

# UCSF Ophthalmology and Proctor Foundation Faculty at the AAO 2017 Annual Meeting

**Richard L Abbott MD**

## **Ophthalmic Premier League: A Team Video Competition on Managing Cataract Complications**

Four teams of the Ophthalmic Premier League (OPL) battle it out in this exciting symposium. Each team will showcase videos of their most challenging cataract cases, after which the audience will vote for their favorites and the judges will decide on the winners. The categories are best entertainer, best video, and best team. The winning team will be awarded the OPL trophy.

Sunday, 2:00PM - 3:30PM, Session: SYM14, Location: THE GREAT HALL

## **Unresolved Challenges in Patient Safety: Finding a Way Forward**

3:15 Introduction and Goals

*Richard L Abbott MD*

5:05 Conclusions and Next Steps

Richard L Abbott MD

Brad H Feldman MD

This interactive symposium will address some of the key elements that impact patient safety on a global level. Brief presentations followed by roundtable discussions will include a full spectrum of patient safety issues, including resident education, procedures in the clinic and operating room, dealing with ministries of health, and the patient perspective. Specific practical steps and recommendations to reduce medical error and improve the quality of patient care will be summarized at the conclusion of the symposium.

Sunday, 3:15PM - 5:30PM, Session: SYM18, Location: 275-277

## **It's All About Management: Efficient Use of an Eye Health Workforce for High-Quality, Affordable Eye Care for All**

8:47 AAO Resources for Improving and Monitoring Patient Safety and Treatment Outcomes

*Richard L Abbott MD*

This symposium will present a range of experiences in competency-based approaches to eye care team development, motivation, career opportunities, and quality of treatment outcomes, to advise attendees on addressing the scarcity of human resources in some communities and countries. Additionally, ways to make eye care more affordable for all will be shared, based on scaled, large project experiences in building sustainable eye care by provision of low-cost, good quality equipment and consumables, price tiers in service provision, and cost-effective interventions.

Monday, 8:30AM - 11:00AM, Session: SYM26, Location: 252-254

**Nisha Acharya MD**

## **Welcome to the Real World of Ophthalmology: Reality 101 for Residents and Fellows**

Residents and fellows will learn about the non-medical aspects of practicing ophthalmology and get their burning questions answered in this interactive forum. Panelists will discuss their personal experiences & highlight various practice options, networking & referrals, advantages/disadvantages of fellowship training & resources to assist them. Learn how membership & active involvement within state ophthalmology societies and the national American Academy of Ophthalmology can benefit you.

Monday, 12:45PM - 1:45PM, Session: SPE20, Location: 252-254

## **The Great Debate: Uveitis**

3:01 Pro: Use FOUR-DRUG Anti-tuberculous Therapy

*Nisha Acharya MD*

Monday, 2:00PM - 3:15PM, Session: SYM39, Location: LA NOUVELLE ORLEANS C

## **Pediatric Uveitis in 2017**

10:15 Introduction

*Nisha Acharya MD*

Pediatric uveitis often poses management challenges. Recently there have been important advances in our understanding of the risk factors, in particular in our ability to predict outcomes of juvenile idiopathic arthritis (JIA)-associated uveitis. This symposium will review differential diagnosis of pediatric uveitis; risk factors for JIA-associated uveitis and best-practice screening; medical treatments, including local corticosteroid treatment, conventional immunosuppression, and biologic drugs; surgical interventions for complications, such as band keratopathy, cataract, and glaucoma; and prognosis and counseling in JIA-associated uveitis for patients and families.

Tuesday, 10:15AM - 11:45AM, Session: SYM49, Location: LA NOUVELLE ORLEANS AB

## **Robert B Bhisitkul MD**

### **Management of the Vitreous for the Anterior Segment Surgeon**

This Skills Transfer course will present management of the vitreous during complicated anterior segment surgery. A variety of vitrectomy techniques will be discussed. Topics will include anterior vitrectomy, pars plana access to the anterior vitreous, and effective use of small-gauge instrumentation. This course is designed to enhance participants' technical skills in handling vitreous during complicated anterior segment surgery.

Monday, 8:00AM - 9:30AM, Session: LAB135A, Location: 356-357, Fee: \$225.00

### **Management of the Vitreous for the Anterior Segment Surgeon**

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Tuesday, 1:00PM - 2:30PM, Session: LAB135B, Location: 356-357, Fee: \$225.00

## **Michele M Bloomer MD**

### **Advanced Refractive Cataract Surgery and Anterior Segment Reconstruction**

This course is designed for surgeons who (1) want to expand their armamentarium for dealing with difficult cataract cases, dislocated IOLs, traumatized eyes, and patients with dysphotopsias and (2) want to achieve better emmetropic results and greater spectacle independence through the use of toric IOLs, limbal relaxing incisions, and multifocal IOLs. The course will cover iris and scleral suture and sutureless fixation techniques for IOLs, chopping techniques, capsular tension rings and stabilization devices, pupil expanders, pupiloplasty and primary closure for iris defects, pars plana vitrectomy, and strategies for dealing with challenging cases. Seipser slip knots and Hoffman pockets will be emphasized.

Monday, 10:30AM - 12:30PM, Session: LAB108B, Location: 356-357, Fee: \$260.00

## **Bertil E Damato MD PhD**

### **Unresolved Challenges in Patient Safety: Finding a Way Forward**

3:35 Patient Perspective: What They Need to Know to Improve Their Safety  
*Bertil E Damato MD PhD*

This interactive symposium will address some of the key elements that impact patient safety on a global level. Brief presentations followed by roundtable discussions will include a full spectrum of patient safety issues, including resident education, procedures in the clinic and operating room, dealing with ministries of health, and the patient perspective. Specific practical steps and recommendations to reduce medical error and improve the quality of patient care will be summarized at the conclusion of the symposium.  
Sunday, 3:15PM - 5:30PM, Session: SYM18, Location: 275-277

## **Thuy Doan, MD**

### **Feasibility of Detecting RNA Expression in Human Vitreous**

Vitreoretinal conditions are often due to a complex interplay of risk factors and molecular events that have not been well elucidated. We aim to qualitatively identify known markers for diabetes: vascular endothelial growth factor (VEGF), interleukin-6 (IL-6), and monocyte chemoattractant protein-1 (MCP-1) in human vitreous specimen from patients at University of California, San Francisco, and San Francisco General Hospital. RNA extraction, reverse transcription, and quantitative polymerase chain reaction for VEGF, IL-6, and MCP-1 were performed. Five vitreous specimens from proliferative diabetic retinopathy (PDR) patients and 10 with vitreous opacities (VO) or epiretinal membrane (ERM) were analyzed. RNA expression of VEGF, IL-6, and MCP-1 was higher in eyes with PDR than in eyes with VO and ERM. This is the first reported study of RNA isolation from human vitreous samples. Qualitatively, we demonstrate increased expression of genes known to play a part in pathogenesis of patients with PDR.  
Monday, 12:45PM - 1:45PM, Session: PO481, Location: HALL C

### **Best of Retina Society Meetings 2017**

8:32 Application of High-throughput DNA Sequencing as An Unbiased Approach to Detect Intraocular Infections, *Thuy A Doan, MD*

Tuesday, 8:30AM - 9:30AM, Session: SYM45, Location: LA NOUVELLE ORLEANS C

### **Common and Emerging Causes of Infectious Uveitis**

Infectious uveitis includes a large spectrum of potential pathogens and presentations. Some of these diseases are more familiar and well known, while others are newly emerging entities. Air travel, immigration, and world globalization have modified traditional patterns of geographic distribution of infectious diseases, including infectious uveitis. Diagnosing and managing infectious uveitis has become increasingly challenging for the ophthalmologist. This course will review ocular manifestations of both common and emerging infectious diseases relevant to the ophthalmologist, including Zika, dengue, Ebola, chikungunya, tuberculosis, syphilis, and cytomegalovirus. The instructors will present a variety of challenging cases from around the world, with interactive discussion sessions.  
Tuesday, 9:00AM - 11:15AM, Session: 627, Location: 282

### **Fungal Keratitis: Innovations in Diagnosis and Treatment**

Fungal keratitis is often more severe than bacterial keratitis, with worse visual acuity outcomes and higher rates of corneal perforation. Next-generation sequencing identifies all pathogens and has the potential to alter the standard-of-care diagnostic paradigm. Confocal microscopy can also be beneficial, particularly in deep ulcers where it may not be possible to culture. The Mycotic Ulcer Treatment Trial I & II, two large NEI-funded randomized controlled trials, demonstrated that topical natamycin is still the most effective treatment for fungal keratitis. Potential future therapies include intrastromal injection of voriconazole and adjunctive collagen crosslinking. This presentation will update general and subspecialty ophthalmologists on diagnosis and treatment of fungal keratitis. At the conclusion of this course, the attendee will be familiar with diagnostic methods including next-generation sequencing and confocal microscopy, as well as evidence-based treatment of fungal keratitis.  
Tuesday, 12:45PM - 1:45PM, Session: 688, Location: 282

## **Jacque L Duncan MD**

### **Retinal Frontiers: Updates in Gene Therapy and Stem Cell Therapy**

In this course, we will discuss new treatments for inherited retinal dystrophies, focusing on updates in the fields of retinal gene therapy and stem cell therapy. A panel of international experts in these fields will provide a didactic introductory lecture, followed by an open panel discussion. Objectives At the conclusion of this course, the attendee will be able to (1) better counsel patients with retinal dystrophies regarding updates in clinical characterization and possible therapies, (2) describe the logistics of ordering and interpreting genetic testing, (3) counsel patients regarding the nuts and bolts of viral vector-mediated retinal gene therapy and stem cell therapy, (4) deepen their understanding of the surgical implications of these treatment modalities, and (5) describe updates in current-day clinical trials in the fields of retinal gene therapy and stem cell therapy.

Sunday, 10:15AM - 12:30PM, Session: 207, Location: 239

### **Current and Emerging Imaging Tools for Macular and Retinal Diseases**

The last decade has seen rapid advances in the field of retinal imaging. There has been widespread adoption of high-resolution spectral domain OCT systems and increased use of ultrawide-field imaging, fundus autofluorescence, intraoperative OCT, and devices employing adaptive optics. In addition, recent advances in spectral domain OCT angiography will likely lead to changes in patient management that will improve visual outcomes. Swept-source OCT and OCT angiography may soon become commercially available in the United States. It is important that ophthalmologists who diagnose and treat retinal diseases remain up to date on these latest imaging technologies in order to provide the best care for their patients. Clinical researchers also need to be familiar with these technically complex systems and to learn the skills required for interpretation of the acquired images. In this symposium, retinal imaging experts will review the progress occurring in this field.

### **Advances in Vision Restoration Techniques and Devices**

This course will review current approaches to vision restoration, including various electronic prostheses, photochemical approaches, and photoreceptive molecule gene therapy. Epiretinal, subretinal, suprachoroidal, optic nerve, and cortical implants will be discussed. Indications, the anatomic site for surgical implantation, and current status of clinical trials and projected commercialization timeframe will be reviewed. Functional vision endpoints, blind rehabilitation techniques, and quality of life research in the field of artificial vision will be discussed. At the conclusion of this course, the attendees will be able to describe the various types of artificial vision strategies and devices under development and will develop a better understanding of prosthetic vision quality and its demonstrated impact on patients' activities of daily living and quality of life.

Monday, 4:30PM - 5:30PM, Session: 539, Location: 388

## **Allan J Flach MD**

### **Medical Therapy for Open-Angle Glaucoma: A Complete Review of the Pharmacodynamics, Pharmacokinetics, and Toxicity of All Potentially Useful Drugs**

This course will present the pharmacodynamics, pharmacokinetics, and toxicity of drugs potentially useful for open-angle glaucoma (OAG) treatment, including parasympathomimetics, sympathomimetics, sympatholytics, carbonic anhydrase inhibitors, prostaglandin analogs, osmotics, neuroprotectors, blood flow enhancers, marijuana, ginkgo biloba, and other alternative therapies. Objective Participants will be able to treat OAG more effectively by enhancing compliance and risk-benefit ratios.

Tuesday, 10:15AM - 11:15AM, Session: 647, Location: 393

## **Ricardo Lamy MD**

### **Feasibility of Detecting RNA Expression in Human Vitreous**

Vitreoretinal conditions are often due to a complex interplay of risk factors and molecular events that have not been well elucidated. We aim to qualitatively identify known markers for diabetes: vascular endothelial growth factor (VEGF), interleukin-6 (IL-6), and monocyte chemoattractant protein-1 (MCP-1) in human vitreous specimen from patients at University of California, San Francisco and San Francisco General Hospital. RNA extraction, reverse transcription, and quantitative polymerase chain reaction for VEGF, IL-6, and MCP-1 were performed. Five vitreous specimens from proliferative diabetic retinopathy (PDR) patients and 10 with vitreous opacities (VO) or epiretinal membrane (ERM) were analyzed. RNA expression of VEGF, IL-6, and MCP-1 was higher in eyes with PDR than in eyes with VO and ERM. **Conclusion** This is the first reported study of RNA isolation from human vitreous samples. Qualitatively, we demonstrate increased expression of genes known to play a part in pathogenesis of patients with PDR.

Monday, 12:45PM - 1:45PM, Session: PO481, Location: HALL C

## **David G Hwang MD FACS**

### **Top 10 Hot Corneal Surgical Tips for 2018**

A global panel of experienced corneal surgeons presents its annual survey of the hottest advances and tips in corneal surgery. Each surgical tip has been carefully selected for novelty and maximum impact on clinical practice. Annually updated topics include time-saving techniques, refinements of common operations, and pearls for cutting-edge surgical procedures (eg, Descemet membrane endothelial keratoplasty, deep anterior lamellar keratoplasty, simple limbal epithelial transplantation, KPro, femtosecond-assisted keratoplasty, and ocular surface reconstruction). A rapid-fire format with expert panel commentary and audience Q&A promotes lively discussion, and annual refreshing of topics and guest faculty ensures that material remains fresh and of interest to repeat attendees. Through step-by-step instructions, surgical video, and detailed handouts, the practitioner will gain practical, specific, and immediately applicable knowledge of improved techniques and approaches for common and challenging problems.

Sunday, 2:00PM - 4:15PM, Session: 254, Location: 394

### **Management of Chronic and Recurrent Anterior Segment Disorders**

11:25 Corneal Biopsy for Chronic Infectious Keratitis: When and How

*David G Hwang MD FACS*

Comprehensive ophthalmologists and corneal specialists frequently encounter both chronic and recurrent disorders of the anterior segment. While consensus exists regarding the management of many primary anterior segment disorders, the approach to management of recurrent and chronic disorders is more varied, with far less evidence in the ophthalmic literature to support one approach versus another. Therefore, in this symposium, the invited faculty will present the audience with a variety of commonly encountered disorders that are refractory to initial, established treatments. The faculty will share their approaches, including evidence-based recommendations (when available) for making accurate diagnoses and choosing and implementing appropriate management strategies. The symposium will conclude with the Castroviejo Lecture.

Monday, 10:15AM - 12:16PM, Session: SYM29, Location: LA NOUVELLE ORLEANS AB

## **Jeremy D Keenan MD MPH**

### **Therapeutic Updates From the Refractive Management/Intervention Preferred Practice Pattern Panel**

1:38 Q&A

*Jeremy D Keenan MD MPH*

Currently ophthalmologists are presented with many refractive management choices to recommend to their patients. Our services in this respect have been increasingly called upon, as the rates of myopia in the United States and many other places around the world are increasing dramatically. In this age of evidenced-based medicine, documents like the Preferred Practice Pattern are now of even greater importance. Newer surgical options range from enhanced excimer laser surgery to femtosecond laser-assisted surgery to intracorneal lenses to even newer modalities in trial, such as corneal collagen crosslinking. Additionally, a newer option, in many ways not new at all, is "refractive" cataract surgery with

IOL replacement. Finally, much attention has been paid in the literature to the control of myopia progression. All of these topics will be reviewed in this symposium.

Monday, 12:45PM - 1:45PM, Session: SYM35, Location: LA NOUVELLE ORLEANS AB

## **Robert C Kersten MD**

### **Blepharoplasty**

This course will cover the latest techniques in upper and lower eyelid blepharoplasty. Basic and advanced surgical techniques, eyelid anatomy, patient selection, preoperative evaluation, and avoidance of complications will be discussed. A course handbook with illustrations outlining the surgical techniques will be provided. Participants will become familiar with the techniques required to perform successful upper and lower eyelid blepharoplasties.

Sunday, 10:15AM - 12:30PM, Session: LEC121, Location: 333-334

### **Oculoplastic Procedures for the General Ophthalmologist**

This course will describe basic and effective procedures for the treatment of involutional ectropion and entropion, tarsorrhaphy, marginal eyelid lesions, dermatochalasis, and aponeurogenic involutional ptosis. At the conclusion of this course, the attendee will be able to select and perform the appropriate surgical technique for the treatment of common eyelid problems encountered in a general ophthalmology practice.

Sunday, 2:00PM - 3:00PM, Session: 245, Location: 339

### **Blepharoplasty**

This course is designed to provide hands-on laboratory experience with the techniques used in upper and lower eyelid blepharoplasty. Videos of techniques will be presented, along with personal assistance with cadaver dissection. Participants will be shown the clinically relevant anatomy as it relates to performing upper and lower eyelid blepharoplasties.

Sunday, 3:30PM - 5:30PM, Session: LAB121A, Location: 352, Fee: \$330.00

## **Thomas M Lietman MD**

### **Section I: Corneal Infections – Old Bugs, New Drugs**

8:13 'Roid Rage: The Controversy over Steroids for Bacterial Keratitis

*Thomas M Lietman MD*

Saturday, 8:02AM - 9:13AM, Session: COR02, Location: LA NOUVELLE ORLEANS AB

## **Shan C Lin MD**

### **Welcome and Introductions**

Saturday, 7:00AM - 8:09AM, Session: GLA01, Location: NEW ORLEANS THEATER AB

### **Section VII: Cataract Controversies – What Now?!?!**

Saturday, 4:24PM - 5:28PM, Session: GLA09, Location: NEW ORLEANS THEATER AB

### **Evidence-Based Guidelines in the Management of Glaucoma**

At present, our treatment approach for glaucoma is directed at reducing IOP with either medical therapy, laser surgery, or incisional surgery. Two important questions often confront a glaucoma specialist when

initiating therapy: Does this patient need to be treated? And if so, how? This course will address the evidence-based guidelines for treating glaucoma and review the invaluable information from major clinical trials that have enhanced our understanding of the risk factors and treatment strategies at various stages of the disease. Representative clinical cases will also be presented. At the conclusion of the course, the attendee will be better able to decide when and how to treat glaucoma patients based on the evidence, including many of the major clinical trials that have guided clinical decision making in glaucoma practice. Sunday, 10:15AM - 12:30PM, Session: 203, Location: 388

### **Differences in Optic Nerve Head, Retinal Nerve Fiber Layer, and Ganglion Cell Complex Parameters between White and Ethnic Chinese Subjects**

The purpose of this presentation is to compare optic nerve head (ONH), retinal nerve fiber layer (RNFL), and ganglion cell complex (GCC) parameters between white and Chinese subjects. Normal subjects aged > 40 years self-identified as being white or Chinese were recruited. Parameters related to ONH, RNFL, and GCC analysis were acquired by RTVue-100 SD-OCT. Multivariable linear regression was carried out, adjusting for potential confounders. Subjects were comprised of 116 white and 130 Chinese. Chinese had significantly higher thickness in all RNFL parameters ( $P < .001$ ) except nasal quadrant. There were statistically significant differences for disc area, area cup-to-disc (C/D) ratio, vertical C/D ratio, and cup volume ( $P < .05$ ), greater in Chinese subjects. White subjects had significantly higher average GCC and inferior GCC ( $P < .01$ ). The study suggests significantly higher RNFL thickness and thinner GCC in normal Chinese. Ethnic differences in RNFL thickness and GCC parameters can be considered in interpreting the OCT data in clinical practice.

Sunday, 12:45PM - 1:45PM, Session: PO086, Location: HALL C

### **Body Mass Index and Risk of Normal-Tension Glaucoma in a South Korean Population-Based Sample**

Purpose: To investigate the association between body mass index (BMI) and normal-tension glaucoma (NTG) in a South Korean population-based sample. Methods BMI and NTG prevalence were assessed in 10,978 subjects  $\geq 40$  years old from the 2008-2011 Korean National Health and Nutrition Examination Survey. Results Low BMI ( $< 19 \text{ kg/m}^2$ ) vs. normal BMI ( $19\text{-}24.9 \text{ kg/m}^2$ ) was associated with greater risk of glaucoma among all subjects (OR 2.28 [1.22-4.26]) and in women (OR 3.45 [1.42-8.38]) but not in men (OR 1.72 [0.71-4.20]). This inverse relationship remained in the youngest group (age 40-49 years old; OR 5.16 [1.86-14.36]) and in women aged 40-49 years old (OR 8.6 [2.55-29.0]). Conclusion Low BMI was associated with increased odds of NTG in this South Korean population sample, especially among women and those in the youngest age strata.

Monday, 12:45PM - 1:45PM, Session: PO347, Location: HALL C

### **High-Precision Microdose Delivery of Topical Medications**

Purpose To demonstrate feasibility, pharmacodynamic equivalence, and topical and systemic safety of piezo-print microdose technology for ocular drug delivery. Methods Twenty-four eyes received 8  $\mu\text{L}$  high-precision microdose vs. 32  $\mu\text{L}$  eyedropper 10% phenylephrine, and pharmacodynamic effect was measured objectively using digital pupillometry. Systemic plasma levels were measured along with topical adverse events. Results High-precision microdosing achieved more than 90% of the overall pharmacodynamic effect, with a significant reduction in ocular adverse effects and lower systemic drug exposure. Conclusion Microdose delivery with piezo-print technology can greatly improve the therapeutic index of ophthalmic pharmaceuticals by reducing 80% topical exposure of drug and preservative as well as systemic absorption.

Monday, 3:12PM - 3:19PM, Session: PA062, Location: 271-273

### **Relationship between Bilateral Oophorectomy, Hormone Replacement Therapy, and Glaucoma in U.S. Women from the 2005-2008 National Health and Nutrition Examination Survey**

Purpose To explore the relationship between bilateral oophorectomy (BO), hormone replacement therapy (HRT), and glaucoma in U.S. women. Methods Cross-sectional study of 3084 women aged  $\geq 40$  years from the 2005-2008 National Health and Nutrition Examination Survey, 558 with and 2526 without BO. Results Adjusting for age and race, women with BO at  $< 43$  years (vs.  $\geq 43$  years) had higher odds of disc+field-defined glaucoma (OR 5.69; CI, 1.07-30.31;  $P = .04$ ). Women with BO  $\geq 10$  years ago (vs.  $< 10$  years ago) had higher odds of visual field defects (OR 4.09; CI, 1.31-12.71;  $P = .02$ ). Women with BO using HRT,

especially estrogen only, had lower odds of field defects than those not using HRT (OR 0.47; CI, 0.24-0.96;  $P = .04$  and OR 0.39; CI, 0.17-0.85;  $P = .02$ , respectively). Conclusion Women undergoing oophorectomy at a younger age or a longer time ago had a higher prevalence of visual field defects and disc+field-defined glaucoma. Hormone replacement therapy may reduce glaucoma risk in this population.  
Monday, 4:42PM - 4:49PM, Session: PA069, Location: 271-273

## **iGlaucoma: The Latest Innovations in Glaucoma Therapy**

Synopsis The field of glaucoma is currently experiencing an expansive period of clinical innovation, with new diagnostic, medical, laser, and surgical treatments becoming available within the past year. This course will discuss (1) new topical therapies that have a range of mechanisms of action, (2) delivery mechanisms for glaucoma medicines that are currently in final stage of clinical testing, with promising results, and (3) laser and surgical treatments that have improved safety profiles and ease of use. We will also discuss the rationalization for combining different modes of action which are complimentary and have specific characteristics, such as lowering IOP at night. Thinking of glaucoma in terms of treatment modalities allows patient care to be both personalized and rational. Objective At the conclusion of this course, the attendees will be able to describe and apply the newest innovations in glaucoma therapy (diagnostics, medications, laser, and surgery) in their practice for optimum patient care.

Tuesday, 10:15AM - 12:30PM, Session: 645, Location: 278-279

## **Ayman Naseri MD**

### **Advanced Refractive Cataract Surgery and Anterior Segment Reconstruction**

This course is designed for surgeons who (1) want to expand their armamentarium for dealing with difficult cataract cases, dislocated IOLs, traumatized eyes, and patients with dysphotopsias and (2) want to achieve better emmetropic results and greater spectacle independence through the use of toric IOLs, limbal relaxing incisions, and multifocal IOLs. Objectives This course will cover iris and scleral suture and sutureless fixation techniques for IOLs, chopping techniques, capsular tension rings and stabilization devices, pupil expanders, pupiloplasty and primary closure for iris defects, pars plana vitrectomy, and strategies for dealing with challenging cases. Seipser slip knots and Hoffman pockets will be emphasized.

Monday, 10:30AM - 12:30PM, Session: LAB108B, Location: 356-357, Fee: \$260.00

## **Jennifer Rose-Nussbaumer MD**

### **Section I: Corneal Infections – Old Bugs, New Drugs**

Saturday, 8:02AM - 9:13AM, Session: COR02, Location: LA NOUVELLE ORLEANS AB

### **Poster Theater: Cornea, External Disease**

Sunday, 10:30AM - 11:45AM, Session: PT02, Location: HALL C

### **Cataract Surgery and Uveitis: Controlling Inflammation, Difficult Pupils, and Distorted Anatomy**

This course will teach the management of difficult and potentially complicated cataract surgery in uveitis using surgical videos that highlight unique uveitic anatomy. The focus will be on preoperative immunosuppression and patient selection, intraoperative management of distorted uveitic anatomy, and postoperative considerations. Both surgical and medical guidelines for the ophthalmologist will be given, with an emphasis on immunosuppression. **Objectives** At the conclusion of this course, attendees will be able to discuss preoperative planning and immunosuppression for cataract surgery in uveitis patients. They will learn intraoperative management of uveitic anatomy via surgical videos and the management of postoperative inflammation.

Tuesday, 9:00AM - 10:00AM, Session: 625, Location: 338

### **Fungal Keratitis: Innovations in Diagnosis and Treatment**

Fungal keratitis is often more severe than bacterial keratitis, with worse visual acuity outcomes and higher rates of corneal perforation. Next-generation sequencing identifies all pathogens and has the potential to alter the standard-of-care diagnostic paradigm. Confocal microscopy can also be beneficial, particularly in

deep ulcers where it may not be possible to culture. The Mycotic Ulcer Treatment Trial I & II, two large NEI-funded randomized controlled trials, demonstrated that topical natamycin is still the most effective treatment for fungal keratitis. Potential future therapies include intrastromal injection of voriconazole and adjunctive collagen crosslinking. **Objective** To update general and subspecialty ophthalmologists on diagnosis and treatment of fungal keratitis. At the conclusion of this course, the attendee will be familiar with diagnostic methods including next-generation sequencing and confocal microscopy, as well as evidence-based treatment of fungal keratitis.

Tuesday, 12:45PM - 1:45PM, Session: 688, Location: 282

## **Jay M Stewart MD**

### **Feasibility of Detecting RNA Expression in Human Vitreous**

Vitreoretinal conditions are often due to a complex interplay of risk factors and molecular events that have not been well elucidated. We aim to qualitatively identify known markers for diabetes: vascular endothelial growth factor (VEGF), interleukin-6 (IL-6), and monocyte chemoattractant protein-1 (MCP-1) in human vitreous specimen from patients at University of California, San Francisco and San Francisco General Hospital. RNA extraction, reverse transcription, and quantitative polymerase chain reaction for VEGF, IL-6, and MCP-1 were performed. Five vitreous specimens from proliferative diabetic retinopathy (PDR) patients and 10 with vitreous opacities (VO) or epiretinal membrane (ERM) were analyzed. RNA expression of VEGF, IL-6, and MCP-1 was higher in eyes with PDR than in eyes with VO and ERM. This is the first reported study of RNA isolation from human vitreous samples. Qualitatively, we demonstrate increased expression of genes known to play a part in pathogenesis of patients with PDR.

Monday, 12:45PM - 1:45PM, Session: PO481, Location: HALL C

## **M Reza Vagefi MD**

### **Spotlight on Ocular Trauma**

#### **10:33 Management of Orbital Fractures**

*M Reza Vagefi MD*

Ocular trauma may have severe visual consequences and lead to facial deformity. Proper surgical techniques and timely intervention will help optimize outcomes. This symposium will review the various types of ocular trauma and management techniques in a multidisciplinary forum including presentations and panel discussions.

Sunday, 10:30AM - 12:00PM, Session: SPO1, Location: LA NOUVELLE ORLEANS AB

### **Medical and Surgical Management of the Blind Eye: Injection to Enucleation**

This skills-oriented practical course focuses on optimizing outcomes in the medical and surgical management of the blind eye, from injection techniques to surgical procedures, with hands-on training and video demonstrations. Various orbital implants will be available for use. An oculist will provide insights on fitting and fabrication of a prosthesis to achieve the best functional and aesthetic outcomes. By the completion of this course, attendees can (1) describe aesthetic considerations for balancing the anophthalmic socket and prosthesis, (2) understand options for medical management of the blind painful eye, (3) demonstrate the role of the Gunderson flap before eye removal surgery, (4) perform steps of enucleation and evisceration surgeries, (5) practice implant pegging to define its role in improving motility, (6) implement a framework for deciding which procedures and implants to choose and when, and (7) apply strategies for avoiding postoperative complications and managing post-enucleation socket syndrome.

Sunday, 2:30PM - 5:00PM, Session: LAB130, Location: 348-349, Fee: \$150.00

### **Volume Augmentation: Fillers, Grafts, and Implants**

#### **4:41 Injectable Filler Devices**

*M Reza Vagefi MD*

Eye removal via enucleation or evisceration is associated with significant volume loss. A wide variety of strategies exist for adding volume primarily or secondarily, both nonsurgical and surgical. This symposium explores various interventions from a variety of perspectives, covering the rationale, advantages, and limitations associated with each treatment. The session delves into the broad array of options to replace volume, including newer injectable devices.

Sunday, 3:45PM - 5:15PM, Session: SYM22, Location: NEW ORLEANS THEATER C

### **Diagnosis and Management of Essential Blepharospasm and Hemifacial Spasm**

Patients with eyelid and facial spasms frequently present to ophthalmologists for evaluation or management. The diagnosis and treatment of essential blepharospasm and hemifacial spasm is straightforward and gratifying. Through lectures, video, and case presentations, participants will learn to manage these patients confidently. **Objective** This course will familiarize participants with the diagnostic features and current treatment options for essential blepharospasm, hemifacial spasm, and related facial dystonias.

Monday, 2:00PM - 3:00PM, Session: 503, Location: 282