In memoriam

Professor Ana Zlata Štefanac (1934-2019)

The sad news of the demise of Professor Ana Zlata Štefanac reached me on a busy Monday morning on March 18, 2019. She passed away some time during the preceding weekend in her Zagreb home. Prof. Ana Zlata Štefanac, PhD was a Croatian scientist and a Full Professor at the Department of Biology, Faculty of Science, University of Zagreb, who retired in 2004.

Professor Štefanac was born Ana Zlata Uđbinac on December 6, 1934 in Zagreb, where she completed all her levels of education. She finished her undergraduate studies in biology in 1959, received her MSc degree in 1964 and PhD in 1967 under the mentorship of Professor and Academician Davor Miličić (1915-1993). She worked as a teaching assistant at the Department of Biology from 1960 and later on advanced to the ranks of Assistant Professor (1972), Associate Professor (1978) and Full Professor (1984). From her early days at the University of Zagreb, she was involved in teaching practical courses in botany and plant anatomy. As she advanced in her career, she lectured more and gave fewer practical instructions. Nevertheless, she always relied on the power of practical examples in teaching. Her students remember her insisting on meticulous preparation of slides containing plant anatomical structures, correctly depicting and describing them in their own hand. No discrepancy between the objects seen under the microscope and student notebook descriptions could escape her attention. This was part of her strategy for motivating students to gain deeper insight into plants structures and functions. Her teaching methods were classical and today would be called old fashioned. However, they were efficient and produced more than a passing impression in the student's mind.

Although Professsor Štefanac was a devoted teacher, her real passion was research. When Prof. Miličić started gathering a team of young collaborators for his pioneering work on plant viruses, she was the first to join in as early as in 1959. This was the time of establishing the laboratory and building capacities needed for the research. Being very practical and energetic, Prof. Štefanac was closely involved in procuring the laboratory equipment, organizing the building of an additional experimental greenhouse and establishing the unit for producing plant virus antisera in rabbits. Those were infrastructural prerequisites for the research projects resulting in many scientific papers, as well as in undergraduate, master and doctoral theses for students all over Yugoslavia. Prof. Štefanac's MSc research focused on the *Turnip yellow mosaic virus* and her PhD enlarged the scope of the research to include other viruses of cruciferous hosts, thus directing her future interests towards plant virus infections and their cytopathological effects.

In the late 1960s and early 1970s, during the time in which postdoctoral specializations were neither required nor easily available for scientists in Croatia, Prof. Štefanac did two of them in renowned virological laboratories. The first one was at the Scottish Crop Research Institute (Invergowrie, Dundee) where she stayed for 13 months thanks toa British Council scholarship. The second one was at the Department of Plant Pathology of the University of California in Davis where she was a Fulbright scholar for 11 months. Working with eminent experts in the field, and mastering new methods at these prestigious institutions enabled her to advance and successfully disseminate her research. One of the most important papers she co-authored investigated the role of mitochondria in the establishment of inclusions formed by the *Tobacco rattle virus* in the cells of experimental plant *Nicotiana clevelandii* (Harrison et al., 1970). The paper on cell inclusions of *Holmes' ribgrass virus* (Miličić et al., 1969) falls into the same category of papers drawing very much international attention as one of the early studies describing pathogenic effects of plant viruses at the cellular level. In addition, Prof. Štefanac left her mark in the field describing and characterizing, biologically and molecularly, numerous plant virus species and strains. Her distinctive handwriting is easily discerned in the lists of plant virus isolates collected over the years as a part of our laboratory's collection. This bears witness to the amount of biological assays she performed with plant viruses during her career.

Professor Štefanac was a member of the Society for General Microbiology, the Association of Applied Biologists and the International Society for Horticultural Science. She attended numerous international and national conferences, published papers in the most important plant pathology and virology international journals like the Journal of General Virology, Virology, Annals of Applied Biology, Phytopathologische Zeitschrift (now Journal of Phytopathology) and Protoplasma. Most of them are still highly relevant in these fields. Nonetheless, she, as well as her colleagues from the same laboratory, did not refrain from publishing in journals that had a more local character like Mikrobiologija, Agronomski glasnik and, at that time, Acta Botanica Croatica. She considered her papers published in the latter highly

relevant and often said that her most important papers were those published in Acta. She and her peers were very good researchers and prolific writers, contributing significantly to the international status and quality of this journal. Professor A. Z. Štefanac was not only an author published in but also served on the editorial board of Acta Botanica Croatica from 1982 until 2008.

I crossed paths with Prof. Štefanac in 1992 as an MSc student in the laboratory. Even though she was not one of my lecturers during previous studies or my mentor in the following years, she was a highly appreciated senior colleague, a practical guide to the inner workings of the laboratory as well as somebody on whose help and expertise I could always rely. She performed her duties with efficiency, thoroughness and pride. Her honesty, dedication and fairness were as much a part of her moral fibre as of her research and teaching. Students described her as tough but just. As coworkers, we saw other aspects of her personality too. She was an excellent baker, cook, interested in gardening and fruit cultivation. Not a birthday or a birth of a baby in the group passed without her baking an old-fashioned full-flavoured cake. As a member of the post-World War II generation, she did not let anything go to waste. She practiced recycling before it became a modern concept for a sustainable way of life. Grounded and direct as she was, I am sure she would have described it as common sense.

Professor Ana Zlata Štefanac's name stays recorded in many chapters of plant virology books as one of the researchers whose results contributed to the basic knowledge on viruses we almost take for granted nowadays. She will be remembered as a scientist for her integrity, industriousness and enthusiasm but also as a person who had the best interest of the people around her at heart.

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