Leister D. (ed.): **Plant Functional Genomics.** - Food Products Press, An Imprint of the Haworth Press, New York - London - Oxford 2005. 677 pp. USD 89.95. ISBN 1-56022-999-3

As we are living in a post-genomic era it is not surprising, that among the most exciting tasks of current biology is to understand functions of thousands of predicted open reading frames within the context of the whole organism. In the case of this compendium the organisms of interest are plants and first extraordinary feature of this volume is that it covers essentially the whole realm of photosynthetic organisms beginning with cyanobacteria and finishing with maize, rice and tomato.

In spite of this vast span of not only species but also techniques the editor and also invited authors managed to compile a logically structured groups of chapters so that also with the help of Index it is possible to find valuable information from all possible fields of expertise related to functional analysis of plant genes and genomes.

First section of the book is devoted to the newly developing techniques – it includes methods of full-length cDNA annotation, T-DNA mutagenesis, reverse genetics tools including TILLING and gene silencing, transcriptomics, metabolomics and large scale protein-protein interaction analysis. Section II provides an overview of the current status of functional genomics of model (old and also new) photosynthetic organisms. It seems at the moment, that the change of the focus of interest (also of grant agencies) from molecular genetic analysis of classical model plant species to other plant species including agriculturally important crops (including rice model) might be very rapid. In this respect, expectations especially for TILLING methodology based on the possibility of direct comparison of wild type and mutated plant DNA are very high.

Sections III and IV are dealing with the analysis of organelle proteomics (chloroplast and mitochondria) and pathways and processes including nitrogen metabolism, salinity tolerance, fatty acid biosynthesis and seed development. Final fifth section is devoted to the analysis of selected plant protein families of transporters, P450 cytochrome superfamily and functional genomics of protein phosphorylation in *Arabidopsis thaliana*.

Broad range of hot topics from very basic experimental plant research questions to applied problems of plant breeding covered by this book makes it a target of equally broad interest from whole range of plant-related scientists, breeders and in fact also policy-makers.

V. ŽÁRSKÝ (*Praha*)