

## Reviews

### From protein structure and function to molecular pathology

*The editors wish to thank E.E. Di Iorio for having coordinated this review.*

The section on proteins in Lehninger's well-known textbook of biochemistry begins, 'Almost everything that occurs in the cell involves one or more proteins'. One might add that – at least in animals – the structure and the form of cells and organisms are also dependent on these macromolecules. This review brings together a number of contributions presented at a symposium held on the occasion of the 60th birthday of Kaspar Winterhalter. They cover a wide range of the functions of proteins, from the support and development of structures to the control of metabolism – and, in the case of Gaucher's disease, the disastrous effect on the whole organism of the absence of a protein. Kaspar Winterhalter carried out pioneering work on the structure of hemoglobins, so it is not surprising that a number of speakers discussed oxygen-binding proteins. Ernesto Di Iorio, who organized the symposium, contributes a personal introductory note.

### Introductory Note

E.E. Di Iorio

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My longstanding friendship with Kaspar Winterhalter was what initiated my decision to organize this symposium. The choice of speakers was difficult only because I wanted to put together a programme in which all Kaspar Winterhalter's scientific interests were represented. However, of all the people I initially invited, only two answered negatively because of other commitments. This made the organization very easy. The organization of a symposium of this type is inevitably linked to the risk of forgetting people who should have been invited. I tried to avoid this, but I am sure I did not fully succeed. I wish to express my apologies to those who were not included.

I am highly indebted to all the speakers for the enthusiasm with which they participated, and especially to

the three chairmen, Jürgen Engel, Robert W. Noble and Dimitri Loukopulos. The abstracts and short papers which follow do not require any comment from my side. Instead, I think it is important to say a few words about the pleasant atmosphere that characterized the symposium, and the enthusiasm of the many old friends, colleagues and former students of Kaspar's who accepted the invitation. At the very end of the symposium, Max Perutz came up to me and said, 'Ernesto, you wanted an abstract of my talk. Here it is' and handed me a neatly hand-written manuscript. I should like to thank him and all the others who not only contributed to the symposium but promptly sent me their contributions in written form for this publication.