Genetics in Ophthalmology

Volume Editors

B. Wissinger, Tübingen
Susanne Kohl, Tübingen
U. Langenbeck, Frankfurt a.M.

20 figures, 6 in color, and 12 tables, 2003

Founded 1926 as ‘Abhandlungen aus der Augenheilkunde und ihren Grenzgebieten’ by C. Behr, Hamburg and J. Meller, Wien


Library of Congress Cataloging-in-Publication Data
Genetics in ophthalmology / volume editors, B. Wissinger, S. Kohl, U. Langenbeck, p. cm. – (Developments in ophthalmology, ISSN 0250–3751 ; v. 37)
Includes bibliographical references and indexes.
RE906.G395 2003
617.7’042–dc21
2003045797

Bibliographic Indices. This publication is listed in bibliographic services, including Current Contents® and Index Medicus.

Drug Dosage. The authors and the publisher have exerted every effort to ensure that drug selection and dosage set forth in this text are in accord with current recommendations and practice at the time of publication. However, in view of ongoing research, changes in government regulations, and the constant flow of information relating to drug therapy and drug reactions, the reader is urged to check the package insert for each drug for any change in indications and dosage and for added warnings and precautions. This is particularly important when the recommended agent is a new and/or infrequently employed drug.

All rights reserved. No part of this publication may be translated into other languages, reproduced or utilized in any form or by any means electronic or mechanical, including photocopying, recording, microcopying, or by any information storage and retrieval system, without permission in writing from the publisher.

© Copyright 2003 by S. Karger AG, P.O. Box, CH–4009 Basel (Switzerland)
www.karger.com
Printed in Switzerland on acid-free paper by Reinhardt Druck, Basel
ISSN 0250–3751
Contents

1  A Glimpse into Genomeland
   Langenbeck, U. (Frankfurt a.M)

16  Epidemiology of Hereditary Ocular Disorders
    Rosenberg, T. (Hellerup)

34  Interactions of Genes and Environment in Myopia
    Feldkämper, M.; Schaeffel, F. (Tübingen)

50  A Molecular Perspective on Corneal Dystrophies
    Vincent, A.L.; Rootman, D. (Toronto); Munier, F.L. (Lausanne);
    Héon, E. (Toronto)

67  Molecular Genetics of Cataract
    Hejtmancik, J.F.; Smaoui, N. (Bethesda, Md.)

83  Progress in the Genetics of Glaucoma
    Weisschu, N.; Schiefer U. (Tübingen)

94  LHON and Other Optic Nerve Atrophies: The Mitochondrial Connection
    Howell, N. (Galveston, Tex.)

109  Retinitis pigmentosa: Genes, Proteins and Prospects
    Hims, M.M. (Leeds); Diager, S.P. (Houston, Tex.); Inglehearn, C.F. (Leeds)

126  Bardet-Biedl Syndrome and Usher Syndrome
    Koenig, R. (Frankfurt a.M)

141  Genetic Defects in Vitamin A Metabolism of the Retinal Pigment
    Epithelium
    Thompson, D.A. (Ann Arbor, Mich.); Gal, A. (Hamburg)

155  Genetics of Macular Dystrophies and Implications for Age-Related
    Macular Degeneration
    Klaver, C.C.W. (New York, N.Y., and Rotterdam); Allikmets, R. (New York, N.Y.)
170 Genetics of Color Vision Deficiencies
   Deeb, S.S. (Seattle, Wash); Kohl, S. (Tübingen)

188 Gene Therapy and Animal Models for Retinal Disease
   Dejneka, N.S.; Rex, T.S.; Bennett, J. (Philadelphia, Pa.)

199 Support for Patients Loosing Sight
   Trauzettel-Klosinski, S.; Hahn, G.-A. (Tübingen)

215 Author Index
216 Subject Index