysics” to students of the Biophysics Department of the Faculty of Biology of Lomonosov Moscow State University. She was an excellent teacher, sparing no effort to captivate the audience and convey the essence of the subject to students. We all miss her.

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