

## OBITUARY

**Prof. RNDr. DANUŠE SOFROVÁ, CSc.**

25 April 1938 – 15 August 2016

*Prof. Danuše Sofrová belongs to a group of researchers who established photosynthesis research in former Czechoslovakia, got in touch with the international photosynthetic community and became a significant part of it. She spent most of her productive life (1961-2014) at the Department of Biochemistry, Faculty of Sciences, Charles University in Prague with her students. She devoted most of her energy to them rather than pushing her own carrier. Thus, she was appointed professor tardily in 1995. Prof. Sofrová also served for many years (1991-2015) as a reviewer and member of the editorial board in Photosynthetica. She has also contributed by many original research articles to our journal.*

*I had the privilege of being one of her students. And even if we had drifted apart somehow during time I can still admire her patience with students, her ability to motivate, inspire, and explain theoretical and experimental aspects of photosynthesis, her willingness to teach us how to write publications and go on in our further research carriers. Many of her students have proved that „having a good mentor early in their carrier can mean the difference between success and failure in any field“ (Lee et al. 2007).*

*Here, there are her students and contributions from some of them:*

1967 RENÁTA MIKŠANOVÁ 1967 MARIE KOŠLEROVÁ 1968 ARNOŠT HORÁK 1969 JANA KREJČÍKOVÁ 1970 VÍT HAŠINEC  
 1972 VLASTIMIL ŠLECHTA 1973 MARIE TYBURCOVÁ 1973 DO THI VANG  
 1974 VLADIMÍR VILÍM 1975 JIŘÍ WILHELM 1975 JOSEF GUBÁN  
 1976 JIŘÍ HLADÍK 1977 JIŘÍ MASOJÍDEK 1979 HELENA BREJNÍKOVÁ-ČLČKÁ  
 1980 ZDEŇKA MIŠURCOVÁ 1981 EVA DOUBRAVOVÁ  
 1982 HELENA BENEŠOVÁ 1983 RAŽENA BÍSKOVÁ-MIKOVÁ 1984 RENÁTA CHADTOVÁ 1985 IRENA ŠTEFANOVÁ  
 1986 HANA PLZÁKOVÁ 1987 ZDENĚK VEŠKRNÁ  
 1988 LENKA MALETÍNSKÁ 1989 JANA LAZAROVÁ  
 1990 FRANTIŠEK VÁCHA 1990 JORGE REVELO  
 1991 VLADIMÍRA JIRSÁKOVÁ 1992 TOMÁŠ KUŽERA 1994 ANDREA KLABOUCHOVÁ 1994 JAROSLAVA MIKŠOVSKÁ 1995 ADAM ECKHARDT  
 1996 VLADIMÍR FUCHART 1997 MICHAL HÁLA 2001 EVA TŮMOVÁ

HELENA SYNKOVÁ (Praha)

*Dana Sofrová, professor and research scientist, was, for several decades, an integral part of the Department of Biochemistry at the Faculty of Science, Charles University in Prague. Her professional interests spanned over biochemistry, plant physiology, bioenergetics, but first of all, she became famous in 'Czechoslovak' photosynthesis and made significant contributions to its research. During her long scientific career, she published her articles in a number of international journals.*

*However, as university professor her main contribution was tutorship of a number of students and junior collaborators. Many of them took her favourite topic, photosynthesis, as their own destiny and eagerly pushed forward photosynthesis research. As her former students we met her later at photosynthetic meetings all over the world; she was in the picture and asking smart questions to the point. She always wished to discuss science as a part of genuine culture in our life, and did not want to leave out the ethical and philosophical approach that is related to it.*

*Dana Sofrová started her academic carrier at the Department of Biochemistry in the early 1960s studying changes of the ATP content in plants as well as in human blood in collaboration with two renowned Czech biochemists Sylva Leblová and Josef Košťiř. Soon after, her research stay in Great Britain opened a new field for Dana Sofrová – photosynthesis. At the Department of Biochemistry of the University of Cambridge (October 1969 – September 1970) known for the long tradition of photosynthesis research (made famous in that regard by Robin Hill) she collaborated with Derek S. Bendall publishing her first paper in this field (Bendall and Sofrová 1971).*

*Starting in the 1970s, Dana Sofrová devoted herself to a 'hot' topic, detailed study of the function and structure of the photosynthetic complexes. In the 1980s an exciting topic was opened in photosynthesis research – isolation and characterization of the photosystem II particles. At that time she also spent some time in the Department of Biology at the National Center "Demokritos" in Athens (Greece) in a group of George Akoyunoglou and George Papageorgiou (1980).*

*Prof. Sofrová and her students, in close collaboration with the group of Prof. Ivan Šetlik at the Institute of Microbiology in Třeboň, made significant contribution in optimizing procedures for isolation of PSII complexes using a variety of detergents (e.g. Šetliková *et al.* 2013).*

*Personally, Dana Sofrová was a nice person with an excellent sense of intelligent humour, clever debater always enjoying discussions about everyday life. We could meet her at social events, in concert halls, cinemas and theatres, keeping a pace with social life, politics, books and art. Though Dana Sofrová was always aware of current events, she was, in some respects, an old fashioned with courtesy and polished manners, reminding us of the better times of the First Czechoslovak Republic when she was born. By nature, she was a conservative liberal, even in the time of deep political 'suppression' in the 1970s when the Department of Biochemistry was relatively 'an isle of freedom' for scholars.*

*Our colleague Dana Sofrová will always remain respectable professor in our minds. She was, in all aspects, an outstanding personality whose knowledge and wisdom we will miss.*

JIŘÍ MASOJÍDEK (Třeboň)  
JOSEF KOMENDA (Třeboň)

*There was a short period around the Prague spring in 1968, when a normal, i.e. non-communist scientists and students from Czechoslovakia were allowed to travel to the western countries. In that time a young post-doc, Dana Sofrová was on a research stay at the Cambridge University. She was saving her pocket money to buy a piece of a Clark electrode which she brought back home. With the aid of skilful glass workers who made the thermostated reaction chamber and the workshop at the Faculty of Science of the Charles University where the electronics was coupled to a historic chart recorder, an instrument for the measurement of oxygen evolution during photosynthesis has been constructed. I found it in 1974 when I started my experiments in the laboratory of Assistant Professor Dana Sofrová for the master degree. Dana was very kind and gentle to her students, letting them study what they liked. In my case it resulted in a situation that a two months before the work had to be presented for a review, I gathered a lot of data, but lacked any reasonable interpretation of them. Anyhow, with Dana's help I was able to come to a solid conclusion and the study was presented to a commission. While Dana was soft to her students, she was very harsh to their opponents, defending her students like a lioness protecting her youngs. A distinguished professor of physical chemistry was not satisfied with my expression that manganese has been extracted from the reaction centre of photosystem II, arguing that extraction is a defined physical-chemical process that is not applicable to the described situation. Then Dana asked him what tooth extraction is. That ignited a large scale discussion, as this was a subject everybody understood and had to say a lot about it. Finally, after a general exhaustion, I passed without any harm.*

*Judging by the results, Dana was an ingenious teacher, as among her students you can find several professors, and one dean of a faculty and one rector of the university.*

*She stayed in contact with her students long time after their graduation. I remember one special occasion, when she invited me, my wife, and some other colleagues to her home. We discussed deep philosophical questions, emptying a row of bottles of wine. Even when leaving I was explaining some complicated problem. To demonstrate how sober I was, I was lacing my boot standing on one leg. The very next moment I continued my speech lying on my back finishing the lacing.*

*After the fall of communism in our country, Dana became a Professor of biochemistry. We used to meet from time to time under several occasions, though not all of them were as merry as the one described. Actually, in the end, when her disease progressed, it was very sad.*

*Dana, we all miss you very much.*

JIŘÍ WILHELM (Praha)

*Dana, more precisely Danuše, had knocked on heaven's door and was admitted after quite a long struggle. In between Dana suffered not only from pain and hardship but also from the thoughts of her immediate. She felt responsibility towards her husband, younger brother and son, because she selflessly took care of all of them. She was protective towards all her close people. Dana acted as catalyst among individuals to help, mediated connections among them as a fairy godmother. This concerns professional as well as personal life. For example also my engagement in Laboratory of Physiology of Photosynthesis in Institute of Experimental Botany was arranged by Dana, although I was not her student. Moreover she also without hesitation helped later our son when he studied in her native and beloved town, Písek. She felt connections and attachment with this town and kept sense of belonging with all people associated with Písek.*

*In the Department of Biochemistry in Faculty of Science UK, Dana established photosynthesis research and a small group. However she was in contact with colleagues in other Czech centres of photosynthesis research, supported them and supplied them with students. She was diploma supervisor of many students and my husband was one of them. I took Dana over from him in a way. In the meantime we were meeting quite regularly while drinking coffee or glass of wine and discussed the most important topics. Dana was renowned for her inquisitive, maybe feared professional questions in every meetings and conferences. She might appear severe but in fact she was curious.*

*Dana always looked very self-contained, emancipated, and independent, courageous and strong but actually she was very subtle and fragile inside. Dana was open minded, loved young people that she gathered around her and supported them intensively. Her pretty unique feature was that she always thoroughly arranged any situation and always had prepared plan B.*

*It is hard for me to talk about Dana in past tense as I hear still her voice and feel her presence. Let she stays in our minds for long, long time.*

NAĎA WILHELMOVÁ (Praha)

*Prof. Sofrová was an exceptional women and I thank her for most I have reached in my scientific career. She has accepted me, a young student in his punk period with ripped jeans and matted hair, encouraged me in experimenting and trying to find different ways in the research she was carrying, let me play with all instruments in her lab and even improve or innovate them, and she helped me reveal the corners of science and discover miracles of photosynthesis. She understood when we were, during the velvet revolution happening during my last year at the faculty, taking the action in the student movement and supported us when we were trying to catch up in the studies and research later when the graduation was approaching.*

*She stayed with me also during my Ph.D. studies as my supervisor even though I was in České Budějovice and she was in Prague. That was the only way how I could work on my doctorate, she trusted me and I tried not to disappoint her. She also stayed by me during my habilitation at the Faculty of Science of the Charles University.*

*I remember her visits here in the South, picking up mushrooms and discussing science or family matters, and my visits in her office at the faculty, always friendly with understanding, always happy to meet, help or just talk. For all those things she had done for me I have always loved her I always will.*

FRANTIŠEK VÁCHA (České Budějovice)

## References

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