

“Photosynthesis and Stress 2005” Conference

The conference was held at the Masaryk University of Brno on September 15 and 16. The double subtitle, “Biophysical and Biochemical Methods in Photosynthesis Research. Central European Conference”, reflected perfectly the scope of the meeting, to give stage to this important research area, and revealed the main aim of the organizers to promote science in the region.

Today, stress research is a flagship in photosynthesis research, and biophysical and biochemical techniques are suited best to understand the basic processes occurring in plants exposed, ‘normally’ and as part of the human agricultural or industrial activities, to a variety of stresses. Hence, this topic easily brings together researchers from various fields of interest, as it did in Brno for 125 participants from a total of 18 countries, mostly from Central Europe, but also from larger distances, *e.g.* from the UK, Korea, and Japan.

The conference started with introductory talks. In this series, special attention was paid to chlorophyll fluorescence kinetics, which is probably one of the most useful tools in this area, but certainly the most widely used one. It was thus important to learn, in two lectures, about the main features of this technique that contributed so much to our understanding, and also about the theoretical and practical limitations, and the possible pitfalls that are forgotten more often than not. The presentations and discussions on this topic continued in almost all other sessions of the conference. Two additional topics were highlighted as part of the General Introduction, which summarized recent advances in the topic of xanthophyll cycle in higher plants and microalgae, and reported on thermo-optically induced structural changes in thylakoids and isolated light-harvesting complexes.

The organizers decided to subdivide the contributions into eight sections. Four of them contained oral presentations, 31 out of the total number of 95 contributions. In accordance with the main trends, the largest attention was paid to light and temperature effects on photosynthesis. This section alone covered results obtained on isolated carotenoids, cyanobacteria, algal cells, agricultural plants, and forest trees. The session “Structure and function of photosystem II and thylakoid membrane components” dealt with diverse topics, including the roles of different subunits of the cytochrome *b/f* and the reaction centre complexes, the regulation of chlorophyllase, and diffusional reorganizations in cyanobacterial thylakoid membranes. A set of oral presentations was devoted to the topics of toxic compounds, which focused mainly on the effects of heavy metals, but also dealt with biosensors. The conference closed with an exciting series of presentations on emerging techniques, mainly on fluorescence and thermographic imaging. Ample time was left for lively discussions and poster presentation. This latter contained the additional topics on nutrient availability; salinity, osmotic and water stress; organism interactions; and populations, ecosystems, and extreme environments. The conference program was complemented with a first-rate exhibition of scientific instruments, some firms with solid basis in the region.

Despite the short time, the organizers succeeded to offer leisure time, a great banquet in the Botanical Garden, with a fantastic folk concert.

The Conference Organizers, headed by Assoc. Prof. Miloš Barták, reached their prime goal: gave an interesting and well balanced topical coverage on stress in photosynthesis, with special attention to the science in Central Europe. The Conference showed that there are a few laboratories in the region which are keeping pace with leading laboratories in the field, and there are many good laboratories which make effort to catch up with the first line. They all can look in the future with a self-confidence, despite financial difficulties in many of them. This optimism can be based partly on the works presented in Brno, but mainly on the talent and enthusiasm of most of the students and young scientists whom we could meet in this conference.

Finally, I hope that in a few years from now we shall refer to this conference as the 1st Central European Photosynthesis Conference, starting a tradition similar to other regional photosynthesis meetings in the world.

G. GARAB (*Szeged*)