

## PREFACE

The present volume of *Acta Biologica Hungarica* contains the proceedings of the 10th Symposium of the International Society for Invertebrate Neurobiology (ISIN), held in Tihany, Lake Balaton, Hungary, July 5–9, 2003. Both the location of the symposium and the publication of the proceedings is a tradition since ever a symposium on invertebrate neurobiology was organized in Tihany, for the first time in 1967. The idea to gather a number of scientists to present current findings in this field of neuroscience has always resulted in a possibility to gain insight into the organization, function, neurochemistry, and in our present days, the molecular biological aspects of neurotransmission and learning of the nervous system of different invertebrates, model animals of comparative neurobiology. We hope this will also be the case now when publishing this volume, providing evidence, on the one side, how much invertebrate neuroscience has developed during the last four years, since 1999, when the previous meeting was held, and on the other side, by the presentation of the new data further support and arguments will be furnished underlying the significance of research in invertebrate neurobiology. The volume, as the symposium itself, is also to offer a unique possibility for the different fields of research and techniques performed on a wide range of invertebrate species to meet and to be published so close to each other as elsewhere would not be possible. Consequently, the volume contains findings obtained on the nervous system of arthropods and molluscs, and this time in lesser extent on worms and annelids, using methods from highly sophisticated single cell electrophysiology to network analysis, from neuronal tracings to immunocytochemistry and molecular neurobiology. However, the pivotal message of the presented findings, as it was always, remains the same: although a small segment of the field of current neuroscience research, the information obtained cannot and should not be neglected, because even to-date the relative simplicity of the organization of the nervous system of these small creatures of our world enable us to study the general rules of the function of the nervous system as well as discover basic principles of cellular memory and learning. The well-tempered execution of different behaviors seems to result in the accommodation of these animals to their surrounding, the capability of responding successfully to challenges of the environment, and by this way

to ensure the survival of different species as possible evolutionary deposit of life. Working on invertebrates and their nervous system is at the same time a teaching, teaching us to see, realize and believe in the unity of nature; the unity of the creatures from the smallest to the most highly developed ones in the sense of the basic principles of the organization and function of the nervous system.

Let us hope that the present volume will bring some evidence for it, and at the same time used by those having it on the shelf will be an important contribution for both their research and teaching activity.

KÁROLY ELEKES  
Editor