



## **Geza Hradzina**

March 16, 1939 – June 2, 2022

Dr. Geza Hrazdina, emeritus professor of Food Science & Technology, passed away in Geneva, New York, on June 2, 2022. He is survived by his wife, Minou Hemmat Hrazdina; son, Geza K. Hrazdina; daughter-in-law, Kate; and granddaughter, Katherina. Geza will be remembered by his colleagues for his seminal scientific contributions to plant biochemistry and biotechnology as well as his passion for mentoring students and advisees.

Geza was born in Letenye, Hungary, on March 16, 1939. He left Hungary in 1958, two years after the Soviet invasion, and pursued his education at the Swiss Federal Institute of Technology (ETH) in Zurich. Geza earned his master's degree in Agricultural Chemistry (1963) and his doctorate in Agricultural Biochemistry (1966) from ETH. Following a postdoctoral position at Cornell University, he was hired as an assistant professor of Food Science & Technology (1968) at the New York State Agricultural Experiment Station (NYSAES), later renamed Cornell AgriTech. He was subsequently promoted to associate professor (1973) and professor of biochemistry (1981). He retired and was elected to Professor Emeritus in 2007.

As a Cornell faculty, Geza's earliest studies focused on identifying and characterizing plant secondary metabolites, including a class of pigments called *anthocyanins*. These compounds are responsible for the red and purple color of wine, apple skins, and many other fruits and flowers. Anthocyanins can possess subtle variations in chemical structure which affect their appearance and stability, which can strongly affect their value to both farmers and the food industry. Geza's lab became well-known for performing some of the earliest characterizations of different anthocyanins found among plants, a fact made more remarkable due to the limited chromatographic separation tools available at the time. In addition to his foundational work on anthocyanins, Geza made contributions to understanding of the molecular biology of other plant metabolites associated with aroma, disease resistance, and growth. Geza also published extensively on the organization of secondary metabolites within the plant cell and the identity and location of enzymes associated with metabolite production. Geza's work on anthocyanins and other natural plant products is still widely cited by food scientists, plant breeders, and horticulturalists as part of efforts to develop new high value plant cultivars, refine our understanding of plant metabolism, and improve food quality during processing.

Geza was a pioneer in the field of plant biotechnology, especially his recognition of the potential value of moving key metabolic enzymes from one plant to another, or from plants into cell cultures. Such ideas have become commonplace in modern plant breeding and synthetic biology, but they were in their infancy in the 1990s when Geza served as co-chair of the Cornell Genomics Initiative. This initiative coordinated efforts across the university to ensure better investment in core facilities at Cornell for emerging life science tools, especially DNA sequencing. The initiative was also responsible for hiring a new generation of genomics-focused biologists and has resulted in Cornell's current reputation as an international leader in the life sciences.

Geza was also a valuable contributor to the sciences outside of Cornell. He served on the advisory and executive committees of the

Phytochemical Society of North America in several capacities, including serving as president from 1982 to 83. He was the program director for the National Science Foundation's Division of Cell Biology and was awarded an Alexander Von Humboldt research fellowship in 1973 and 1982.

Over his career as a professor, Geza served as an advisor and mentor to dozens of graduate students, post-doctoral associates, and visiting scientists. His generosity with his mentees could be extraordinary. One student in the plant sciences recalled meeting Geza for the first time to discuss a project related to grape anthocyanin quality, and by the end of the conversation Geza had offered the student full access to his library of painstakingly isolated anthocyanin standards. Along with his admirable scientific contributions, these types of acts – kind, generous, and transformative – keep Geza's memory alive among his former students and colleagues at Cornell.

*Written by Gavin Sacks*