In memoriam
Professor Desanka Marić, PhD
1929–2023

Desanka Marić (maiden name Kostić) was born and raised in Novi Sad, Serbia, where she completed primary and secondary school. In 1948, she enrolled in undergraduate studies at the University of Belgrade and majored in biology in 1952. From 1953 to 1963, she worked at the Institute for Medical Research in Novi Sad in the group of Professor Strahinja Marinkov. At the same time, she enrolled in graduate studies at the University of Belgrade and defended her PhD thesis there in 1960, under the mentorship of Professor Radoslav K. Andjus. In this period, the focus of Dr. Desanka Marić's work was on thrombocytopoiesis and platelet function. That research has been summarized in 10 published papers, including her PhD dissertation, "A Contribution to the Mechanism of Action of Female Sex Hormones on Rabbit Platelets". In 1964, she started her academic carrier as an assistant professor of animal physiology at the Faculty of Philosophy of the University of Novi Sad. During 1963 and 1964, Professor Marić was a postdoctoral fellow at the Worcester Foundation for Experimental Biology (Shrewsbury, MA, USA), a prestigious institution that studied reproductive functions. She continued her postdoctoral studies at the University of Kentucky College of Medicine (Lexington, KY, USA) in 1966 and 1967. She was promoted to the title of associate professor in 1970 and to the title of full professor in 1975, both at the Faculty of Sciences, University of Novi Sad.

During her work as professor, she was always in charge of teaching General Animal Physiology, and until 1975 she also taught Comparative Animal Physiology. At that time, the fields of molecular and cellular physiology, neuroendocrinology, and endocrinology were developing very intensively and began to explain numerous mechanisms of physiological phenomena. Professor Marić responded to this challenge by systematic reading of the literature, extensive discussions with colleagues about these novel findings, long-term preparation of lectures, as well as by introducing new slides and textbooks from American universities into her teaching. Professor Marić also recognized contemporary research trends and introduced elective subjects for final year students: Neuroendocrinology, Reproductive Physiology, and Reproductive Endocrinology. She also published two editions of the textbook *General Physiology of Animals* with Stanko S. Stojilković, a workshop book with selected chapters from Comparative Animal Physiology with Irena Simonović, and a chapter in the textbook *Radiological and Related Analyses (theory and application)* with Radmila Kovačević and Stanko S. Stojilković.

Professor Marić also founded a laboratory for endocrinological research at the Faculty of Sciences of the University of Novi Sad. The initial phase of her scientific work includes the establishment of a prestigious space and the acquisition of equipment made in the 1970s. During that time, she also organized endocrinological training, including radioimmunoassay techniques for peptide hormones, at the Institute of Endocrinology, Faculty of Medicine, University of Milan in the laboratory of Professor Luciano Martini, for then scientific associates Irena Simonović and Radmila Kovačević. She established a collaboration with Professor Béla Flerkó (Pécs University Faculty of Medicine), and Professor Béla Halász (Budapest University Faculty of Medicine), whose laboratories also provided training on hypothalamic deafferentation and steroid hormone radioimmunoassays. She also collaborated with Professor Radivoje Milin (Department of Histology, Faculty of Medicine, University of Novi Sad), including training Lazar Krsmanović in histological methods. She hired several more teaching assistants and technicians. These and numerous other efforts resulted in the development of one of the most well-equipped and productive laboratories for experimental endocrinology in the former Yugoslavia. The laboratory, under the leadership of Professor Marić, also significantly contributed to the worldwide recognition of Yugoslav experimental endocrinology, and served as one of the reference European laboratories for radioimmunological analyses.

The research work of the Laboratory was oriented towards the characterization of regulatory mechanisms of reproduction and hypothalamic control of gonadotropic secretion in developing and adult rodents using different experimental approaches. The laboratory applied variable ways of deafferentation of the hypothalamus and monitored changes in gonadotropic hormones and prolactin in order to understand the complex mechanisms of neuroendocrine regulation of reproductive function. Extensive research work related to the study of hormonal changes during postnatal development, as well as the mechanisms involved in the onset of puberty, with a special emphasis on the role of prolactin in males and the concept of interdependence of prolactin and androgen production. The effects of short-term and long-term hyperpolactinemia on the developmental pattern

of androgen and gonadotroph levels were also studied. Both short and long periods of estrogenization in adult animals were used to compare the blockade and reestablishment of reproductive functions with the kinetics observed in developing animals. Extensive studies have also been conducted to understand the impact of stress on central and local regulatory mechanisms of testicular steroidogenesis, as well as the importance of endogenous opiates and free radicals in the paracrine control of androgen production. Many of these experiments were done in collaboration with Professor Radoslav K. Andjus with support from a grant from the Serbian Academy of Sciences and Arts.

Professor Marić's scientific work in endocrinology includes over 80 peer-reviewed scientific papers, 15 of which were published in eminent international journals, such as *Endocrinology*, *Neuroendocrinology*, *Journal of Endocrinology* and *European Journal of Pharmacology*. These publications have had a significant positive impact on the international and domestic scientific public, expressed through numerous citations in the works of other authors. Equally important, she was the mentor of several doctoral dissertations, among which were the theses of her closest collaborators Irena Simonović, Radmila Kovačević, Lazar Krsmanović, Stanko S. Stojilković and Tatjana S. Kostić. Professor Marić retired in 1995, but productive endocrinological research continues even today in her former laboratories. The laboratory led by professors Silvana A. Andrić and Tatjana S. Kostić conducts basic research in reproductive endocrinology with a focus on testicular functions, while the Laboratory led by Professor Nebojša N. Andrić and Professor Emeritus Radmila Kovačević are working on the modern and attractive problem of endocrine disruptors. After retirement, Professor Marić continued to monitor progress in the work of her colleagues, advised them as needed and shared her enthusiasm about new achievements and discoveries in physiology and endocrinology.

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