USC ROSKI EYE INSTITUTE - ARVO 2016 SNEAK PEEK

The 2016 Association for Research in Vision and Ophthalmology (ARVO) annual conference will be held in Seattle on May 1-5. USC Gayle and Edward Roski Eye Institute experts will share their latest breakthroughs in their relentless pursuit to prevent, preserve and restore sight. Recent advances include large scale multiethnic eye studies that will transform eye health care policy in America, a comparative study of the world's first patient with two artificial retinal prostheses and novel diagnostic methods using USC-pioneered optical coherence tomography (OCT) technology.

Preventive Care: Influencing vision health care policy in America

Over the past 21 years, USC Roski Eye Institute physician-scientists, led by Rohit Varma, MD, MPH, have conducted the nation's largest studies in ocular epidemiology. This research continues to uncover the prevalence of eye diseases and identify key risk factors among minorities and vulnerable populations. Such studies can help physicians create guidelines for screening and intervention, leading to preventive eye care and early treatment, which is crucial to ensuring healthy vision.

Sight Restoration: World's first patient with retinal prosthesis in each eye

Visual function has been restored by Argus I and Argus II in the same patient. Researchers working with Mark S. Humayun, MD, PhD, and James Weiland, PhD, will present a comparative study of a patient previously implanted with Argus I in one eye who recently received surgical implantation of Argus II in the other eye. This world's first study offers a unique opportunity to compare patient perceptions from the two retinal prostheses.

Pioneering the field of Imaging Technology in Vision Science-OCT

The USC Roski Eye Institute was one of only two research sites chosen to conduct preclinical pilot studies using prototype OCT
angiography (OCT-A) devices. OCT-A was recently FDA-approved for clinical use as a result of this study. USC Roski Eye Institute experts are developing groundbreaking imaging techniques and quantifying the microvascular mechanisms in diseases such as glaucoma, uveitis and optic neuropathies, which may lead to early diagnosis and treatment interventions.

**USC ROSKI EYE INSTITUTE SNEAK PEEK AT ARVO 2016**

**SUNDAY, MAY 1, 2016**

<table>
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<tr>
<th>Time</th>
<th>Event</th>
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| 8:30am - 10:15am | Danhong Zhu, MD, PhD, David R. Hinton, MD  
Poster # B0255  
RC  
Scientific Poster. RPE: Optimization of Culture Conditions for Human Retinal Progenitor Cells |
| 8:30am - 10:15am | Juan Carlos Martinez, MD, Amir H. Kashani, MD, PhD, Mark S. Humayun, MD, PhD  
Poster # A0283  
PH, AP, RC  
Scientific Poster. Retina: Physiology Pharmacology: Modification of preretinal oxygen tension related to intraocular pressure |
| 8:30am - 10:15am | Bruce Burkemper, PhD, MPH, Rohit Varma, MD, MPH  
Poster # A0283  
CL  
Scientific Poster. Epidemiological aspects of AMD: Risk factors for prevalent early AMD and associated retinal lesions: The Chinese American Study |
| 8:30am - 10:15am | Farzana Choudhury, MBBS, MPH, PhD, Rohit Varma, MD, MPH  
Poster # A0015  
CL  
Scientific Poster. Epidemiological aspects of AMD: Impact of Longitudinal Changes in Age-related Macular Degeneration on Visual Functioning and Quality of Life in Latinos: The Los Angeles Latino Eye Study (LALES) |
| 8:30am - 10:15am | Austin K. Mircheff, PhD  
Poster # D0101  
CO  
Scientific Poster. Dry Eye 1: Multiplicities of Lacrimal Gland Disease Phenotypes |
| 8:30am - 10:15am | Xinbo Zhang, PhD, Rohit Varma, MD, MPH  
Poster # D0009  
GL  
Scientific Poster. Glaucoma Structure and Function: Detect Glaucoma Progression Using Data-Driven Resampling Method on Repeated Longitudinal Measurements |
| 1:30pm - 3:15pm | Hardeep P. Singh, PhD, David Cobrinik, MD, PhD  
Poster # B0003  
RC, VN, MOI  
Scientific Poster. Photoreceptor development and physiology, Human Cone Precursor Program Underlying a Proliferative Response to pRB Loss |
| 1:30pm - 3:15pm | Anoush Shahidzadeh, MPH, Carmen A. Puliafito, MD, MBA, Amir H. Kashani, MD, PhD  
Poster # A0082  
MOI  
Scientific Poster. Advancement in OCT: Widefield Swept-Source Optical Coherence Tomography Angiography |
| 2:45pm - 3pm | J. Martin Heur, MD, PhD  
Room 606/607  
Workshop/Presentation. Diverse animal models on retinal and corneal degenerative diseases: Zebrafish Model of Corneal Endothelial Disease |
3:15pm - 5pm
Poster # B0358
RC
Li Zhang, PhD , Biju Thomas, PhD, Mark S. Humayun, MD, PhD
Scientific Poster. Stem Cell Engineering and Fundamental Mechanisms: Expression of phagocytosis-related receptors of subretinal implanted hESC-RPE cells in RCS rats

3:15pm - 5pm
Poster # C0019
BI
Cheryl Craft, PhD
Scientific Poster. Gene editing and therapies: Tissue Inhibitor of Metalloproteinase 1 Enhances Cell Survival in a Matrix Metalloproteinase Dependent Mechanism in the Rhodopsin S334ter-line 3 Retinitis Pigmentosa Model

USC ROSKI EYE INSTITUTE ARVO RECEPTION
Sunday, May 1, 2016 | 7:30 pm - 10:30 pm
W Hotel Seattle | Great Room
1112 Fourth Avenue
Seattle, Washington 98101

MONDAY, MAY 2, 2016

11am - 12:45pm
Poster # A0176
CO
Grace Shih, MD, Bibiana J. Reiser, MD, MS
Scientific Poster. Corneal Imaging: Corneal Endothelium and Iridocorneal Angle Biometrics in Pediatric Glaucmatous Eyes

11am - 12:45pm
Poster # A0212
CO
Dagny Zhu, MD, J. Martin Heur, MD, PhD
Scientific Poster. Cornea Imaging: Functional Imaging of Ex Vivo Human Corneal Endothelium Using Two-Photon Fluorescence Lifetime Imaging Microscopy

11am - 12:45pm
Poster # B0083
LE
Mina Torres, MS, Rohit Varma, MD, MPH

3:45pm - 5:30pm
Poster #B0010
CL, AP
Arman Zaman, MD, Julie M. Schallhorn, MD, MS
Scientific Poster. Myopia: Perinatal Light Exposure and the Development of Myopia and Hyperopia

3:45pm - 5:30pm
Poster # A0235
AP
Lilangi S. Ediriwickrema, MD, MS, Michael Burnstine, MD, Narsing A. Rao, MD
Scientific Poster. Adnexal and Orbital Pathology: Malignant Solitary Fibrous Tumor of the Orbit: Revamping the Immunophenotypic and Histopathological Gold Standard for Diagnosis

3:45pm - 5:30pm
Abstract # 2313
Room Tahoma 3, TCC
Scott Whitcup, MD, Pravin Dugel, MD
Presentation. Diabetic Macular Edema Treatment: Consistency of visual acuity response to anti-VEGF therapy in diabetic macular edema patients: An analysis of DRCRnet Protocol I data

TUESDAY, MAY 3, 2016
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<tr>
<th>Time</th>
<th>Event</th>
<th>Authors</th>
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| 8:30am - 10:15am | Abstract # 2818  
Room Tahoma 1/2, TCC | Andrew Browne, MD, PhD, Bibiana J. Reiser, MD, MS, Thomas Lee, MD, David Cobrinik, MD, PhD  
Presentation. Stem Cells: Disease Models and Therapeutics I: Human Stem Cell Derived Retinal Spheroids Characterized Non-Invasively for Structure and Function by Multimodal Imaging |
| 8:30am - 10:15am | Poster # B0082  
EY | Xuejuan Jiang, PhD, Rohit Varma, MD, MPH  
Scientific Poster. Amblyopia: Dilated Eye Examination among Multi-ethnic Preschool Children |
| 8:30am - 10:15am | Poster # C0077  
RE | Stavros N. Moysidis, MD, Lisa C. Olmos de Koo, MD, MBA, Andrew A. Moshfeghi, MD, MBA, Narsing A. Rao, MD, Mark S. Humayun, MD, PhD, Damien C. Rodger, MD, PhD  
Scientific Poster. Diabetic retinopathy and steroids: Does the Vitreous Protect the Retina, Vasculature, and Optic Nerve from Impact During Intravitreal Injection of Dexamethasone Implants? |
| 11am - 12:45pm | Poster # C0143  
AP | Jesse L. Berry, MD, Jonathan W. Kim, MD  
Scientific Poster. What is New in Retinoblastoma? Analysis of Nucleic Acid content in the Aqueous Humor of Retinoblastoma Eyes |
| 11am - 12:45pm | Poster # C0160  
AP | Hassan A. Aziz, MD, Jesse L. Berry, MD, Jonathan W. Kim, MD  
Scientific Poster. What is New in Retinoblastoma? Acute Vaso-occlusion and Chorioretinal Toxicity following Intravitreal Melphalan Injection |
| 11am - 12:45pm | Poster # C0148  
AP | Ananth Sastry, MD, Jesse L. Berry, MD, Jonathan W. Kim, MD  
Scientific Poster. What is New in Retinoblastoma? Retrograde Differentiation of Retinoblastoma in Infants |
| 11am - 12:45pm | Poster # D0179  
RE | Kiran Nimmagadda, PhD, James D. Weiland, PhD  
Scientific Poster. Retinal Prosthesis and Stem Cells: Relative power consumption at the electrode-retina interface during retinal stimulation with voltage versus current controlled stimulus pulses |
| 11am - 12:45pm | Poster # D0175  
RE | Andrew C. Weitz, PhD, Mark S. Humayun, MD, PhD, James D. Weiland, PhD  
Scientific Poster. Retinal Prosthesis and Stem Cells: Focal electrical stimulation of the retina |
| 11am - 12:45pm | Poster # D0174  
RE | Alejandra Gonzalez Calle, MS, James D. Weiland, PhD  
Scientific Poster. Retinal Prosthesis and Stem Cells: Evaluation of electrical stimulation of the retina with optical coherence tomography |
| 11am - 12:45pm | Poster # DO196  
RE | Biju Thomas, PhD, David R. Hinton, MD, Mark S. Humayun, MD, PhD  
Scientific Poster. Retinal Prosthesis and Stem Cells: A New ImmuneDeficient Dystrophic RCS Rat Model for Transplantation Studies Using Human Derived Cells |
| 11am - 12:45pm | Poster # C0142  
AP | Jonathan W. Kim, MD  
Scientific Poster. What is new in Retinoblastoma?: Rabbit model of ocular photodynamic
therapy using an indirect ophthalmoscope delivery system.

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<th>Time</th>
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<th>Name</th>
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<tbody>
<tr>
<td>11am - 12:45pm</td>
<td>A0064 RE</td>
<td>Julie M. Schallhorn, MD, MS</td>
<td>Scientific Poster. Corneal Refractive Surgery II: Laser vision correction in the setting of systemic collagen vascular disorders</td>
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<td>3:45pm - 5:30pm</td>
<td>D0016 IM, CL</td>
<td>On-Tat Lee, MD, Jesse L. Berry, MD, Damien C. Rodger, MD, PhD, Narsing A. Rao, MD</td>
<td>Scientific Poster. Uveitis Epidemiology: Chronic manifestations of Vogt-Koyanagi-Harada disease</td>
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<td>3:45pm - 5:30pm</td>
<td>D0297 MOI, AP</td>
<td>Kelly Rue, MD, Lisa C. Olmos de Koo, MD, MBA</td>
<td>Scientific Poster. Clinical and Other Applications of OCT: Swept Source OCT Imaging of Retinal Colobomas</td>
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<tr>
<td>3:45pm - 5:30pm</td>
<td>D0092 RE</td>
<td>Kam Vaziri, Andrew A. Moshfeghi, MD, MBA</td>
<td>Scientific Poster. Macular Edema Clinical and Translational: Relationship Between Prostaglandin Analog Use and Cystoid Macular Edema</td>
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<td>3:45pm - 5:30pm</td>
<td>D0305 MOI, AP</td>
<td>Ana Martyanova, Amir Kashani, MD, PhD, David Hinton, MD, Mark S. Humayun, MD, PhD</td>
<td>Scientific Poster. Clinical and Other Applications of OCT: SD-OCT Assessment of Retinal Structure After Subretinal Implantation of a Substrate- Adherent Monolayer of Human Embryonic Stem Cell-Derived Retinal Pigment Epithelium</td>
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<td>3:45pm - 5:30pm</td>
<td>C0108 RE</td>
<td>Brian C. Joondeph, MD, David S. Boyer, MD</td>
<td>Scientific Poster. Vitreoretinal Interface Disease: ORBIT: A phase IV clinical study - lessons learned from patient selection criteria for ocriplasmin intravitreal injection</td>
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<td>3:45pm - 5:30pm</td>
<td>A0038 CO</td>
<td>Billy X. Pan, MD, Gloria B. Chiu, OD, FAAO, J. Martin Heur, MD, PhD</td>
<td>Scientific Poster. Ocular Surface Health and Disease: Prosthetic Replacement of the Ocular Surface Ecosystem Therapy for Sjögren's Syndrome Patients</td>
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**WEDNESDAY, MAY 4, 2016**

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<th>Time</th>
<th>Poster #</th>
<th>Name</th>
<th>Title</th>
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<tr>
<td>8:30am - 10:15am</td>
<td>B0099 RE</td>
<td>Kaitlin Kogachi, Amir H. Kashani, MD, PhD</td>
<td>Scientific Poster. Vitreoretinal Surgery 2: Retinal Thickness Analysis following Subretinal Tissue Plasminogen Activator for Displacement of Subretinal Hemorrhage</td>
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<td>11am - 12:45pm</td>
<td>C0139 GL</td>
<td>Benjamin Xu, MD, PhD, Rohit Varma, MD, MPH</td>
<td>Scientific Poster. Glaucoma Imaging II: The Relationship Between Intraocular Pressure and Sectoral Angle Narrowing As Measured With Anterior Segment Optical Coherence Tomography: The Chinese American Eye Study</td>
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<td>11am - 12:45pm</td>
<td>C0147 GL</td>
<td>Natasha Naik, MD, Rohit Varma, MD, MPH</td>
<td>Scientific Poster. Glaucoma Imaging II: A New Definition of Narrow Angles Based on Anterior Segment Optical Coherence Tomography Measurements: The</td>
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<tr>
<td>11am - 12:45pm</td>
<td><strong>Poster # A0046</strong>&lt;br&gt;Drew Nannini, MS, Rohit Varma, MD, MPH&lt;br&gt;Scientific Poster. Corneal Genetics and Myopia: A genome-wide association study of central corneal thickness in Latinos</td>
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<td>11:00am - 12:45pm</td>
<td><strong>Poster # B0224</strong>&lt;br&gt;Pravin Dugel, MD&lt;br&gt;Scientific Poster. Anti-VEGF: A 2-year study comparing the efficacy and safety of brolucizumab vs aflibercept in subjects with neovascular age-related macular degeneration: testing an alternative treatment regimen</td>
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<td>3:45pm - 5:30pm</td>
<td><strong>Abstract # 5204</strong>&lt;br&gt;Lan Yue, PhD, Lisa C. Olmos de Koo, MD, MBA, James D. Weiland, PhD, Mark S. Humayun, MD, PhD&lt;br&gt;Presentation. Retinal Prosthetics and Novel Therapies: Visual function restored by Argus I and Argus II in the same subject</td>
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<td>3:45pm - 5:30pm</td>
<td><strong>Poster # C0069</strong>&lt;br&gt;Brandon J. Wong, MD, Rohit Varma, MD, MPH, Vivek Patel, MD, Dara West, MD, Carmen A. Puliafito, MD, MBA, Amir H. Kashani, MD, PhD, Grace Richter, MD, MPH&lt;br&gt;Scientific Poster. Clinical Applications of OCT Angiography: Anatomic correlations between optical coherence tomography angiography microvasculature defects and ganglion cell analysis thinning in glaucomatous and non-glaucomatous optic neuropathy</td>
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<td>3:45pm - 5:30pm</td>
<td><strong>Poster # C0112</strong>&lt;br&gt;Damien C. Rodger, MD, PhD, Carmen A. Puliafito, MD, MBA, Narsing A. Rao, MD, Amir H. Kashani, MD, PhD&lt;br&gt;Scientific Poster. Clinical Applications of OCT Angiography: Quantitative analysis of changes in the retinal microvasculature in uveitis using spectral domain optical coherence tomography angiography (SD-OCTA)</td>
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<td>3:45pm - 5:30pm</td>
<td><strong>Poster # D0065</strong>&lt;br&gt;Roberta McKean-Cowdin, PhD, Rohit Varma, MD, MPH, Mina Torres, MS, Chunyi Hsu, MPH, Xuejuan Jiang, PhD&lt;br&gt;Scientific Poster. Clinical Potpourri: Risk Indicators and Prevalence of Undetected Eye Disease in Chinese Americans: The Chinese American Eye Study (CHES)</td>
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<td>3:45pm - 5:30pm</td>
<td><strong>Poster # D0068</strong>&lt;br&gt;Chunyi Hsu, MPH, Xuejuan Jiang, PhD, Mina Torres, MS, Rohit Varma, MD, MPH&lt;br&gt;Scientific Poster. Clinical Potpourri: Noncompliance with Vision Care Guidelines in Chinese Americans with Type 2 Diabetes Mellitus</td>
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<td>3:45pm - 5:30pm</td>
<td><strong>Poster # C0109</strong>&lt;br&gt;Nicole Kouliosis, Carmen A. Puliafito, MD, MBA, Amir H. Kashani, MD, MPH&lt;br&gt;Scientific Poster. Clinical Applications of OCT Angiography: Quantitative Microvascular Analysis of Retinal Venous Occlusion by Optical Coherence Tomography Angiography</td>
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<td>3:45pm - 5:30pm</td>
<td><strong>Poster # C0088</strong>&lt;br&gt;Alice Y. Kim, Carmen A. Puliafito, MD, MBA, Amir H. Kashani, MD, PhD&lt;br&gt;Scientific Poster. Clinical Applications of OCT</td>
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Angiography: Quantification of retinal microvascular changes in diabetic retinopathy using spectral domain optical coherence tomography angiography (SD-OCTA)

THURSDAY, MAY 5, 2016

8:30am - 9:45am
Poster # C0062 RE
Walid F. Abdallah MD, PhD, Mark S. Humayun, MD, PhD
Scientific Poster. Vitreoretinal Surgery Novel Approaches: Experimental Induction of Posterior Vitreous Detachment

8:30am - 9:45am
Poster # A0003 CO
Zhen Meng, Sarah F. Hamm-Alvarez, PhD
Scientific Poster. Lacrimal glands, meibomian glands and others: Altered expression of Rab3D, Cathepsin S and other effectors of antigen presentation is triggered by interferon-γ in lacrimal gland acinar cells

11am - 12:45pm
Poster # C0184 RE
Sun Young Lee, MD, PhD, Dagny Zhu, MD, Jesse L. Berry, MD
Scientific Poster. Endophthalmitis and Trauma: Outcomes of Open Globe Injury Repair in an Underserved Population at a Level I Trauma Center: The Los Angeles County + University of Southern California (LAC+USC) Experience

11am - 12:45pm
Poster # D0208 GL
Jiun L. Do, MD, PhD, Jesse L. Berry, MD, Grace Richter, MD, MPH
Scientific Poster. Glaucoma Surgery II: Comparison of Ahmed versus Baerveldt Implants in Managing Neovascular Glaucoma

11am - 12:45pm
Poster # A0141 CL
Wafa Al-Otaibi, Farhad Hafezi, MD, PhD
Scientific Poster. Cornea and Anterior Segment: Preliminary data on the prevalence of Keratoconus among Children and Adolescents in Riyadh, Saudi Arabia

Joy V. Roque
Program Manager
Office of Rohit Varma, MD, MPH
Interim Dean, Keck School of Medicine of USC
Grace and Emery Beardsley Professor and Chair, Department of Ophthalmology
Director, USC Roski Eye Institute

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STAY CONNECTED

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