

# Investigative Ophthalmology & Visual Science

A Journal of Clinical and Basic Research

Copyright © 1979 by the Association for Research in Vision and Ophthalmology

---

## CONTENTS

### ARTICLES

- The canine eye: the vessels of aqueous drainage 223  
E. Michael Van Buskirk, *Division of Ophthalmology, Department of Surgery, The Milton S. Hershey Medical Center, College of Medicine, The Pennsylvania State University, Hershey, Pa.*
- Elemental analysis of melanins from bovine hair, iris, choroid, and retinal pigment epithelium 231  
Thaddeus P. Dryja, Maureen O'Neil-Dryja, and Daniel M. Albert, *Howe Laboratory of Ophthalmology, Massachusetts Eye and Ear Infirmary, Boston, Mass.*

*Continued on page 7*

---

Vol. 18, No. 3, March, 1979. INVESTIGATIVE OPHTHALMOLOGY & VISUAL SCIENCE is published monthly by The C. V. Mosby Company, 11830 Westline Industrial Drive, St. Louis, Mo. 63141.

Annual subscription rates:	United States	All foreign countries
Institutional*	\$52.00	\$57.50
Personal†	\$37.00	\$42.50
Student, resident‡	\$29.60	\$35.10

Single copies are \$5.00 postpaid. Remittances should be made by check, draft, or post office or express money order payable to this Journal.

\*Institutional (multiple-reader) subscriptions are available to public and private libraries, schools, hospitals, and clinics; city, county, state, provincial, and national government bureaus and departments; and all commercial and private institutions and organizations.

†Personal subscriptions and all student-rate subscriptions must be in the names of, and billed to, and paid by individuals. All student-rate requests must indicate training status and name of institution.

‡Subscriptions may begin at any time.

Second class postage paid at St. Louis, Mo. Copyright © 1979 by The Association for Research in Vision and Ophthalmology, Inc.

---

The appearance of a code at the bottom of the first page of an original article in this journal indicates the copyright owner's consent that copies of the article may be made for personal or internal use, or for the personal or internal use of specific clients. This consent is given on the condition, however, that the copier pay the stated per copy fee through the Copyright Clearance Center, Inc., P.O. Box 765, Schenectady, N. Y. 12301, (518) 374-4430, for copying beyond that permitted by Sections 107 or 108 of the U. S. Copyright Law. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, or for resale.

---

## CONTENTS

*Continued*

- Implications of aldose reductase in cataracts in human diabetes** 237  
Shambhu D. Varma, Stanley S. Schocket, and R. D. Richards,  
*Department of Ophthalmology, University of Maryland Medical School,  
Baltimore, Md.*
- Effect of phenylephrine on normal and regenerated endothelial cells in  
cat cornea** 242  
Kenneth L. Cohen, Diane L. Van Horn, Henry F. Edelhauser, and  
Richard O. Schultz, *Departments of Ophthalmology and Physiology, The  
Medical College of Wisconsin, Milwaukee, and Research Service, Veterans  
Administration Center, Wood, Wisc.*
- Intraocular levels of cefamandole compared with cefazolin after  
subconjunctival injection in rabbits** 250  
Michael Barza, Anne Kane, and Jules L. Baum, *Infectious Disease  
Service, Department of Medicine, and Department of Ophthalmology,  
Tufts University School of Medicine and New England Medical Center  
Hospital, Boston, Mass.*
- ATP is released into the rabbit eye by antidromic stimulation of the  
trigeminal nerve** 256  
Eugenio Maul and Marvin Sears, *Department of Ophthalmology and  
Visual Science, Yale University School of Medicine, New Haven, Conn.*
- Rod sensitivity relative to cone sensitivity in retinitis pigmentosa** 263  
Robert W. Massof and Daniel Finkelstein, *Wilmer Ophthalmological  
Institute, The Johns Hopkins University School of Medicine,  
Baltimore, Md.*
- Cat optic nerve imaging with metrizamide** 273  
Jeffrey P. Davis, Victor M. Haughton, Gerald J. Harris,  
O. Petter Eldevik, and Walter E. Gager, *Departments of Ophthalmology  
and Neuroradiology, Medical College of Wisconsin, Milwaukee, Wisc.*
- Low-energy, Q-switched ruby laser iridotomies in *Macaca mulatta*** 278  
Charles H. Bonney and Douglas E. Gaasterland, *Behavioral Sciences  
Department, Armed Forces Radiobiology Research Institute, and  
Clinical Branch, National Eye Institute, National Institutes of Health,  
Bethesda, Md.*
- Method of measuring aqueous humor flow and corneal endothelial  
permeability using a fluorophotometry nomogram** 288  
Roger L. Coakes and Richard F. Brubaker, *Department of  
Ophthalmology, Mayo Clinic, Rochester, Minn.*

*Continued on page 9*

# CONTENTS

*Continued*

## REPORTS

- Immunohistochemical identification of slow-tonic fibers in human extrinsic eye muscles** 303  
S. Pierobon Bormioli, P. Torresan, S. Sartore, G. B. Moschini, and S. Schiaffino, *National Research Council Unit for Muscle Biology and Physiopathology, Institute of General Pathology, and Department of Ophthalmology, University of Padova, Padova, Italy*
- Differential retinoid binding in chick pigment epithelium and choroid** 306  
Barbara Wiggert, Eileen Masterson, Paul Israel, and Gerald J. Chader, *Laboratory of Vision Research, National Eye Institute, National Institutes of Health, Bethesda, Md.*
- Expression of Ia antigen-like molecules on cells in the corneal epithelium** 310  
Lars Klareskog, Urban Forsum, Ulla Malmnäs Tjernlund, Lars Rask, and Per A. Peterson, *Department of Cell Research, Institute of Clinical Microbiology, and Department of Dermatology, University of Uppsala, Uppsala, Sweden*
- Effect of intraocular irrigating solutions on intracellular membrane potentials and swelling rate of isolated human and rabbit cornea** 313  
Michael Wiederholt and Marianne Koch, *Departments of Clinical Physiology and Ophthalmology, Klinikum Steglitz, Freie Universität Berlin, Berlin, Germany*
- Stimulation of keratocyte metabolism by products of lymphoid cells** 317  
David BenEzra and Igal Gery, *Clinical Branch and Laboratory of Vision Research, National Eye Institute, Bethesda, Md.*
- Human platelet monoamine oxidase activity in glaucoma** 320  
Caterina Aldinio, Chiara Cerletti, Luciano Manara, Martino Recchia, Giuseppe Carlevaro, and Vito de Molfetta, *Laboratory of Drug Metabolism and Biostatistic Unit, Istituto di Ricerche Farmacologiche "Mario Negri," Milan, and Department of Ophthalmology, Monza Regional Hospital, Monza, Italy*
- Saccades in extremes of lateral gaze** 324  
Larry A. Abel, Louis F. Dell'Osso, Robert B. Daroff, and Lawrence Parker, *Ocular Motor Neurophysiology Laboratory, Miami VA Hospital, and Department of Ophthalmology and Neurology, University of Miami, Miami, Fla.*
- ANNOUNCEMENTS** 328

*Information for authors on page 15*

*Index to advertisers on third cover*