

FINAL PROGRAM

January 26 - 28

2012

**Contact Lens Association of Ophthalmologists, Inc.[®]
and CLAO Education & Research Foundation**

Symposium and Congress

Caesars Palace Hotel, Las Vegas, NV



Dedicated to Advancing Contact Lens Science and Research

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Thursday, January 26

1:00 – 1:05 pm	Welcome and Introductions	Michael H. Goldstein, MD, MM, Deborah S. Jacobs, MD, David W. Lamberts, MD, William T. Driebe, Jr., MD
1:05 – 3:05 pm	CLAO ERF James E. Key, II, MD Symposium	Moderators: Donald J. Doughman, MD, William T. Driebe, Jr., MD
1:05 – 1:35 pm	ERF Keynote Speaker	
	• The Cornea’s Response to Contact Lens Induced Hypoxia	Desmond Fonn, Dip. Optom., M. Optom.
1:35 – 3:05 pm	Update on Research from the FDA	Moderators: Malvina H. Eydelman, MD, Thomas L. Steinemann, MD
	• FDA: Lessons Learned from the Outbreaks and Steps Taken.....	Joseph C. Hutter, PhD
	• Silicone and Conventional Hydrogel Contact Lens Materials: Similarities and Differences	K. Scott Phillips, PhD
	• Silicone Hydrogel Lens Groupings and Testing Strategies.....	J. Angelo Green, PhD
	• The Effects of Contact Lens Materials on Disinfection Activity in a Multipurpose Contact Lens Solutions Containing PHMB, Polyquatarnium-1 and Myristamidopropyl Dimethylamine.....	Victoria M. Hitchins, PhD
	• Important Variables and Test Methodology for the Evaluation of Efficacy of CLMPS Against Acanthamoeba	Megan Shoff, PhD
	• Effects of CL, Lens Cases and “Soil” on Disinfection Activity in MPS Against Fusarium	Charles Clavet, MS
	• FDA Steps to Improve Safety for Contact Lens Users	Kesia Alexander, PhD
3:05 – 3:25 pm	Posters and Break	
3:25 – 4:20 pm	SOBLEC Symposium: Special Contact Lens Fittings in Brazil	Moderators: Bruce H. Koffler, MD, Cesar Lipener, MD, Ubirajara M. Moraes, MD
	• Experience with Scleral Contact Lens Fitting	Tania Schaeffer, MD
	• Particularities of the Piggy-Back System.....	Paulo Ricardo de Oliveira, MD
	• Keratakonus: Ten Years of Experience and Management	Orestes Miraglia, MD
	• Special Situations in CL Fitting: What Can I Do Now?.....	Marcelo Sobrinho, MD
4:20 – 5:15 pm	Risk Management (in conjunction with OMIC)	Moderator: Michael H. Goldstein, MD, MM
	• Lessons Learned From Malpractice Claims	Anne M. Menke, RN, PhD and Andrew P. Doan, MD
5:30 – 7:30 pm	Joint Reception With GSLS (Paris Hotel Rivoli Ballroom B&C)	

Friday, January 27

8:00 – 9:30 am	Microbial Keratitis: Epidemiology, Diagnosis and Treatment	Moderators: Deepinder K. Dhaliwal, MD, LAc, Bennie H. Jeng, MD
	• Epidemiology of Corneal Ulcers	Bennie H. Jeng, MD
	• An Update on the Epidemiology of Contact Lens-Related Microbial Keratitis.....	Charlotte Joslin, OD, PhD
	• Treatment of Contact Lens Associated Keratitis.....	Deepinder K. Dhaliwal, MD, LAc
	• Comparison of Cefuroxime/Gentamicin to Cefazolin/Tobramycin and Moxifloxacin for the Coverage of Bacteria Isolated from Keratitis.....	Regis P. Kowalski, MS, [M]ASCP
	• Report on the Steroids and Corneal Ulcers Trial.....	Stephen McLeod, MD
	• Update on Point of Care Testing for Adenovirus.....	Shachar Tauber, MD
9:30 – 10:25 am	JCLS Symposium	Moderators: Bruce H. Koffler, MD, David S. Chu, MD
	• Introduction and JCLS in Yokohama 2012.....	Nobuhisa Mizuki, MD
	• Long-term Effect of Overnight Orthokeratology on Axial Length Elongation in Childhood Myopia: A 5-year Follow-up Study in Japan	Takahiro Hiraoka, MD
	• The Opaque Tint Contact Lenses	Kiyoshi Watanabe, MD
	• Dry Eye and Contact Lens.....	Takashi Hamano, MD
10:25 – 10:45 am	Posters and Break	
10:45 am – 12:05 pm	Free Papers	Moderators: Warren R. Fagadau, MD, S. Lance Forstot, MD, FACS
	• Soft Contact Lens Associated Keratitis, Observations From Clinical Practice	Edward J. Meier, MD
	• Betaine Surface Modification of Silicone Hydrogel Contact Lenses to Increase Wettability	Alonzo Cook, PhD
	• Visualization of Hyaluronic Acid.....	Mohinder Merchea, OD, PhD
	• Constant Drug Tear Concentration for Duration of Wear From Contact Lenses	Mark E. Byrne, PhD
	• Scleral Lenses in Pediatric Patients	Muriel M. Schornack, OD, FAAO
12:00 – 1:00 pm	Lunch	
1:00 – 2:00 pm	Spotlight on Keratoconus/Oliver H. Dabezies, Jr. MD, Lecture	Moderators: Joseph B. Ciolino, MD, Michael H. Goldstein MD, MM
	• Lessons from CLEK	Joseph T. Barr, OD, MS, FAAO
	• Update on Hybrid Lenses.....	Dianne Anderson, OD, FAAO
	Oliver H. Dabezies, Jr. MD, Lecture	Honorary Moderator: Harold A. Stein, MD
	Introduction – Michael H. Goldstein, MD, MM	
	• UV Crosslinking – Current Evidence-Based Review	Penny A. Asbell, MD, FACS, MBA
2:00 – 2:55 pm	Scleral Lenses: Update, Innovations, and Unanswered Questions	Moderators: Muriel M. Schornack, OD,FAAO Deborah S. Jacobs, MD
	• Scleral Lenses: What We Know	Muriel M. Schornack, OD, FAAO
	• Scleral Lenses: What We Don’t Know.....	Lynette Johns, OD, FAAO
	• Use of Anterior Segment OCT for Scleral Lens Assessment	Amy C. Nau, OD, FAAO
	• Wavefront-guided Correction of Keratoconus	Guenyoung Yoon, PhD
2:55 – 3:15 pm	Posters and Break	

Friday, January 27

3:15 – 4:10 pm	Innovations in Fitting / Innovations in Therapeutics	Moderators: Sami G. El Hage, OD, PhD, DSc, Deborah S. Jacobs, MD
	• The Contribution of Corneal Topography in Fitting Contact Lenses	Norman Leach, OD, MS, FAAO
	• Evolution of Corneal Topography/ Aberrometry and Their application in Contact Lens Fitting	Sami G. El Hage, OD, PhD, DSc
	• Contact Lens Drug Delivery	Joseph B. Ciolino, MD
	• Protecting the Exposed Ocular Surface	Col. Jeffery M. Cleland, MS, OD, MBA, FAAO
4:10 – 5:05 pm	Update on Ocular Surface Disease	Moderator: Gary N. Foulks, MD, FACS
	• The Value of In-Office Tear Osmolarity Testing	Gary N. Foulks, MD, FACS
	• International Workshop on Meibomian Gland Dysfunction.....	Penny A. Asbell, MD, FACS, MBA
	• Innovative Treatment of Meibomian Gland Dysfunction.....	Alan N. Carlson, MD
	• Improving the Diagnosis, Management, and Treatment of Inflammatory Dry Eye	Shachar Tauber, MD
5:05 – 7:00 pm	Reception	
8:00 – 8:55 am	Contact Lens Solutions: Recent Advances	Moderators: Bruce H. Koffler, MD, Warren R. Fagadau, MD
	• Controversies in Balancing Bio-compatibility and Disinfection Efficacy	Gary Orsborn, OD, MS, FAAO
	• Is Polyhexamethylene Biguanide (PHMB) an Effective Disinfectant for Adenovirus?.....	Eric Romanowski, MS
	• Comfort: Are We Making Any Progress?	Ralph P. Stone, PhD
8:55 – 9:50 am	ECLSO Symposium	Moderators: Florence Malet, MD, Jean-Pierre Chartrand, MD
	• CLAIK, A New Clinical Entity?	René Mely, MD
	• Myopia and Contact Lenses: Where Are We?	Florence Malet, MD
	• Risk Factors for Contact Lens Related Microbial Keratitis in 2011	Arnaud Sauer, MD
	• Keratoconus Contact Lens Designs: Update	Ayfer Kanpolat, MD
9:50 – 10:10 am	Posters and Break	
10:10 – 10:40 am	Contact Lens and Corneal Collagen Crosslinking	Moderators: Sami G. El Hage, OD, PhD, DSc, Joseph B. Ciolino, MD
	• Assessment of Silicone Hydrogel Mini-Scleral ContactLenses After CXL For Keratoconus	Boris Severinsky, M. Optom
	• Corneal Collagen Crosslinking Combined with Orthokeratology Experience in Europe.....	Sami G. El Hage, OD, PhD, DSc
10:40 – 12:15pm	Progress for Presbyopia/ Harold A. Stein, MD, Lecture	Moderators: S. Lance Forstot, MD, FACS, Peter C. Donshik, MD, Warren R. Fagadau, MD
	• Optical Principles of Presbyopia-correcting Ophthalmic Lenses	Geunyoung Yoon, PhD
	• Continuing in Contacts: Multi-focal Soft Lenses for Presbyopia	Harvard Sylvan, OD
	• Innovative Options for Presbyopic Specialty Lens Fits	Dianne M. Anderson, OD, FAAO
	Harold A. Stein, MD, Lecture	Introduction – Warren R. Fagadau, MD
	• Emerging Concepts in Accommodative Intraocular Lenses	Stephen D. McLeod, MD
12:15 – 1:15 pm	Lunch	

Afternoon Joint Session with Sports Vision

1:15 – 2:10 pm	Symposium: Athletes and Refractive Surgery	Moderator: David Kirschen, OD, PhD, Daniel Laby, MD
	• The Case for Refractive Surgery	Michael H. Goldstein, MD, MM
	• The Case Against Refractive Surgery.....	Daniel Laby, MD
	• Panel Discussion – Ethics of Refractive Surgery in Elite Athletes:.....	David Kirschen, OD, PhD, Michael H. Goldstein, MD, MM, David S. Chu, MD, Daniel Laby, MD, Roberto Pineda II, MD, Rolando Toyos, MD
2:10 – 2:40 pm	Perspectives on Performance	Moderators: Geunyoung Yoon, PhD and Deborah S. Jacobs, MD
	• Enhancing Vision Performance, the Army’s Perspective	Col. Jeffery M. Cleland, MS, OD, MBA, FAAO
	• Adaptive Optic Vision Simulator and Supernormal Vision	Geunyoung Yoon, PhD
2:40 – 3:35 pm	Symposium on Ethics	Moderator: Michael H. Goldstein, MD, MM
	Case Discussion on Ethics in Ophthalmology	Roberto Pineda, II, MD
3:35 – 3:55 pm	Posters and Break	
3:55 – 4:55 pm	Sports Vision Symposium	Moderator: Daniel Laby, MD
	• Automated Pupillometry for the Detection of Concussions in Football Players.....	Rolando Toyos, MD
	• Incidental Findings in Professional Baseball.....	David Kirschen, OD, PhD, Daniel Laby, MD
	• Pre- & Post-Diagnostics and Individually Designed Sports Vision Training Program	Stefanie Hennigfeld, MA and Sabine Nebendahl, MA
4:55 – 5:00 pm	Closing Remarks	Michael H. Goldstein, MD, MM, Deborah S. Jacobs, MD, David W. Lamberts, MD, William T. Driebe, Jr., MD
5:00 – 7:00 pm	Sports Vision Welcome Reception	

CLAO ERF James E. Key, II, MD Symposium

Moderators: Donald J. Doughman, MD, William T. Driebe, Jr., MD
Technical Level: II
Audience: All Eye Care Professionals
Prerequisites: None

Objectives: At the completion of this course, the attendee will be able to:

- 1) Explain the cornea’s response to induced hypoxia;
- 2) Analyze FDA research considerations in eye care;
- 3) Cite FDA steps to improve safety for contact lens users;

Description: This symposium provides for an update on research from the US FDA and includes the ERF Keynote Speaker.

ERF Keynote Speaker

Desmond Fonn, Dip. Optom., M. Optom. - “The Cornea’s Response to Contact Lens Induced Hypoxia”

Update on Research from the FDA

Moderators: Malvina H. Eydelman, MD, Thomas L. Steinemann, MD

SOBLEC Symposium: Special Contact Lens Fittings in Brazil

Moderators: Bruce H. Koffler, MD, Cesar Lipener, MD, Ubirajara M. Moraes, MD
Technical Level: II
Audience: All Eye Care Professionals

Prerequisite: The participant should be familiar with corneal physiology and contact lens fitting

Objectives: At the completion of this course participant should be able to:

- 1) Discuss challenges with the piggy-back system;
- 2) Analyze ten years of experience with keratoconus management;
- 3) Recognize scleral contact lens fitting techniques;

Description: The Brazilian Ophthalmological Society of Contact Lenses and Cornea (SOBLEC) was invited to put on this special International Symposium. Well-known ophthalmologists from Brazil will present on special uses for contact lenses.

Risk Management (in conjunction with OMIC)

Moderator: Michael H. Goldstein, MD, MM
Technical Level: I
Audience: All Eye Care Professionals

Prerequisite: None

Objectives: At the completion of this course participant should be able to:

- 1) Recognize how malpractice claims can affect the eye care practice;
- 2) Discuss challenging malpractice cases;
- 3) Analyze lessons from malpractice claims;

Description: The Ophthalmic Mutual Insurance Company (OMIC) is a risk retention group. The organization provides “qualified ophthalmologists with a single, comprehensive, affordable professional liability policy for the full scope of ophthalmic practice.” This presentation will provide ophthalmologists with an update on current approaches to risk in their practices.

Microbial Keratitis: Epidemiology, Diagnosis and Treatment

Moderators: Deepinder K. Dhaliwal, MD, LAc, Bennie H. Jeng, MD
Technical Level: III
Audience: All Eye Care Professionals

Prerequisite: The participant should be familiar with basic ocular anatomy and physiology. A basic knowledge of contact lens fitting is required.

Objectives: At the completion of this course participant should be able to:

- 1) Recognize the status of epidemiological studies microbial keratitis;
- 2) Discuss the treatment of contact lens associated keratitis;
- 3) Consider the importance of point of care testing for adenovirus;

Description: Recent studies will be presented revealing emerging patterns in the presentation of microbial keratitis and advancements in treatment.

JCLS Symposium

Moderators: Bruce H. Koffler, MD, David S. Chu, MD
Technical Level: II
Audience: All Eye Care Professionals

Prerequisites: The participant should be familiar with biochemistry principles and ocular physiology. A basic knowledge of contact lens fitting is required.

Objectives: At the completion of this course, the attendee will be able to:

- 1) Discuss the long-term effect of overnight orthokeratology;
- 2) Itemize issues relating to dry eye and contact lens use;
- 3) Recognize uses for the opaque tint contact lens;

Description: The Japan Contact Lens Society (JCLS) was invited to put on this special International Symposium. Well-known ophthalmologists from Japan present scientific papers ranging on various topics.

Technical Levels: Level I - No technical background required · Level II - Some technical background required · Level III - Significant technical background required

Free Papers

Moderators: Warren R. Fagadau, MD, S. Lance Forstot, MD, FACS
Technical Level: II
Audience: All Eye Care Professionals

Prerequisite: The participant should be familiar with basic ocular terminology and ocular physiology. A basic knowledge of contact lens fitting is required.

Objectives: At the completion of this course participant should be able to:

- 1) Recognize soft contact lens associated keratitis;
- 2) Discuss surface modification of silicone hydrogel lenses;
- 3) Consider the structure of hyaluronic acid;
- 4) Evaluate the use of sclera lenses in pediatric patients;

Description: Researchers were invited to submit free papers for presentation at this meeting. This session provides an opportunity for these researchers to discuss their work.

Spotlight on Keratoconus/Oliver H. Dabezies, Jr. MD, Lecture

Moderators: Joseph B. Ciolino, MD, Michael H. Goldstein MD, MM
Technical Level: III
Audience: All Eye Care Professionals

Prerequisite: The participant should be familiar with basic myopia control theory and orthokeratology theories. An understanding of ocular anatomy and physiology and a basic knowledge of contact lens fitting are required.

Objectives: At the completion of this course participant should be able to:

- 1) State the results of the CLEK study;
- 2) Contrast new options in hybrid lenses for the treatment of various disorders of refraction and of the cornea;
- 3) Discuss the history and ongoing experience with UV crosslinking;

Description: This symposium will review the results of the CLEK study, give an update on hybrid contact lenses for the treatment of keratoconus and provide data on experience with corneal UV crosslinking. This symposium includes a named lectureship.

Oliver H. Dabezies, Jr. MD, Lecture

Moderators: Joseph B. Ciolinom, MD, Michael H. Goldstein, MD, MM,
 - Penny A. Asbell, MD, FACS, MBA - “UV Crosslinking – Current Evidence-Based Review”

Scleral Lenses: Update, Innovations, and Unanswered Questions

Moderators: Muriel M. Schornack, OD, FAAO, and Deborah S. Jacobs, MD
Technical Level: III
Audience: All Eye Care Professionals

Prerequisite: The participant should be familiar with the gas permeable contact lens and sclera lens fitting

Objectives: At the completion of this course participant should be able to:

- 1) Consider the use of Anterior Segment OCT for Scleral Lens Assessment;
- 2) Discuss wavefront guided correction of keratoconus;
- 3) Summarize what is known and not known about scleral lenses;

Description: This symposium will cover various aspects of expanded use of scleral lenses.

Innovations in Fitting / Innovations in Therapeutics

Moderators: Sami G. El Hage, OD, PhD, DSc, Deborah S. Jacobs, MD
Technical Level: III
Audience: All Eye Care Professionals

Prerequisite: The participant should be familiar with basic ocular physiology

Objectives: At the completion of this course participant should be able to:

- 1) Explain the value of using corneal topography in CL fitting;
- 2) Explain the value of using aberrometry in CL fitting;
- 3) Discuss the use of contact lenses for therapeutic indications;

Description: This symposium will cover innovations in diagnostic technology to improve vision correction with contact lens and innovations in contact lens as atherapeutic option.

Update on Ocular Surface Disease

Moderator: Gary N. Foulks, MD, FACS
Technical Level: II
Audience: All Eye Care Professionals

Prerequisite: The participant should be familiar with the anatomy of the cornea

Objectives: At the completion of this course participant should be able to:

- 1) Report on the value of in-office tear osmolarity testing;
- 2) Assess treatments for meibomian gland dysfunction;
- 3) Define improvements in management and treatment of inflammatory dry eye;

Description: Innovations in the diagnosis, classification and treatment of dry eye and ocular surface disease will be presented.

Contact Lens Solutions: Recent Advances

Moderators: Bruce H. Koffler, MD, Warren R. Fagadau, MD
Technical Level: II
Audience: All Eye Care Professionals

Prerequisite: The participant should be familiar with the chemistry of contact lens care solutions.

Objectives: At the completion of this course participant should be able to:

- 1) Define the balance between bio-compatibility and disinfection efficacy;
- 2) Discuss the effectiveness of PHMB as a disinfectant for adenovirus;
- 3) Summarize improvements in solution comfort;

Description: This symposium will review the effectiveness of certain types of contact lens care systems as well as bio-compatibility versus disinfection solution efficacy.

ECLSO Symposium

Moderators: Florence Malet, MD, Jean-Pierre Chartrand, MD
Technical Level: II
Audience: All Eye Care Professionals

Prerequisite: The participant should be familiar with theories on myopia and basic contact lens fitting

Objectives: At the completion of this course participant should be able to:

- 1) Define risk factors for CL related keratitis;
- 2) Discuss contact lens effect on myopia;
- 3) Compare new designs for CLs used to treat keratoconus;

Description: The European Contact Lens Society (ECLSO) was invited to put on this special International Symposium. Well-known ophthalmologists from Europe will present on current contact lens research in Europe.

Contact Lens and Corneal Collagen Crosslinking

Moderators: Sami G. El Hage, OD, PhD, DSc, Joseph B. Ciolino, MD
Technical Level: II
Audience: All Eye Care Professionals

Prerequisite: The participant should be familiar with ocular physiology

Objectives: At the completion of this course participant should be able to:

- 1) Assess the use of silicon hydrogel mini-scleral lenses after crosslinking;
- 2) Recognize the value of silicon hydrogel mini-scleral lenses;
- 3) Discuss collagen crosslinking and orthokeratology experience;

Description: This symposium will cover new developments in the area of contact lens and corneal collagen crosslinking.

Progress for Presbyopia/ Harold A. Stein, MD, Lecture

Moderators: S. Lance Forstot, MD, FACS, Peter C. Donshik, MD, Warren R. Fagadau, MD

Technical Level: II

Audience: All Eye Care Professionals

Prerequisite: The participant should be familiar with ocular changes occurring with presbyopia and basic optics

Objectives: At the completion of this course participant should be able to:

- 1) Describe the optical principles of ophthalmic lenses for presbyopic correction;
- 2) Discuss options for specialty lens fits in presbyopic correction;
- 3) Recite the concept of an accommodative intraocular lens;

Description: This symposium will review the ever-expanding contact lens and intra-ocular lens options for the treatment of presbyopia. This symposium also includes a named lectureship.

Technical Levels: Level I - No technical background required · Level II - Some technical background required · Level III - Significant technical background required

Harold A. Stein, MD, Lecture:

Introduction – Warren R. Fagadau, MD
 - Stephen D. McLeod, MD - “Emerging Concepts in Accommodative Intraocular Lenses”

Afternoon Joint Session with Sports Vision Symposium: Athletes and Refractive Surgery

Moderator: David Kirschen, OD, PhD Daniel Laby, MD
Technical Level: II
Audience: All Eye Care Professionals

Prerequisites: Basic understanding of refractive surgery

Objectives: At the completion of this course, the attendee will be able to:

- 1) Indicate when refractive surgery is advised;
- 2) Distinguish ethics in eye care for elite athletes;
- 3) Assess refractive surgery needs in athletes;

Description: Refractive surgery is becoming utilized more by athletes to enhance performance. This symposium will discuss the pros and cons of refractive surgery for athletes and provide for a participant question and answer session.

Perspectives on Performance

Moderators: Geunyoung Yoon, PhD and Deborah S. Jacobs, MD
Technical Level: I
Audience: All Eye Care Professionals

Prerequisites: None

Objectives: At the completion of this course, the attendee will be able to:

- 1) Summarize the adaptive optic vision simulator;
- 2) Describe supernormal vision;
- 3) Outline the army’s perspective on enhancing visual performance;

Description: High level performance is paramount to elite athletes. This symposium will consider how vision enhance is able to impact performance of the athlete.

Symposium on Ethics

Moderator: Moderator: Michael H. Goldstein, MD, MM
Technical Level: I
Audience: All Eye Care Professionals

Prerequisites: None

Objectives: At the completion of this course, the attendee will be able to:

- 1) Identify ethics considerations in the eye care practice;
- 2) Distinguish business ethics in eye care;
- 3) Recognize difficult practitioner/patient relations;

Description: Ethics in medicine is a pillar of the profession. This symposium will review some ethics cases and provide for a participant question and answer session.

Sports Vision Symposium

Moderator: Daniel Laby, MD
Technical Level: I
Audience: All Eye Care Professionals

Prerequisites: Basic Ocular Anatomy

Objectives: At the completion of this course, the attendee will be able to:

- 1) Discuss the use of automated pupillometry to detect concussion
- 2) Assess vision findings in professional baseball;
- 3) Debate diagnostics for an individually designed sports vision training program;

Description: Sports vision is a growing subspecialty in vision care. This symposium will review designing a sports vision program, pupillometry for concussion detection and vision in baseball.

The 2012 CLAO/CLAO ERF program is supported in part by educational grants from the following companies:

- Abbott Medical Optics, Inc.
- Bausch and Lomb, Inc.
- Vistakon®, Division of Johnson & Johnson Vision Care, Inc. (“JJVCI”)
- with funds provided by JJVCI.



Kesia Alexander, PhD - Dr. Alexander received a PhD in Analytical Chemistry from Howard University. She has been with the Food and Drug Administration for over 15 years where she is currently a Deputy Director in the Division of Ophthalmic, Neurological and Ear, Nose and Throat Devices (DONED).



Charles R. Clavet, MS - My interest over the past 20 years has focused on regulatory issues in microbiology related to medical devices, in-vitro diagnostics and important food related public health concerns. Present projects include the detection of viruses in foods utilizing high throughput technologies and the effect of contact lenses on disinfection activity of multipurpose contact lens solutions.



Malvina B. Eydelman, MD - Dr. Eydelman received her M.D. degree from Harvard Medical School and a Doctorate in Health Sciences and Technology from Massachusetts Institute of Technology (M.I.T.) in 1991. In 1995, Dr. Eydelman joined FDA. For the last 16 years, as an Expert Medical Officer, Senior Medical Advisor and Director of the FDA's Division of Ophthalmic, Neurological and Ear, Nose and Throat Devices (DONED), Dr. Eydelman has been involved in all aspects of assuring safety and effectiveness of ophthalmic medical devices. Dr. Eydelman's broad ophthalmic interests have resulted in a United States Patent and numerous publications.



Stefanie Hennigfeld, MA - Co-Founder of DynamicEye, Cologne, Germany, was trained by Sabine in 2004 and has a vision therapy practice in Erfstadt, near Cologne, www.durchblick-haben.de. The practice is part of a healthcare center with doctors from many different fields. Stefanie is instructor at the Eye-fitness Academy, member of the AOA and in her practice she is working mainly with children and young adults.



Dianne Anderson, OD, FAAO - Dr. Anderson has a Bachelor of Science degree in biology from Rockford College and is a graduate of Indiana University School of Optometry. She is a fellow of the American Academy of Optometry and a member of the American Optometric Association's Cornea and Contact Lens Section. Dr. Anderson specializes in contact lens fittings. This includes soft, rigid gas permeable and hybrid lenses. Her major area of interest lies in keratoconus and post-surgical contact lens fits such as corneal transplants.



Col. Jeffery M. Cleland, MS, OD, MBA, FAAO - Dr. Cleland is originally from Washington State and began his academic life at Central Washington University where he obtained a Bachelor of Science in Biology in 1988. He then continued his education at Pacific University College of Optometry with an Army Health Professions Scholarship. Dr. Cleland Graduated with a doctor of optometry in May of 1993.



Warren "Chip" Fagadau, MD - Dr. Chip Fagadau specializes in the surgical and medical management of vision disorders related to cataract and the corneal surface; advanced vision correction services, including TECNIS Multifocal and Crystalens implantation; as well as custom LASIK. Trained at UT Southwestern, Yale, and Johns Hopkins, Dr. Fagadau is currently a clinical assistant professor at UT Southwestern Medical School (affiliated with the UT Southwestern Laser Center for Vision). Dr. Fagadau is President-Elect of CLAO.



Takahiro Hiraoka, MD - Dr. Hiraoka is an Assistant Professor in the Department of Ophthalmology, Institute of Clinical Medicine, University of Tsukuba, Ibaraki, Japan. He graduated from University of Tsukuba School of Medicine in 1993 and completed postgraduate training in 1999. In 2005, he assumed the present post.



Penny A. Asbell, MD, FACS, MBA - Dr. Asbell is currently Professor of Ophthalmology at Mount Sinai School of Medicine and Director of the Cornea Service. She has extensive interest and research experience in cornea, especially in cornea surgery, ocular surface disease, and infectious keratitis and has published over 200 peer-reviewed articles and has lectured worldwide. She recently was honored by the American Academy of Ophthalmology with the Life Achievement Honor Award.



Paulo Ricardo de Oliveira, MD - President of the International Medical Contact Lens Council and President of Deliberative Council of SOBLEC.



Desmond Fonn Dip. Optom, M. Optom. - Desmond Fonn is Professor Emeritus and the founding Director of the Centre for Contact Lens Research at the School of Optometry, University of Waterloo, Waterloo, Ontario, Canada. He is a graduate of the School of Optometry in Johannesburg, South Africa and the University of New South Wales in Sydney, Australia where he also served as a consultant for the Cornea and Contact Lens Research Unit. He currently serves as Editor-In-Chief of Eye & Contact Lens.



Victoria Hitchins, PhD - Dr. Hitchins is a Research Microbiologist for the FDA/Center for Devices and Radiological Health. She received her MS and PhD in Microbiology at Michigan State University. Her NIH Postdoctoral Fellow (Biochemistry) was completed at Princeton and University of Kentucky. Research Fellow: Department of Medicine, University of Kentucky.



Joseph T. Barr, OD, MS, FAAO - Joe Barr, OD, MS, FAAO received a Doctor of Optometry degree and Master's degree in Physiological Optics and a residency certificate in Contact Lenses from The Ohio State University College of Optometry. He is an emeritus professor of Optometry and Vision Science, The Ohio State University, where he was also Associate Dean for Clinical Services and Professional Program until 2007. He was also the Director of the Collaborative Longitudinal Evaluation in Keratoconus Photography Reading Center funded by NEI. Currently he is the VP of Global Clinical & Medical Affairs and Professional Services Vision Care at B&L.



Deepinder K. Dhaliwal, MD, LAc - Dr. Dhaliwal is an Associate Professor of Ophthalmology at the University of Pittsburgh, School of Medicine. She is Director of the Refractive Surgery Service, Director of the Laser Vision/Aesthetic Center, Director of UPMC Monroeville, and is Co-Director of the Cornea Service and Cornea Fellowship. She founded and is the director of the Center for Integrative Eye Care which is currently investigating the role of acupuncture in treating certain eye diseases.



S. Lance Forstot, MD, FACS - S. Lance Forstot, MD, FACS, graduated from Johns Hopkins Medical School and was a resident in Ophthalmology at the University of Florida. In 1982, Dr. Forstot went into private practice establishing Corneal Consultants of Colorado. He continues teaching as a full Clinical Professor of Ophthalmology at the University of Colorado Medical School. Dr. Forstot has been a member of CLAO since 1976, a Past President, and is on the Board as Executive Vice President. He also serves on the CLAO-ERF Board.



Joseph C. Hutter, PhD, is a chemical engineer and reviewer in the Division of Neurological, Ophthalmic, and Ear Nose and Throat Devices in the Office of Device Evaluation, Center for Devices and Radiological Health, FDA. He has a M.S. and Ph.D. in chemical engineering from Penn State and a B.S.Ch.E. from the University of Florida.



Mark Byrne, PhD - Dr. Mark Byrne is the Daniel F. & Josephine Breeden Distinguished Associate Professor at Auburn University and co-founder and chief technical officer of OcuMedic, Inc., a drug delivery company. He is a recognized leader in the fields of biomaterials engineering, controlled therapeutic delivery, polymer engineering, and biomedical devices. Dr. Byrne holds a BS in Chemical Engineering/Biomedical Engineering from Carnegie Mellon University and MS and PhD degrees in Chemical Engineering from Purdue University.



Peter C. Donszhik, MD - Dr. Donszhik is a Clinical Professor of Ophthalmology at the University of Connecticut Health. He received his Doctor of Medicine from New York Medical College. His ophthalmology residency was at Mount Sinai Hospital in New York which was followed by a fellowship in corneal and external disease at the Massachusetts Eye and Ear Infirmary in Boston. Dr. Donszhik is currently serving as Chair of the JACHPO Education and Research Foundation. He is a past president of CLAO, JCAHPO and the IMCLC.



Gary N. Foulks, MD, FACS - Dr. Foulks is Emeritus Professor of Ophthalmology in the Department of Ophthalmology and Visual Sciences of the University of Louisville School of Medicine. Dr Foulks is presently the Editor-in-Chief of The Ocular Surface, the 2003 Whitney Sampson Lecturer and the 2005 recipient of the Castroviejo Medal.



Deborah S. Jacobs, MD - Deborah S. Jacobs, MD, a specialist in cornea and external eye disease and cataract, is currently the Medical Director at the Boston Foundation for Sight, Needham, MA. She is currently an Assistant Clinical Professor of Ophthalmology at Harvard Medical School and Part-time Faculty at MEEI Cornea Service. Dr. Jacobs is the Chair of CLAO's Scientific Programs.



Alan N. Carlson, MD - Dr. Carlson serves as Chief of the Corneal and Refractive Surgery Services at the Duke Eye Center where his research interests and clinical emphasis largely specializes in laser vision correction surgery, cataract surgery, corneal transplantation and the prevention of surgical complications. A leader in his field, Carlson is credited with starting the Duke Center for Vision Correction in 1996, and building this program to a nationally recognized university program for laser and vision correction surgery.



Donald J. Doughman, MD - Dr. Doughman received a degree in Music Education from Drake University and graduated from the University of Iowa College of Medicine. He serves as the Medical Director of the Minnesota Lions Eye Bank and is Chief of Ophthalmology at the Veteran's Administration Medical Center.



Michael H. Goldstein, MD, MBA - Dr. Goldstein is Co-Director of the Cornea Service at the New England Eye Center/ Tufts Medical Center in Boston where he is an Assistant Professor of Ophthalmology at Tufts University School of Medicine. Dr. Goldstein currently serves as President as CLAO. He is also the President for the Massachusetts Medical Society and the Vice President for the Tufts Medical Center Medical Staff. In addition, he is the Chair of the AAO's Cornea POC Panel and teaches the cornea section for the AAO's board review course. He, also, currently serves as team ophthalmologist for the Boston Celtics.



Bennie H. Jeng, MD - Dr. Jeng is currently an Associate Professor of Ophthalmology and Co-Director of the Cornea Service at the University of California San Francisco. He is also Chief of the Department of Ophthalmology at the San Francisco General Hospital, and he is the Director of the Francis I. Proctor Foundation/UCSF Cornea Fellowship Program. Dr. Jeng is an active member on numerous committees for AAO and the Association for Research in Vision and Ophthalmology.



David S. Chu, MD - Dr. Chu received his MD from New York University School of Medicine. He completed his residency at New York Medical College and fellowship in Ocular Immunology at Massachusetts Eye and Ear Infirmary of Harvard Medical School. Currently, he is Associate Professor of Ophthalmology and Associate Director of Corneal and Refractive Surgery Division at Institute of Ophthalmology and Visual Science of New Jersey Medical School of UMDNJ. He serves as Medical Director of Lions Eye Bank of New Jersey and Midwest Eye Banks. He is also the Team Ophthalmologist to the New York Jets.



Dr. William T. Driebe, Jr., MD - Dr. Driebe is chairman of the University of Florida Department of Ophthalmology. His areas of expertise include cornea and external disease and contact lenses. He completed his residency at the University of Florida and then completed his cornea fellowship at the Bascom Palmer Eye Institute. He is a past president of CLAO and also a past program chair for CLAO. He is currently the program chair for the CLAO Educational Research Foundation.



J. Angelo Green, PhD - Dr. Green received his B.S., with honors, in chemistry and PhD in molecular biology from the University of Massachusetts at Amherst. He spent five years at the National Institutes of Health as a Research Fellow. He joined the Food and Drug Administration (FDA) in 2009 as an FDA Commissioner's Fellow. Dr. Green is currently a Scientific Reviewer at the Center for Devices and Radiological Health in the Office of Device Evaluation.



Lynette K. Johns, OD, FAAO - Dr. Lynette Johns has been the senior optometrist at the Boston Foundation for Sight since 2005. She is a graduate of the New England College of Optometry where she also completed a residency in cornea and contact lenses. She is adjunct clinical faculty at the New England College of Optometry. Dr. Johns is a fellow of the American Academy of Optometry and a fellow of the Scleral Lens Education Society.



Joseph B. Ciolino, MD - Dr. Ciolino serves on Harvard Medical School's full time faculty at MEEI. After graduating from Boston College, he obtained his medical degree from Georgetown University School of Medicine, and completed an Internal Medicine internship at Brown University and his ophthalmology residency at Albany Medical College, where he served as Chief Resident in his final year.



Sami G. El Hage, OD, PhD, DSc - Dr. El Hage received his O.D. degree from the Pennsylvania College of Optometry, and his Ph.D. and D.Sc. from the University of Paris. He is a former student and colleague of Professor Yves Le Grand in Paris, France. He has taught at the University of Paris and the University of Houston, College of Optometry, where he was a tenured full professor and graduate faculty at the age of 33. He has lectured extensively nationally and internationally.



Takashi Hamano, MD - Dr. Hamano served as the Director of Ophthalmology Osaka S.I. Hospital from 1988-1999. He was the Director of the Dry Eye Center from 1996-2001 and has been at Hamano Eye Clinic since 1999. Dr. Hamano is a Council member of Japan Dry Eye Society and Council member of Japan Contact Lens Society.



Charlotte Joslin, OD, PhD - Dr. Joslin is currently Director of the Contact Lens Service and Associate Professor at the University of Illinois at Chicago, Department of Ophthalmology and Visual Sciences and a Department Affiliate, Epidemiology and Biostatistics in the UIC School of Public Health. Dr. Joslin received her undergraduate degree from Illinois Wesleyan University, professional degree from The Ohio State University, and completed her residency training at the VA Chicago Healthcare, West Side and Hines Divisions. She received her PhD in epidemiology at the UIC School of Public Health.



Ayfer Kanpolat, MD - Professor Ayfer Kanpolat, Ankara University, Faculty of Medicine, Department of Ophthalmology, Director of the Cornea and Contact Lens Service- Anterior segment surgeon. Vice President of the ECLSO (2008-2011), Dr. Kanpolat has organized several local and international courses and meetings on Contact Lenses, ECLSO Congresses at 2000 and 2011 in Turkey. Invited as a speaker to International World Ophthalmology Congresses. She has lots of national and international publications in peer-reviewed journals about cornea, contact lenses and external eye diseases.



Florence Malet, MD - Dr. Malet is specialized in Cornea and Anterior segment diseases in Bordeaux University Hospital where she is responsible of the Unit of Contact lens fitting .She is past President of the French Contact Lens Society and past –president of the ECLSO since January. She is currently director of the French University Educational Diploma of Contactology. She has published, in May 2009, a book on "Contact Lenses" presented at the French Ophthalmologic Society (SFO).



Ubirajara Moulin de Moraes, MD - Dr. Moraes is an ophthalmologist specializing in contact lens since 1980. He is the current Finance Director of the Brazilian Contact Lens, Cornea and Refraction Society (SOBLEC) and a member of Brazilian Ophthalmology Council (CBO).



Tania Schaefer, MD - Dr. Tania Schaefer is an ophthalmologist, Coordinator of the Contact Lens Service at the Clinical Hospital, in Curitiba, Brazil.



David Kirschen, OD, PhD - Dr. Kirschen is a licensed Optometrist as well as a Vision Scientist. He received his Doctor of Optometry degree and PhD in Physiological Optics from the University of California at Berkeley. For last 18 years Dr. Kirschen has been Team Optometrist for several professional sports teams including the LA Dodgers, Boston Red Sox, NY Mets and LA Kings among others. Dr. Kirschen is a Professor of Optometry and Visual Science at the Southern California College of Optometry. He has been the Chief of Binocular Vision and Orthoptic Services at the Jules Stein Eye Institute at UCLA for the last 27 years.



Stephen McLeod, MD - Dr. McLeod graduated from Dartmouth College in 1985, and received his Doctor of Medicine degree from the Johns Hopkins University School of Medicine in 1989. He completed residency training in ophthalmology at the Illinois Eye and Ear Infirmary of the University of Illinois at Chicago in 1993, and fellowship training in cornea, external disease and refractive surgery at the Doheny Eye Institute of the University of Southern California, Keck School of Medicine.



Amy C. Nau, OD, FAAO - Dr. Nau is the Director of optometric and low vision services for the UPMC Eye Center, and the founder of the Sensory Substitution Laboratory. She is the director of the optics, contact lens and refraction course and the director of the Eye Center optical department. Her research interests primarily center on artificial vision technologies for the blind.



Muriel M. Schornack, OD, FAAO - Dr. Schornack received her Doctor of Optometry degree from the Illinois College of Optometry, and completed a residency in Primary Care Optometry at the Illinois Eye Institute. She is currently a consultant in the Department of Ophthalmology at the Mayo Clinic in Rochester, Minnesota, and holds the rank of Assistant Professor of Ophthalmology in the Mayo Clinic Medical School. She is the director of the contact lens service at Mayo, and began a scleral lens practice at Mayo in 2006. She has fit more than 300 eyes with the devices.



Bruce H. Koffler, MD - Dr. Koffler is the Founder and Medical Director of Koffler Vision Group in Lexington, Kentucky. Dr. Koffler is a fellowship trained ophthalmic surgeon who completed his training in Cornea and External Disease at the Georgetown University Center for Sight in Washington, D.C. in 1979. He has served on the CLAO Board of Directors in several capacities since 1995 and was elected President of CLAO in 2003.



Edward Meier, MD - Dr. Meier graduated from medical school at the University of Kentucky and 1998 and completed residency at the University of South Carolina in 2002. He currently practices with Eye Care Associates of Greater Cincinnati in Mason, OH. He has research interests in contact lens, dry eye disease, ocular allergy, and blepharitis.



Sabine Nebendahl, MA - Sabine Nebendahl is Co-founder of DynamicEye and works near Cologne, Germany. She has been a vision trainer since 2001 and works with both individuals and groups. In the past six years, she has conducted education series for vision trainers at her Eye Fitness Academy. Sabine also participated in courses of behavioral optometry held by Stefan Collier.



Boris Severinsky, MOptom - Mr. Severinsky is currently the head of Contact Lens Clinic and Chief of Optometry Service in the Refractive Surgery Institute in the Department of Ophthalmology at Hadassah University Hospital in Jerusalem. He also runs a special contact lens practice. Since 2001 he has been specializing in scleral contact lens fitting.



Regis P. Kowalski, MS, [M]ASCP - University of Pittsburgh, Pittsburgh, PA; Associate Professor of Ophthalmology; Executive Director, Charles T. Campbell Ophthalmic Microbiology Laboratory; Clinical Ophthalmic Microbiologist (University of Pittsburgh Medical Center). Active member of ARVO, OMIG, ISOPT, CLAO, and EVER. Numerous peer-reviewed chapters and manuscripts involving clinical ophthalmic microbiology and anti-infective drug discovery.



René Mély, MD - Dr. René Mély received his medical degree from the University of Strasbourg (France) in 1981 and completed his residency in ophthalmology at the University Hospital in Homburg (Germany). Dr. Mély has been in private practice since 1992. He served as a Secretary General of the European Contact Lens Society of Ophthalmologists (ECLSO) from 2003 to 2011 and is President elect.



Gary Orsborn, OD, MS, FAAO - Dr. Gary Orsborn is Director, Medical Affairs – Global Vision Care. Since joining Bausch & Lomb in 1985, his responsibilities in the U.S. and international divisions have included management of field clinical studies of marketed and developmental contact lenses and care products, development of practitioner educational materials, world-wide professional relations, and marketing of vision care products.



Megan Shoff, PhD - Present projects include influence of device design on infection control, the effect of contact lens materials on disinfection activity of multipurpose contact lens solutions (MPS), and the development of a protocol for testing the efficacy of contact lens MPS against Acanthamoeba.



Daniel Laby, MD - Dr. Laby has been trained in Ophthalmology and specializes in Pediatric Ophthalmology and Strabismus. Dr. Laby attended the George Washington University School of Medicine, receiving his medical degree in 1987. He completed his residency in 1992 and a fellowship at UCLA in 1993. Dr. Laby has served as staff ophthalmologist for several professional sports teams including the Boston Red Sox, LA Dodgers, NY Mets and LA Kings among others.



Anne M. Menke, RN, PhD, is Risk Manager for OMIC (Ophthalmic Mutual Insurance Company), where she performs ophthalmic claims analyses in order to help ophthalmologists promote patient safety and reduce the risk of medical malpractice lawsuits.



K. Scott Phillips, PhD - Lieutenant Commander K. Scott Phillips is a commissioned officer in the United States Public Health Service (PHS) assigned to FDA in the Division of Chemistry and Materials Science, Office of Science and Engineering Laboratories, Center for Devices and Radiological Health. He performs research and provides regulatory consults to ensure the safety and effectiveness of medical devices. Phillips has more than 10 years experience as a bioanalytical chemist and is applying his expertise to solve regulatory science challenges at the biointerface of medical devices.



Marcelo Sobrinho, MD - Professor of Ophthalmology – Catholic University of Campinas, São Paulo State, Brazil; Head of the Department of Ophthalmology – Catholic University of Campinas, São Paulo State, Brazil; and Ophthalmologist of the Contact Lens Department – Federal University of São Paulo, Brazil.



David W. Lamberts, MD - Dr. Lamberts received his undergraduate degree from Michigan State University before earning his Doctor of Medicine from Wayne State University School of Medicine. For over 35 years, Dr. Lamberts has worked in the field of ophthalmology at clinics and facilities across the country. From 2003-05 he was President of the Contact Lens Association of Ophthalmologists (CLAO). In 2005, CLAO appointed him Commissioner to the Joint Commission on Allied Health Personnel in Ophthalmology (JCAHPO).



Mohinder M. Merchea, OD, PhD, MBA, FAAO, FBCLA - Dr. Mohinder Merchea is Director, Medical Affairs – North America, Vision Care. His research and clinical experience include refractive surgery, keratoconus, topography, wavefront aberrations, and contact lenses, and he has over 14 years of experience in medical device human clinical trials. Dr. Merchea is a Diplomate in the Cornea & Contact Lens Section of the American Academy of Optometry and a Fellow of the British Contact Lens Association, and is a member of the American Optometric Association and the Association for Research in Vision and Ophthalmology.



Roberto Pineda, MD - Dr. Pineda completed his medical degree at the University of Minnesota Medical School, and was a recipient of the Howard Hughes NIH-HHMI Research Scholars Program at the Cloisters in Bethesda Maryland where he worked with retinoblastoma cell lines at the National Eye Institute. Currently he is the Director of Refractive Surgery at the Massachusetts Eye and Ear Infirmary, and former Division Chief of Ophthalmology at the Brigham and Womens Hospital.



Harold Stein, MD - Dr. Stein has been identified with contact lenses since he began practice in the same year that Wichterly invented the soft contact lenses and revolutionized contactology. He has been identified with CLAO since its inception and has held many offices including President. He has authored or co-authored more than 35 books and individual chapters and contributed to over 200 peer review journals. He is currently Professor of Ophthalmology at the University of Toronto and practices at the Bochner Eye Institute.



Norman E. Leach, OD, MS, FAAO, FOAA - Dr. Leach received his O.D. and M.S. degrees from the University of Houston, College of Optometry. Dr. Leach currently holds a Clinical Professor of Optometry position at the University of Houston College of Optometry where he also serves as Director of the Cornea and Contact Lens Residency Program and Associate Director of the Texas Eye Research and Technology Center.



Orestes Miraglia, MD - Dr. Miraglia is an ophthalmologist and Director in a private clinic located at Belo Horizonte, MG, Brazil. He is also an instructor of refractometry and contact lenses in a specialization course of ophthalmology of the Faculdade de Ciências Médicas de MG, a past President of the Brazilian Society of Contact Lens and Cornea (SOBLEC) and is currently one of the Scientific Directors of SOBLEC.



Eric G. Romanowski, MS - Mr. Romanowski is Research Director of the Charles T. Campbell Ophthalmic Microbiology Laboratory at the UPMC Eye Center at the University of Pittsburgh. His research interests include the discovery and development of new antiviral and antibacterial agents for ophthalmic use as well as the pathogenesis of viral and bacterial infections of the eye.



Thomas L. ("Tim") Steinemann, MD - Dr. Steinemann is an ophthalmologist and corneal and external eye disease specialist at MetroHealth Medical Center, Cleveland, Ohio. He is also a full-time faculty member and Professor of Ophthalmology at the Case School of Medicine, Case Western Reserve University, Cleveland, Ohio. He has been appointed as a member of the Ophthalmic Devices Panel of the Medical Devices Advisory Committee, Center for Devices and Radiological Health, U.S. Food and Drug Administration.



Cesar Lipener, MD - President of SOBLEC - Contact Lens, Cornea and Refractometry Brazilian Society Head of Contact Lens Section at Federal University of Sao Paulo, Brazil.



Nobuhisa Mizuki, MD - Dr. Mizuki is the professor and chairman of the Department of Ophthalmology at the Yokohama City University School of Medicine, where he received an MD (1989) and PhD (1993). His laboratory is focused on discovering the disease susceptibility genes of uveitis, high myopia, glaucoma, and other ophthalmological conditions by using molecular biological techniques. The genome-wide association study on Behçet's disease was published in Nature Genetics (2010). Dr. Mizuki has authored or co-authored 100 books and approximately 300 journal articles related to ophthalmological research.



Arnaud Sauer, MD - Ophthalmologie, Hôpitaux Universitaires de Strasbourg, Nouvel Hôpital Civil, BP 426, 67091, Strasbourg Cedex, France. Ophthalmologist with a particular interest in infectious and inflammatory diseases. Coordinator of the French Study Group for Contact Lenses Related Microbial Keratitis. PhD, Microbiology department of Strasbourg University.



Ralph P. Stone, PhD - Dr Stone retired from Alcon Laboratories in 2006 after 25 years in research and development of contact lens and lens care systems. Many of the care systems at B&L, Allergan (AMO) and Alcon were influenced during Dr Stone's tenure in the field. Dr Stone continues to write and lecture on contact lenses, lens care and compliance. He is active in the development of testing standards for lenses and care systems under the American National Standards Institute, and the International Standards Organization.



Harvard Sylvan, OD - Harvard Sylvan, OD, is currently the Director of Professional Relations at CooperVision. Before joining CooperVision, Dr. Sylvan was on the staff at Opticare Eye Health & Vision Center, a large ophthalmology practice in Waterbury, CT. He has been a consultant for several contact lens companies, has been involved in contact lens related clinical investigations, was in private practice and was a clinical instructor at SUNY College of Optometry.



Kiyoshi Watanabe MD - Dr. Watanabe attended the Osaka University Medical School, Dept. of Ophthalmology from 1988-1991. He worked at Hamano Eye Clinic from 1991-1995 and has owned Watanabe Eye Clinic since 1995.



Shachar Tauber, MD - Shachar Tauber, MD, Mercy Eye Specialists, is Director of Cornea and Refractive Surgery and Director of Ophthalmology Research. He is a recipient of a Department of Defense grant to study and develop a contact lens drug delivery system for corneal wound repair of those military personnel injured in combat.



Geunyoung Yoon, PhD - Professor Yoon received his PhD degree from Osaka University, Japan in 1998 in High Power Laser and Optics and is currently an Associate Professor of Ophthalmology and the Institute of Optics at the University of Rochester. His research focus is on physiological optics, specifically understanding optical quality of the eye, adaptive optics and customized ophthalmic optics for vision correction. His recent research projects include neural adaptation in highly-aberrated eyes, accommodation and presbyopic correction, tear film metrology for dry eye research and high-resolution intraocular imaging using OCT and MRI.



Rolando Toyos, MD - Dr. Toyos is a graduate of Berkeley and Stanford University. He received his medical degree at the University of Illinois. He completed his ophthalmology residency at Northwestern University and Children's Hospital in Chicago. Dr. Toyos has authored several Medical books and many research papers. He specializes in Cataract, Glaucoma, LASIK, and Dry Eye.

REVIEW OF FIFTEEN YEARS OF CONTACT LENS FITTING IN A UNIVERSITY HOSPITAL IN BRAZIL

Author: Marcelo Sobrinho, MD
Purpose: This study aims to review all of the fitted contact lenses (C.L.) during the first fifteen years of the C.L. Department of the Catholic University of Campinas, São Paulo State, Brazil. It is an university hospital, therefore the profile of the patients is expected to be different from private practices.
Methods: A retrospective review of the charts of 703 patients (1074 eyes) who were fitted in our C.L. department in the last fifteen years was conducted. We investigated the sex, age, diagnosis at the time of fitting, lens fitted and visual acuity with spectacles, and with C.L.
Results: The most prevalent diagnosis was compound myopic astigmatism 366 (34,07%), followed by keratoconus 270 (25,13%), myopia 138 (12,84%) and compound hypermetropic astigmatism 68 (6,33%).
Conclusion: Unlike private practices, but similar to other studies in university hospitals, we had a great number of special fittings (including corneal ectasias, e.g. keratoconus). In our study, compound myopic astigmatism was the most prevalent diagnosis, followed by keratoconus.

DESCRIPTIVE ANALYSIS OF THE TYPES AND PARAMETERS OF CONTACT LENSES FITTED IN EACH EVOLUTIVE DEGREE AND MORPHOLOGY OF KERATOCONUS

Author: Leticia Helena Lunardi, MD
Purpose: To describe the types and parameters of contact lenses (CL) fitted in each evolutive degree and morphology of keratoconus.
Methods: The types of CL fitted in 185 keratoconus patients (325 eyes) were assessed retrospectively. The keratoconus was classified by keratometry and morphology. All initial tests were with rigid gas-permeable CL (RGPCL) moncurve, if they failed other formats and types of CL were tested.
Results: In regard to form, the CL more fitted were moncurve (45%) and bicurve (34%) in oval cones, while in the nipple cones were the bicurve (53%) and moncurve (32%). However when we consider the degree of keratoconus, the moncurve CL (51%) were the most adapted from mild to moderate degrees, and bicurve (55%) between the serious and advanced degrees.
Conclusion: Our results show that CL moncurve seem to bring more benefits in the mild to moderate keratoconus and the oval cone. While the CL bicurve benefit most advanced and severe cases, probably due to asphericity of the cornea.

RATE OF DISINFECTION OF VARIOUS MULTIPURPOSE SOLUTIONS AGAINST CLINICALLY RELEVANT BACTERIAL SPECIES

Author: Patricia Walsh, BS
Purpose: To evaluate the disinfection efficacy of Multipurpose Solutions (MPS) against clinically relevant bacterial species at reduced exposure times.
Methods: Using a modification of the ISO 14729 standard, several MPS were evaluated against clinically relevant bacteria (methicillin-resistant Staphylococcus aureus, Haemophilus influenzae, Streptococcus pneumoniae, Stenotrophomonas maltophilia), for disinfection efficacy at reduced exposure times.
Results: The ISO 14729 standard was used as a reference for this testing. Disinfection efficacy showed a time dependency for some MPS, increasing with exposure from 10 through 60 minutes, while others showed less effect. Additionally, these organisms showed different susceptibilities to the various MPS.
Conclusion: The rate of disinfection of a given MPS can vary, depending on the challenge organism. These observations support using non-compensatory organisms to evaluate differences in efficacy among various MPS. The results do not suggest a benefit for reducing the current disinfection regimen recommended by the manufacturer's instructions.

CONTROLLED, EXTENDED RELEASE OF COMFORT AGENTS FROM CONTACT LENSES

Author: Charles J. White, MS
Purpose: Discomfort in lens wear is described as the most important unsolved issue within the lens industry. Current commercial approaches do not ensure user comfort, particularly at the end of wear, leading to consumer dissatisfaction and discontinuation of lens wear.
Methods: We have produced daily disposable and continuous, extended wear contact lenses to incorporate and controllably release high molecular weight comfort agents over any duration of lens wear by creating memory sites within the lenses.
Results: By controlling the diversity and concentration of functional monomers added to commercial lens formulations, we gained a high degree of control over the release rate of the comfort agents hyaluronic acid (HA) and hydroxypropyl methylcellulose (HPMC) at approximately constant and linear rates well beyond the respective duration of lens wear.
Conclusion: This technology offers the most practical and effective method of ensuring comfort in contact lens wear by potentially preventing the occurrence of discomfort.

REDUCTION IN AXIAL LENGTH AFTER LONG-TERM OVERNIGHT ORTHOKERATOLOGY LENS WEAR

Author: Larry Hou-Yan Ng, OD, FAAO, FBCLA
Purpose: To report two unusual cases of reduction in axial length after long-term overnight orthokeratology lens wear in two Chinese patients.
Methods: Two observational case reports of a 19-year old female myope, L.J.L, and a 17-year old male myope, T.C.M, with both 8 years' experience in wearing orthokeratology lenses overnight, were found to have reduced axial lengths during their regular orthokeratology aftercare consultations. Both patients were well adapted to the orthokeratology lenses without any remarkable complications during their lens wear history. The baseline axial length on L.J.L was found to be OD: 24.69mm and OS: 24.31mm while the post-treatment findings (after 8 years of orthokeratology lens wear) were OD: 24.39mm and OS: 24.02mm. Likewise, the baseline axial length on T.C.M was found to be OD: 26.06mm and OS: 25.96mm while the post-treatment findings (after 8 years of orthokeratology lens wear) were OD: 25.93mm and OS: 25.90mm. All the axial length findings were measured by the IOLMaster (Carl Zeiss, Germany).
Results: The possible etiologies and clinical significance for the above post-orthokeratology clinical findings are discussed.
Conclusion: Recent studies show that orthokeratology lens wear can have a myopia control effect in children by the retardation of axial length growth. However, from the above cases, there may be a myopia reversing effect as well after long-term orthokeratology procedures.

IN VIVO AND IN VITRO EXTENDED DRUG RELEASE FROM THERAPEUTIC DAILY DISPOSABLE CONTACT LENSES

Author: Arianna Tieppo, PhD
Purpose: An immense need exists for drug delivery to the eye at a constant rate over an extended period of time to provide the necessary therapeutic dose, thereby eliminating the application of topical eye drop medication.
Methods: We have designed and synthesized novel therapeutic daily disposable contact lenses capable of tailorable loading and controlled release of small MW molecules (NSAID and anti-histamine) via memory created within the lens structure.
Results: By increasing the diversity of functional monomers at a fixed monomer/template ratio or optimizing the ratio within the network, lenses were designed to release ketotifen fumarate and diclofenac sodium at different rates. A relatively constant tear film concentration of drug was measured for the duration of wear in a New Zealand white rabbit exhibiting ~100 times greater bioavailability than eye drops.
Conclusion: This technology offers a more effective and efficient method of ocular therapy by providing a constant and optimal dose of medication.

NEW OPTION IN CONVENTIONAL SILICONE-HYDROGEL CONTACT LENSES: THE BRAZILIAN EXPERIENCE

Author: Marcelo Sobrinho, MD
Purpose: To evaluate the clinical performance of a new conventional silicone-hydrogel contact lens, in spherical and toric designs.
Methods: We fitted the Perfect SH and Perfect Toric SH (World Vision Ophthalmic, Brazil) in 17 patients (33 eyes). The material of this contact lens is the Filcon II (hydration: 74%; Dk: 60 x 10-11@35C). We evaluated the sex, age, if the patient had tried to wear contact lenses before, visual acuity with spectacles and with contact lenses, spherical equivalent of the refraction, design of the lenses fitted (between spherical and toric), keratometry, the base-curve of the lenses fitted, and if the patients were satisfied with the new lenses.
Results: Fourteen subjects were female (82%), and 3(18%) were male. The mean age was 27,71 (± 7,62). Eighty-two percent had previous contact lenses experience. In our series, twenty-four eyes were fitted with toric lenses (73%), and nine (17%) with spherical lenses. The visual acuity with spectacles was 0,31 (logMAR), and with contact lenses were 0,25(logMAR). Eighty-eight percent of the patients of our series were satisfied.
Conclusion: This new conventional silicone-hydrogel C.L. is a very useful option for contact lens fitting in Brazil

FACULTY FINANCIAL INTEREST DISCLOSURE

Name	Company	Received	Role
Alexander, Kesia			21
Anderson, Dianne	Paragon Vision Sciences	5	12
Anderson, Dianne	ISTA Pharmaceuticals	5	14
Asbell, Penny	CRC-Clinical Research Consultants	8	18
Asbell, Penny	Alcon	8	18
Asbell, Penny	Bausch & Lomb	4	13
Asbell, Penny	Eleven Biotherapeutics	4	13
Asbell, Penny	Pfizer	8	18
Asbell, Penny	R-Tech Ueno	4	13
Asbell, Penny	Tear Science	4	13
Asbell, Penny	Valeant	4	13
Asbell, Penny	Vindico	5	14
Barr, Joseph	Bausch & Lomb	1	10
Byrne, Mark E.	OcuMedic, Inc.	7	11
Carlson, Alan			21
Chu, David	Novartis	8	18
Chu, David	Lux Bio	8	18
Chu, David	Alcon	5	14
Chu, David	Inspire	5	14
Chu, David	Analysis Group	4	13
Ciolino, Joseph	ORA	4	13
Ciolino, Joseph	J & J Vision Care	5	14
Ciolino, Joseph	Curatio CME Institute	5	14
Clavet, Charles			21
Cleland, Jeffery			21
Cook, Alonzo	Semprus BioSciences	1	11
David, Brian	Bausch & Lomb	1	10
de Oliveira, Paulo			21
Dhalwal, Deepinder			21
Danshik, Peter			20
Doughman, Donald			21
Driebe, Jr., William			21
El Hage, Sami			21
Eydman, Malvina			21
Fann, Desmond	CIBA Vision	4	13
Fann, Desmond	Visioneering Technologies, Inc	4	13
Farstot, S. Lance			20
Faulks, Gary	Tearlab, Inc.	4	13
Frucht-Pery, Josef			21
Goldstein, Michael	Eleven Biotherapeutics	4, 7	13
Goldstein, Michael	Innanovate, Inc	7	17
Green, J. Angelo			21
Hamano, Takashi	Koken Co. Ltd.	2	13
Hennigfeld, Stefanie	DynamicEye	6	14
Hilfiker, Tiffany	Bausch & Lomb	1	10
Hiraoka, Takahiro			21

Name	Company	Received	Role
Hitchens, Victoria			21
Hook, Daniel	Bausch & Lomb	1	10
Hutter, Joseph			21
Jeng, Bennie	CROprofessionals	4	13
Johns, Lynette	American Academy of Opticianry	5	14
Johns, Lynette	Contact Lens Spectrum	5	12
Joslin, Charlotte			21
Kanpolat, Ayfer			21
Kirschen, David	Alcon	4	13
Koffler, Bruce	Alcon	5	14, 15
Koffler, Bruce	Bausch & Lomb	5	14, 15
Koffler, Bruce	Johnson & Johnson	5	14, 15
Koffler, Bruce	Merck	5	14, 15
Kowalski, Regis			21
Labby, Daniel	Alcon	4	13
Lamberts, David			20
Leach, Norman			21
Li, Jun	Semprus BioSciences	1	10
Lipener, Cesar			21
Loose, Christopher	Semprus BioSciences	1	11
Lunardi, Leticia			21
Malet, Florence	Abbott	4	16
Malet, Florence	Ciba Vision	6	14
Maziarz, E. Peter	Bausch & Lomb	1	11
McLeod, Stephen			21
Meier, Edward	Vista Pharmaceuticals	5	14
Meier, Edward	Vista Pharmaceuticals	5	12
Meier, Edward	Alcon	5	12
Mely, Rene	CIBA Vision	6	14
Mely, Rene	Johnson & Johnson	6	14
Mely, Rene	Bausch & Lomb	4, 6	13, 14
Menke, Anne			21
Merchea, Mohinder	Bausch & Lomb	1	11
Miraglia Jr., Orestes			21
Mizuki, Nobuhisa			21
Moraes, Ubirajara			21
Nau, Amy			21
Nebendahl, Sabine	DynamicEye	6	14
Ng, Larry			21
Norton, Sue	Bausch & Lomb	1	10
Orsborn, Gary	Bausch & Lomb	1	10
Phillips, Kenneth Scott			21
Pineda, Roberto	Alcon Laboratories	4	16
Romanowski, Eric	Alcon Laboratories	4, 8	13, 18
Romanowski, Eric	Inspire Pharmaceuticals	4	13
Romanowski, Eric	3-V Biosciences	8	18

Name	Company	Received	Role
Romanowski, Eric	Allergan, Inc.	8	18
Sauer, Arnaud			21
Schaefer, Tania			20
Schornack, Muriel			21
Severinsky, Boris			21
Shoff, Megan			21
Skinner, Matt	Semprus BioSciences	1	10
Sobrinho, Marcelo			21
Stein, Harold A.			21
Steinemann, Thomas			20
Stone, Ralph	Alcon Laboratories	4, 6	13, 14
Stone, Ralph	Merck	7	
Sylvan, Harvard	CooperVision	1	10
Tauber, Shachar	Alcon Laboratories	5	16
Tauber, Shachar	Alcon Laboratories	1	10
Tauber, Shachar	Allergan	5	14
Tauber, Shachar	Inspire/Merck	5	14
Tauber, Shachar	Novababy	4	13
Tauber, Shachar	Ocugenics	3, 7	11
Tieppo, Arianna			21
Toyos, Rolando	Dermamed	4, 5, 6	14, 13
Toyos, Rolando	Alcon	4, 5, 6	14, 13
Toyos, Rolando	ISTA	4, 5, 6	14, 13
Toyos, Rolando	Oculus	8	18
Wainsztain, Denise			21
Walsh, Patricia	Bausch & Lomb	1	10
Wang, Hao	Semprus BioSciences	1	10
Watanabe, Kiyoshi			21
White, Charles			21
Wygladacz, Katarzyna	Bausch & Lomb	1	10
Yoon, Geunyoung			21

DISCLOSURE KEY			
Key	Received	Key	Role
1	Salary	11	Management position
2	Royalty	12	Independent contractor
3	Intellectual property rights		(including contracted research)
4	Consulting Fee	13	Consulting
5	Honoraria	14	Speaker
6	Travel grant	15	Teaching
7	Ownership interest (e.g., stocks, stock options, or other ownership interest, excluding diversified mutual funds)	16	Membership on advisory committee or review panel
		17	Board membership
		18	Research Grant
8	Grant	19	Other activities
9	Other	20	Not received in time for printing
10	Employment	21	No disclosure to make

Named Lectureships and Awards

Keynote Speakers

- 1980 Max H. Talbot, MD
- 1981 Max H. Talbot, MD
- 1982 Hon. Albert Gore
- 1984 Whitney G. Sampson, MD
- 1985 Hon. W. Henson Moore
- 1986 Sanford A. Marcus
- 1989 James Sammons, MD
- 1991 C John Tupper, MD
- 1994 William A. Maxwell, MD, PhD
- 1995 Senator Harry Reid
- 1996 Richard L. Lindstrom, MD (Surgical)
- 1997 Marguerite B. McDonald, MD (Surgical)
- 1998 Brien Holden, OD, PhD, OAM
- 2006 H. Dwight Cavanagh, MD, PhD (ERF)
- 2007 Patrick J. Caroline, FAAO, FCLSA (ERF)
- 2008 Oliver Schein, MD, MPH (ERF)
- 2009 Kelly Nichols, OD, PhD (ERF)
- 2010 Perry S. Binder, MD (ERF)
- 2012 Desmond Fonn, Dip. Optom., M. Optom. (ERF)

Everett Kinsey Lecturers

- 1987 Carl Kupfer, MD
- 1988 Irving J. Fatt, PhD
- 1989 Henry Edelhauser, PhD
- 1990 Stephen D. Klyce, PhD
- 1991 Jay Enoch, OD, PhD
- 1992 Robert Mandell, OD, PhD
- 1993 J. W. Costerton, PhD
- 1994 Bernard E. McCarey, PhD
- 1995 Roger W. Beuerman, PhD
- 1996 Edwin M. Stone, MD, PhD
- 1997 Gregory S. Schultz, PhD
- 1998 Steven E. Wilson, MD
- 1999 M. Cristina Kenney, MD, PhD
- 2000 Jean-Marie Parel, PhD

Theodore E. Obrig Lecturers

- 1977 Joseph W. Soper, FCLSA
- 1978 Kenneth Swanson, FCLSA
- 1979 Jack W. Moore, FCLSA
- 1987 Linda J. Rhodes, NCLC
- 1988 Craig W. Norman, FCLSA
- 1989 Fred Danker, FCLSA
- 1990 Michael A. Ward, FCLSA
- 1991 William Winegar, FCLSA
- 1992 Paulette S. Kays, FCLSA
- 1993 Patrick J. Caroline, FAAO
- 1994 Timothy O. Koch, FCLSA
- 1995 Mark P. Andre, FAAO, FCLSA
- 1996 Keith W. Harrison, FCLSA
- 1997 Marcus P. Soper, FCLSA
- 1998 Jean Ann Vickery, FCLSA
- 1999 Phyllis R. Rakow, COMT, FCLSA, NCLC
- 2000 John F. Deering, FCLSA
- 2001 Susan L. Connelly, FCLSA

Richard L. Lindstrom, MD, Lecturers

- 1998 Douglas D. Koch, MD
- 1999 Daniel S. Durrie, MD
- 2000 W. Bruce Jackson, MD
- 2001 Larry F. Rich, MD
- 2002 Jack Holladay, MD
- 2003 Raymond M. Stein, MD
- 2004 Edward Holland, MD
- 2005 Roger Steinert, MD
- 2006 George Waring, MD
- 2007 David R. Hardten, MD
- 2008 Perry S. Binder, MD
- 2009 Eduardo Alphonso, MD
- 2010 Michael B. Raizman, MD
- 2011 David Huang, MD, PhD

Oliver H. Dabezies, Jr., MD, Lecturers

- 2001 William M. Bourne, MD
- 2001 William M. Bourne, MD
- 2002 Peter C. Donshik, MD
- 2003 James E. Key, II, MD
- 2004 William T. Driebe, Jr., MD
- 2005 Scheffer Tseng, MD, PhD
- 2006 James McCulley, MD
- 2007 Elizabeth Cohen, MD
- 2008 James Chodosh, MD
- 2009 H. Dwight Cavanagh, MD
- 2010 Elmer Y. Tu, MD
- 2012 Penny A. Asbell, MD, FACS, MBA

Harold A. Stein, MD, Lecturers

- 2001 Sven Erik G. Nilsson, MD, PhD
- 2002 Irwin Siegel, OD, PhD
- 2003 Frank Holly, PhD
- 2004 Stephen Plugfelder, MD
- 2005 Miguel Refojo, DSc
- 2006 Perry Rosenthal, MD
- 2007 Raymond M. Stein, MD
- 2008 Mark Terry, MD
- 2009 Florence Malet, MD
- 2010 Anthony J. Aldave, MD
- 2012 Stephen D. McLeod, MD

President's Award

- 2007 Melvin I. Freeman, MD
- 2008 Peter C. Donshik, MD

Recipients of the R. Hugh Minor Distinguished Service Award

- 1987 R. Hugh Minor, MD
- 1990 Paul R. Honan, Jr., MD
- 1991 Oliver H. Dabezies, Jr., MD
- 1992 Whitney G. Sampson, MD
- 1993 Harold A. Stein, MD, FRCS-C

- 1994 R. Linsy Farris, MD
- 1995 Herve M. Byron, MD
- 1996 Melvin I. Freeman, MD
- 1997 James E. Key, II, MD
- 1998 Leonard N. Waldbaur, Esq
- 1999 H. Jonathan Kersley, MD
- 2000 Richard G. Lembach, MD
- 2001 Marie Salassi, MD
- 2002 Carol R. Mobley, FCLSA
- 2003 Peter C. Donshik, MD
- 2004 Joseph Spaar, MD
- 2005 John S. Massare, PhD
- 2006 William T. Driebe, Jr., MD
- 2007 David W. Lamberts, MD
- 2008 Zoraida Fiol-Silva, MD

Whitney G. Sampson, MD, Lecturers

- 1991 Oliver H. Dabezies, Jr., MD
- 1992 R Linsy Farris, MD
- 1993 Harold A. Stein, MD
- 1994 Herbert E. Kaufman, MD
- 1995 Perry S. Binder, MD
- 1996 Stephen D. Klyce, PhD
- 1997 H Dwight Cavanagh, MD, PhD
- 1998 James P. McCulley, MD
- 1999 Donald J. Doughman, MD
- 2000 Marguerite B. McDonald, MD
- 2001 William T. Driebe, Jr., MD
- 2002 Michael A. Lemp, MD
- 2003 Gary N. Foulks, MD, FACS
- 2004 William D. Mathers, MD
- 2005 Peter C. Donshik, MD
- 2006 M. Cristina Kenney, M.D., PhD
- 2007 Zoraida Fiol-Silva, MD
- 2008 George A. Stern, MD
- 2009 Edward J. Holland, MD
- 2010 R. Doyle Stulting, MD, PhD
- 2011 Claes H. Dohlman, MD, PhD

OBJECTIVES OF THE SYMPOSIUM AND CONGRESS

The primary objective of the CLAO / CLAO ERF Symposium and Congress is to provide a forum where the latest clinical and basic research in the field of contact lens and anterior segment ocular science may be presented.

To this end, the scope of the CLAO / CLAO ERF Symposium and Congress includes symposia on innovations on contact lens, dealing with the anterior segment of the eye.

Information on Continuing Education Credits will be available with the final program.

Meeting Attire: Business Casual

STATEMENT CONCERNING ANTI-COMPETITIVE CONDUCT

The purpose of this meeting is to discuss and act on matters related to the science of contact lenses and not to discuss or pursue the business interests of any individual or of any other company or business entity. Each person in attendance at this meeting should be aware of and must proceed with caution and alertness towards the requirements and prohibitions of federal and state anti-trust laws. No one should engage in discussions, either at this meeting or in private conversations, of the business plans or contemplated activities of our individual medical entities or the plans and activities of any other company or business entity. We should concern ourselves only with the science of contact lenses as set forth in the agenda for this meeting.

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