

Preface: A Tribute to David S. Zee

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In honor of Dr. David Zee's 60th birthday, a satellite meeting of the Bárány Society was held in Siena, Italy, from July 3 to 5, 2004. The birthday, however, was merely a pretext for his many admirers to gather and honor a dear friend and colleague—an outstanding researcher, clinician, and teacher who has devoted his professional career to understanding and elucidating brain function through the study of the ocular motor system in both health and disease. The conference was entitled “Clinical and Basic Ocular Motor Research,” and this volume consists of the proceedings from that meeting.

David Zee began his scientific career at The Johns Hopkins University in 1965 as a medical student. There, he came under the influence of David A. Robinson, from whom he learned the power of mathematical modeling for the study of biological systems. Over almost four decades, David Zee has remained loyal to Johns Hopkins and today is Professor of Neurology, with secondary appointments in the Departments of Otolaryngology, Ophthalmology, and Neuroscience.

David's longstanding interest in eye movement and vestibular disorders has led to countless studies in healthy humans and in patients as well as in animal models of human disease. The underlying motivation of his research is to improve the diagnosis and treatment of patients with ocular motor and vestibular disorders. Among his innumerable accomplishments we can name but a few: author (with R.J. Leigh) of the seminal textbook *The Neurology of Eye Movements*; former member of the advisory council of the National Eye Institute of the National Institutes of Health; counselor of the American Neurological Association; recipient of the Ottorino Rossi prize, the Hallpike-Nylén Medal of the Bárány Society, the inaugural Houston Merritt award and lecture of the American Academy of Neurology, the inaugural Frank Ford award for outstanding teaching of neurology at Johns Hopkins, and the Johns Hopkins Professor's award for outstanding teaching in the clinical sciences. David has had individual research grant support continuously from the National Institutes of Health since 1976, including a special ten-year merit award. He has had (at last count) 51 postdoctoral fellows or visiting scientists come through his laboratory to work with him. He has given a number of named lectures around the world and has authored or coauthored more than 300 scientific papers.

This volume is composed of articles derived from the ten invited lectures, 32 oral presentations, and 33 posters presented at the Siena meeting. A wide spectrum of investigators from the world of ocular motor research, all friends and colleagues of

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David's, assembled in Siena to present and discuss their latest scientific findings. The contributions represent the state of the art in ocular motor and vestibular research, focusing particularly on the bridge between laboratory and clinical research as well as on interdisciplinary topics in neurology, ophthalmology, and otology. From recent advances in the physiology and anatomy of the eye muscles presented in the first section of this volume, the focus of the next section shifts to the physiology and performance of the healthy vestibular system and its adaptive abilities. Subsequent sections deal with the mechanisms of eye movement control specifically developed in foveate species—saccades, pursuit, and vergence—considering the neuroanatomy, physiology, and role of higher-level cerebral processing. These studies were performed within the framework of state-of-the-art brain imaging and sophisticated behavioral testing paradigms in both humans and experimental animals. The last section of the book is devoted to clinical implications of basic research, beginning with the applications of vestibular studies to clinical neuro-otology, and including adaptive control of vestibular reflexes, physical rehabilitation, and recording of ocular motor disorders. This section also includes corresponding animal studies, which will help to improve diagnosis in clinical neurology and neuro-ophthalmology. The volume aims to provide researchers with a critical update from a number of disciplines—both clinical and basic—and to bring basic physiology to the bedside and vice versa.

We would like to thank all our friends and colleagues who participated in the meeting and helped to make this event both scientifically exciting and socially fulfilling. We were especially happy to see that David Zee's early mentor, David A. Robinson, was able to make the trip to Siena. A special thanks is due to Prof. Daniele Nuti, our host in Siena, who was largely responsible for making the meeting a success. We are deeply grateful to the members of the Organizing Committee for their financial and scientific support. These include John W. Griffin, Lloyd B. Minor, and Mark J. Shelhamer from The Johns Hopkins University, Baltimore, USA; R. John Leigh and John S. Stahl from the Case Western Reserve University, Cleveland, USA; Daniele Nuti and Alessandro Rossi from the University of Siena, Siena, Italy; Ulrich Büttner and Thomas Brandt from the Ludwig Maximilian University, Munich, Germany; Maurizio Versino from the University of Pavia, Fondazione Istituto Neurologico C. Mondino, Pavia, Italy; and Thomas Haslwanter and Klaus Hess from the University of Zurich, Switzerland. A special acknowledgement goes to Professors John Leigh and Mark Shelhamer for their great help with the publication of this volume. We are also grateful to the members of the editorial department of the *Annals* for seeing this volume through the press.

Finally, on a personal note, we would like to thank David Zee himself, for his mentoring, his scientific enthusiasm, and his human support, and we dedicate this volume to him. In his lab, we learned—in addition to gaining scientific and experimental skills—that **research and clinical care can and should be fun in order to attain the best results.**