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Preface
The original papers presented in this issue stem from lectures which were given at the International Symposium on the Clinical and Physiological Aspects of Light Reception and Perception, held in Schloss Rauisch-Holzhausen, from March 24 to 27, 1983. The symposium was organized in honor of the 60th birthday of Prof. Eberhard Dodt and was presided by Prof. Ragnar Granit.
The theme of the symposium was chosen to illustrate Prof. Dodt's long-standing efforts to closely link basic research in sensory physiology to ophthalmology. This is reflected by the scope of this book: In recent years, a series of new techniques of testing visual function were developed which are still at the experimental stage, but have a great potential for clinical application. There are other methods which have already undergone an evolutionary process in the last decades; they are already established in
major ophthalmic hospitals, but their potential for ophthalmological
topodiagnoses has not yet been fully explored. Finally, there are tests of
visual function used routinely by most ophthalmologists whose diagnostic
value has only recently been discovered when applied to certain visual
disturbances such as toxic or degenerative eye diseases.
This book attempts to summarize some of these recent developments
in 12 chapters, first by sketching historical developments, then by reviewing
classical and novel electrodagnostic methods in ophthalmology,
including some unusual result in retinal diseases; by presenting new physiological
observations on which such tests are based especially concerning
the functional layering of the retina; the extension of these electrophysiological
methods to such unexplored patient groups as the very young, the
strabismic and diabetics is demonstrated; several methods of objectively
assessing visual acuity are investigated and reviewed, also in their capacity
to uncover cases of aggravation and simulation; interesting new techniques
of employing new and classical color vision tests in combination
with electrophysiological tests for differential diagnostics in degenerative
diseases of the retina and the optic nerve as well as in retinotoxic dysfunctions
are discussed. The basic principles of these techniques are presented
and advice for the optimal application of color vision tests is
offered. Several papers are devoted to the application of electrophysiological
and psychophysical methods in certain diseases such as forms of
macular dystrophy, demyelinating diseases of the optic nerve and glaucoma.
Many of the contributors to this book were drawn to the field by
working in Prof. Dodt's laboratory at the Max Planck Institute for Physiological
and Clinical Research in Bad Nauheim, as pointed out in Prof.
Baumann's laudatio (pp. 1-?). Over the years Prof. Dodt introduced 94
young scientists to the field of physiological and ophthalmological research
in the institute's facilities in Bad Nauheim as well as in the institute's
Laboratory in the University Eye Hospital in Frankfurt, in close and
fruitful collaboration with Prof. W. Doden. Many successfully continued
their work on the visual system at eye clinics, universities as well as
domestic and foreign research institutes.
At the symposium in Rauisch-Holzhausen, 52 original papers and 18
posters were presented in 9 different sessions, many by his pupils and those
scientists with whom he pursued collaborative scientific projects over the
years. 21 papers of the symposium which dealt primarily with basic physiological
aspects in the lateral eyes as well as in the pineal organ were
published as a special issue of Ophthalmic Research [Ophthalmic Res. 16:
1-128, 1984].
The major purpose of the symposium was to bring together clinical
and basic investigators to discuss current trends in vision research, and to intensify scientific contacts which form a vital basis for future collaborative research projects. This was certainly achieved since more than 160 participants from 12 different countries, mostly from Europe but also from Japan and the United States, exchanged their thoughts and experiences in lively discussions.

Particular thanks are due to the sponsors of this symposium, the Max Planck Society, the W. G. Kerckhoff Foundation, the International Society for Clinical Electrophysiology of Vision (ISCEV) and the Justus Liebig University of Giessen that provided beautiful facilities at the castle in Rauisch-Holzhausen. Major donations were made by Bell & Howell GmbH, Digital Equipment GmbH, Delalande Arzneimittel GmbH, Hewlett Packard GmbH, J. E. List-Electronic, Dr. G. Mann, E. Merck, Nicolet Instruments, 'B' Medizin-Elektronik, Science Trading GmbH, Dr. Karl Thomae GmbH, Tnnies KG, and Wander Pharma GmbH. Special thanks are also due to the German Ophthalmological Society, especially to its secretary Prof. W. Jaeger and its former president, Prof. O.-E. Lund (1981/1982), who gave advice and assistance during the preparatory phases of the meeting.

Many colleagues contributed to the success of this symposium. Dr. . Meissi, Dr. R.P. Schuurmans, Dr. Z Berninger, H.-U. Evers, Monika Baier, Dr. Claudia Zrenner, Mrs. H. Breitenfelder, and the institute's administration were indispensable in planning and organizing the symposium. We are also grateful to Mrs. E. Baruth, Mrs. G. Eckl, Miss S. George, Mrs. M. Granz, Dr. M. Mitsuyu, Mrs. . Schneider, G. Thiele, Dr. H. E. Vomberg, Dr. M. Wzirfel, and all the others who made special efforts. All of them gave liberally of their time; their cooperative attitude was a major help in making a successful conference.

Professor Dr. Dr. h. c. W. Straub, the referees and S. Karger Publishers deserve special thanks for enabling the publication of this issue. But most of all, this symposium, dedicated to Prof. Dodt, stimulated 3 days of scientific exchange and made it especially apparent to younger scientists that it is worthwhile to devote one's life to science, and strikingly demonstrated that there is a living international network of scientific interdisciplinary exchange which heavily depends on scientists like Prof. Eberhard Dodt.

Bad Nauheim, March 1984 Eberhard Zrenner