



## A leading figure in the field of plant physiology

### **RNDr. Otilia Gašparíková, CSc**

passed away on 8<sup>th</sup> April 2021, at the age of 82.

*RNDr. Otilia Gašparíková, CSc was a leading scientific personality in the field of plant physiology, with extensive knowledge on plant metabolism, a generous research organizer and a good-hearted colleague and friend.*

*Otilia Gašparíková, was born on 12<sup>th</sup> May 1939 in Tvrdošín, a small city of the region Orava, North Slovakia. The beauty of the surrounding Orava landscape and the farmer environment in the country where she grew up influenced her orientation at natural sciences. She studied biology at the Faculty of Natural Sciences of the Comenius University in Bratislava. During the studies, she discovered for herself the field of plant physiology, which eventually became her whole-life matter of interest and research focusing. After graduating from the University, she entered a team of plant scientists in the Laboratory of Plant Biology (1961). The team had consisted of a small group of enthusiasts, in the best sense the founders of both Institute of Botany in Bratislava (1963), and research on plant physiology within the Slovak Academy of Sciences. At the start of her research activity, Otilia Gašparíková studied the role of growth regulators in plant growth processes. In this field she defended her postgraduate dissertation and achieved the academic degree Candidate of Sciences (PhD) in 1966.*

*In this time period, the plant roots became the main research subject for the scientists of the Department of Plant Physiology. Otilia Gašparíková contributed to this conception with her original results. Based on the isoenzyme characteristics of selected enzymes from the group of oxidoreductases and hydrolases, she has brought evidence on the complexity of structural and biochemical differentiation of root cells. The topography of the enzyme activities in the individual root tissues has contributed to elucidation of functional roles of the root tissues in radial and longitudinal transport of ions, and of their assimilation. Participation of individual maize root tissues in nitrate assimilation, as well as the findings on metabolism of nitrogen compounds in the plants have been the most cited results of Otilia Gašparíková. In the 80-ties, she has focused her research on stress physiology, particularly the enzyme activities, synthesis of nucleic acids and proteins, and the nitrate metabolism under water deficit, low temperature, and excessive nitrate supply in the root tissues. As an internationally recognized expert in plant metabolism under cold stress, Otilia was addressed to coordinate the project Structural and Physiological Aspects of Cold Acclimation in Maize Plants, within the Action COST 814 "Crop Development for the Cool and Wet Regions of Europe" in 1993. She was appointed National Representative and a member of Technical Committee of the COST 814 Action. The results of her experimental work have been published in scientific journals and symposia proceedings and the extensive studies on plant root metabolism are included in monographs and textbooks for university students. She proved to be an excellent organizer as Scientific Secretary, Chair-lady, and member of the Organizing Committee, of the six International Symposia on Structure and Function of Roots (1971 - 2003) that unforgettably entered the history of the research on plant roots. She was editor of the Proceedings of these Symposia, issued in The Netherlands in 1981, 1989, 1995, 2001, and in Biologia 59/Suppl. 13, 2004.*

*Also, her pedagogical activities should be accentuated. As an invited teacher, she had been giving lectures on plant metabolism, in the Faculty of Natural Sciences, Comenius University in Bratislava. She supervised diploma and PhD students.*

*Otilia Gašparíková bestowed responsible and efficient work as a long continuing member of the Editorial Boards of the journals Biologia Plantarum, Praha, and the journal Biologia, Section Botany, Bratislava.*

*The managing and organizing activities throughout the Otilia's life in science should be highlighted especially. She was the head of the Department of Plant Physiology and, vice-director of the Institute of Experimental Biology and Ecology, during the period when the plant sciences had been integrated within that Institute (1973 - 1990). However, her creative initiative was accepted with our open arms particularly in the process of re-establishing the Institute of Botany, Slovak Academy of Sciences, after the collapse of the authoritarian regime in our country in 1990. She was elected the first, very*

*efficient and successful director of this Institute (1990 - 1998), which regained the status of respectful institution under her management. Not only plant physiologists but also colleagues from other fields of plant science working in this institute appreciated her extensive knowledge on general botany, her understanding and support in any aspect of their research activities. In retrospective, it is hard to believe how brilliantly she could master the turbulent period of extensive reorganization activities and duties in the Slovak Academy of Sciences.*

*She was active as secretary of the Scientific Advisory Board for Ecological Sciences of the Slovak Academy of Sciences, and contributed to elevating the level of overall knowledge on biological sciences in our country.*

*The outstanding scientific results, managing and organization activities of Otilia Gašpariková were awarded in our country as well as abroad. Slovak Academy of Sciences awarded her the Silver (1983) and Gold (1989) Medals for Development in Biological Sciences and the Commemorative Medal to 200<sup>th</sup> Anniversary of the birth of J. E. Purkyně (1988). The Ukrainian Academy of Sciences awarded her N.G. Kholodnyj Memorial Medal, and Commemorative Medal of the 1500<sup>th</sup> Anniversary of the Foundation of the City of Kiev in 1982. The committee of the Slovak Botanical Society appointed her the Honorary Member in 1999. In 2019 she was designated one of the Distinguished Personalities of the Slovak Academy of Sciences.*

*Many Slovak and foreign plant scientists had known Otilia Gašpariková as a kind, modest and friendly personality, ever offering advises and support both in scientific and everyday life respects. Our closest Czech colleagues have sent us their kind remembrances of Otilia and expressed their deep distress. My strongest personal experiences and memories concern the privilege of both collaboration with Otilia within the COST project, and, participation in her organization and managing work, as the scientific secretary, of the Institute of Botany.*

*Profoundly sad, we all miss our good-hearted colleague and friend Otilia.*

Milada Čiamporová