



TFOS VENEZIA 2024

10th International Conference on
the Tear Film & Ocular Surface:
Basic Science and Clinical Relevance

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10th International Conference on the
Tear Film & Ocular Surface:
Basic Science and Clinical Relevance

Conference Program

Venice, Italy
October 30 - November 2, 2024

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Preface

The global mission of the Tear Film & Ocular Surface Society (TFOS; www.TearFilm.org) is to advance the research, literacy, and educational aspects of the scientific field of the tear film and ocular surface. During the past two decades, TFOS has helped to promote increased international awareness of external eye diseases, enhance governmental funding for tear film and ocular surface research, stimulate the development of therapeutic drugs and diagnostic devices, and influence the design and conduct of clinical trials of novel treatments for ocular surface disorders.

To promote further progress in this field of vision research, TFOS is sponsoring the 10th International Conference on the Tear Film & Ocular Surface: Basic Science and Clinical Relevance, which is being held at the Hotel Molino Stucky (Venice, Italy) from October 30 to November 2, 2024. This Conference is designed to assess the current knowledge and 'state of the art' research on the structure and function of tear film-producing tissues, tears and the ocular surface in both health and disease. The goal of this Conference is to promote an international exchange of information that will be of value to basic scientists involved in eye research, to clinicians in the eye care community, and to companies with an interest in tear film or ocular surface disorders.

This book contains the scientific program, as well as the abstracts of the oral and poster presentations, of this TFOS Conference.

David A. Sullivan

Acknowledgments

TFOS expresses its appreciation to Sabrina Zappia and CITYNet (www.citynetonline.it), Julie Karimi and JAKA Congressi (www.jaka.it) and Haydée Murgel and h.design (www.hdesign.biz) for their help with this Conference.

Thursday, October 31, 2024

Chairperson – Stefano Bonini (Italy)

Opening Remarks

8:00 Stefano Bonini, Department of Ophthalmology, University of Rome Campus BioMedico, Rome, Italy

8th Claes H. Dohlman Conference Address

Chairperson – Stefano Bonini (Italy)

8:05 The future of tear film and ocular surface research. Mark Willcox, School of Optometry and Vision Science, University of New South Wales, Sydney, Australia

SESSION I

Ocular surface disease: What we do to ourselves

Chairpersons - Arturo Grau (Chile), Brigitte Shen Lee (USA)

8:30 Contact lenses. Alex Hui,^{1,2} Centre for Ocular Research and Education, University of Waterloo, Waterloo, Ontario, Canada,¹ School of Optometry and Vision Science, Faculty of Medicine and Health, UNSW Sydney, Sydney, NSW, Australia.²

8:45 Cosmetics. Rachna Murthy, FaceRestoration, London, UK

9:00 Digital eye strain. Laura E Downie, University of Melbourne, Australia

9:15 Environmental conditions. Monica Alves, Department of Ophthalmology and Otorhinolaryngology, University of Campinas, Campinas, Brazil.

9:30 Nutrition. Marc Labetoulle, Bicetre-Paris Saclay and Quinze-Vingt Hospitals, Paris, France

9:45 Lifestyle. Michael T. M. Wang¹ and Anat Galor² Department of Ophthalmology, New Zealand National Eye Centre, The University of Auckland, Auckland, New Zealand,¹ and Bascom Palmer Eye Institute, Miami, FL, USA²

10:00 Poster Session I (with Coffee & Tea)

Chairpersons - Enesa Begovic (Bosnia and Herzegovina), Giulio Ferrari (Italy)

East, West, North, South: Impact of geographic region and ethnicity on the prevalence and management of ocular surface disease

Chairpersons - Stefano Barabino (Italy), Jutta Horwath-Winter (Austria)

10:50 Uncorrected refractive error. Michele Lanza, Università of Campania Luigi Vanvitelli, Caserta, Italy

11:05 Keratoconus. Namrata Sharma, All India Institute of Medical Sciences, New Delhi, India

11:20 Dry eye disease. Jelle Vehof, Department of Twins Research and Genetic Epidemiology, King's College London, London, United Kingdom, and Department of Ophthalmology, University of Groningen, Groningen, Netherlands, and Department of Ophthalmology, Vestfold Hospital Trust, Tønsberg, Norway

11:35 Ocular allergy. Andrea Leonardi, Department of Neuroscience, Ophthalmology Unit, University of Padova, Padova, Italy

11:50 Fuchs' endothelial dystrophy and corneal diseases. Jodhbir Mehta, Singapore National Eye Centre and Singapore Eye Research Institute, Singapore

12:05 Pterygium. José Gomes, Ophthalmology Department, Universidade Federal de São Paulo, São Paulo, Brazil

12:20 Poster Viewing & Lunch

Models and biomarkers for ocular surface disease

Chairpersons - Benjamin Sullivan (USA), Piera Versura (Italy))

- 13:40** Role of mitochondria in dry eye disease. Wei Chen, Qinxiang Zheng, Dan Jiang, Ling Li, Fanli Peng, National Clinical Research Center for Ocular Diseases, Eye Hospital, Wenzhou Medical University¹, Wenzhou, China
- 13:55** Ectodysplasin A mutation: a model for meibomian gland dysfunction and corneal epithelial abnormalities. Shangkun Ou,^{1,2} Wei Li,² Department of Ophthalmology, the Affiliated Hospital of Guizhou Medical University, Guiyang, China¹. Eye Institute of Xiamen University and Affiliated Xiamen Eye Center, School of Medicine, Xiamen University, Xiamen, China²
- 14:10** Development and application of a human corneal endothelial cell model. Francisco Bandeira e Silva, Department of Ophthalmology and Visual Sciences, Paulista School of Medicine, Federal University of São Paulo, São Paulo, Brazil
- 14:25** Proteomic analysis of intrinsically disordered proteins in the human tear film. David J. Taylor Gonzalez¹, Mak Djulbegovic², Michael Antonietti³, Anat Galor³, Vladimir N. Uversky⁴, Carol L. Karp³, ¹Hamilton Eye Institute, ²Wills Eye Hospital, ³Bascom Palmer Eye Institute, ⁴ Molecular Medicine and USF Health Byrd Alzheimer's Center and Research Institute
- 14:40** Tear film microRNAs as potential biomarkers. Garrett N. Jones¹, Jeremy Altman¹, Drew Mayernik,¹ Tae-Jin Lee,¹ Shruti Sharma,^{1,2} Ashok Sharma,^{1,2} ¹Center for Biotechnology and Genomic Medicine, ²Department of Ophthalmology, Augusta University, Augusta, GA, USA
- 14:55** Biochemical, molecular, and genetic biomarkers in the tear film of glaucoma patients. Maria Dolores Pinazo-Durán, Ophthalmic Research Unit "Santiago Grisolia"/FISABIO, and University of Valencia Research Group on Cellular and Molecular Ophthalmobiology. Valencia, Spain.

15:10 Poster Session I (with Coffee & Tea)

Chairpersons - Enesa Begovic (Bosnia and Herzegovina), Giulio Ferrari (Italy)

Impact of glaucoma medications on the ocular surface and how ocular surface disease can influence glaucoma treatment

Chairpersons - Sihem Lazreg (Algeria), Tor Paaske Uttheim (Norway)

- 16:00** Epidemiology and pathophysiology of glaucoma. Gus Gazzard, Glaucoma Service, Moorfields Eye Hospital NHS Foundation Trust; UCL Institute of Ophthalmology; and NIHR-Moorfields Biomedical Research Centre, London, UK
- 16:15** Prevalence of, and risk factors for, ocular surface disease in glaucoma patients. Elisabeth M. Messmer, Department of Ophthalmology, LMU University Hospital, München, Germany
- 16:30** Adverse effects of active ingredients in glaucoma medications on the ocular surface, adnexa, nasolacrimal duct, and periorbital area. Raul E. Ruiz-Lozano, Bascom Palmer Eye Institute, University of Miami, Miami, FL, USA
- 16:45** Adverse effects of additives in glaucoma medications. Miriam Kolko, Department of Drug Design and Pharmacology, University of Copenhagen, Copenhagen, and Department of Ophthalmology, Copenhagen University Hospital, Rigshospitalet, Glostrup, Denmark
- 17:00** Management of ocular surface disease in glaucoma patients. Christophe Baudouin, Quinze-Vingts Hospital & Vision Institute, Paris, France
- 17:15** Management of glaucoma in ocular surface disease patients. Barbara Cvenkel, Department of Ophthalmology, UMC Ljubljana, Faculty of Medicine, University of Ljubljana, Ljubljana, Slovenia

TFOS #2 Innovation Showcase

Chairperson - Jonathan Roos (UK)

JUDGES

Dimitri Azar (USA), President and CEO of Twenty/Twenty Therapeutics

Penny Asbell (USA), recent Ophthalmology Chair, University of Tennessee Health Science Center

Fabrizio Chines (Italy), Chairman and CEO of SIFI Pharmaceuticals

Kelly Nichols (USA), Dean, University of Alabama at Birmingham School of Optometry

Andrew Stewart (USA), President, Global Pharmaceuticals and International Consumer, Bausch + Lomb

18:00 Introduction, Rolando Toyos (USA)

18:05 ESSIRI labs (USA; www.eyesarethestory.com), Amy Gallant Sullivan, Founder, and Rachna Murthy, Medical Advisory Board

18:12 Aston Vision Sciences (UK; www.astonvisionsciences.com), Karl Obszanski, Founder

18:19 Photon Therapeutics (New Zealand; www.photon-therapeutics.com), Simon Dean, Co-Founder

18:26 Signal12 (USA; www.signal12inc.com), Pamela Gallin, Medical Director

18:33 ECI Therapeutics (USA; www.ecitherapeutics.com), Ronald Gentile, Co-Founder & Chief Medical Officer

18:40 Azura (Israel; www.azuraophthalmics.com), Marc Gleeson, Chief Executive Officer

18:47 Lubris BioPharma (USA; www.lubris.net), Benjamin D Sullivan, Co-Founder

Poster Session I

Chairpersons - Enesa Begovic (Bosnia and Herzegovina), Giulio Ferrari (Italy)

1	RISK FACTORS FOR DRY EYE DISEASE IN ARGENTINA: A NATIONAL EPIDEMIOLOGICAL STUDY. <u>Marini María C.</u> ¹ Liviero Belén ² , Alves Mónica ³ , Galletti J ⁴ , Galperin G ⁵ Torres Rodrigo M ⁶ ¹ Hospital de Alta Complejidad El Cruce - Hospital Británico. Buenos Aires, Argentina. ² Humana Centro Médico. Córdoba, Argentina. ³ University of Campinas. Campinas, Brazil. ⁴ CONICET-National Academy of Medicine of Buenos Aires, Argentina. ⁵ Hospital Oftalmológico Pedro Lagleyze. Buenos Aires, Argentina. ⁶ R.O.M.A.T. creator center. Entre Ríos, Argentina.
2	DRY EYE DISEASE GEOGRAPHIC DISTRIBUTION AND CORRELATION WITH TEMPERATURE AND HUMIDITY IN ARGENTINA. <u>Marini María C.</u> ¹ Liviero Belén ² , Alves Mónica ³ , Galletti J ⁴ , Galperin G ⁵ Torres Rodrigo M ⁶ ¹ Hospital de Alta Complejidad El Cruce - Hospital Británico. Buenos Aires, Argentina. ² Humana Centro Médico. Córdoba, Argentina. ³ University of Campinas. Campinas, Brazil. ⁴ CONICET-National Academy of Medicine of Buenos Aires, Argentina. ⁵ Hospital Oftalmológico Pedro Lagleyze. Buenos Aires, Argentina. ⁶ R.O.M.A.T. creator center. Entre Ríos, Argentina.
3	HOW EYELASH EXTENSIONS MAY AFFECT DRY EYE DISEASE? Christina N Grupcheva, Dimitar I Grupchev, Nataliya Usheva, Lora O Grupcheva, Department of Ophthalmology and Visual Science, Medical University, Varna, Bulgaria
4	THE IMPACT OF EYELINER USAGE ON DRY EYE SYMPTOMS. Yanru Shen ¹ , Amy G. Sullivan ² , Min Ke ¹ , <u>Yang Liu</u> ¹ ¹ Department of Ophthalmology, Zhongnan Hospital of Wuhan University, Wuhan, China, ² ESSIRI Labs, Boston, United States
5	THE OPTIMEYES™ PROTOCOL. <u>Rachna Murthy</u> , Jonathan C P Roos, FaceRestoration Ltd, London UK
6	THE EFFECT OF AZR-MD-001 0.5% OPHTHALMIC OINTMENT ON MEIBOMIAN GLAND SECRETION, QUALITY AND COMFORTABLE LENS WEAR OVER 3 MONTHS OF DOSING IN PATIENTS WITH CONTACT LENS DISCOMFORT. Fiona Stapleton, ¹ Jacqueline Tan, ¹ Mark Hinds, ² Yair Alster, ³ Charles Bosworth, ³ UNSW Sydney, NSW, Australia, ¹ Ophthalmic Trials Australia, Brisbane, Australia, ² Azura Ophthalmics Ltd, Tel Aviv, Israel ³

7	AZR-MD-001 FOR THE TREATMENT OF MEIBOMIAN GLAND DYSFUNCTION: A SIX- MONTH EXPANSION STUDY. <u>Laura E. Downie</u> , ¹ Jacqueline Tan, ² Fiona Stapleton, ² Yair Alster ³ , Charles Bosworth, ³ ¹ The University of Melbourne, Australia, ² UNSW Sydney, Australia, ³ Azura Ophthalmics Ltd, Tel Aviv, Israel
8	SIX-MONTH COMPARISON OF CLINICIAN-GUIDED THERMAL PULSATION WITH WARM COMPRESS THERAPY FOR MANAGING MEIBOMIAN GLAND DYSFUNCTION. Catherine Jennings, Dian Zhuang, Alex Muntz, Michael M.T.Wang, Jennifer P. Craig, Department of Ophthalmology, The University of Auckland, Auckland, New Zealand
9	A CASE OF LID MARGIN HEMORRHAGE FOLLOWING INTENSE PULSED LIGHT THERAPY AND MEIBOMIAN GLAND EXPRESSION. <u>Young Chae Yoon</u> . Kim's Eye Hospital, Seoul, Korea
10	COMPARISON OF INTENSE PULSED LIGHT TREATMENTS INCLUDING UPPER LID OR LATERAL CANTHUS IN PATIENTS OF MEIBOMIAN GLAND DYSFUNCTION. <u>SoHyeon Kim</u> , ¹ Ji Sang Min, ^{1,2} Tae-im Kim, ^{1,2} Bon Nyeo Koo, ³ Kyoung Yul Seo. ^{1,2} Institute of Vision Research, Department of Ophthalmology, ¹ Cornea Dystrophy Research Institute, Department of Ophthalmology, ² Department of Anesthesiology, ³ Yonsei University College of Medicine, Seodaemungu, Seoul, Korea
11	REVEALING THE EFFECTS OF INTENSE PULSED LIGHT THERAPY ON MEIBOGENESIS AND MEIBUM DISCHARGE IN APOE-/- MOUSE WITH MEIBOMIAN GLAND DYSFUNCTION. Xiaoming Yan, ^{1,2} Wenjing Song. ^{1,2} Department of Ophthalmology, Peking University First Hospital, ¹ Peking University, ² Beijing, China
12	POSSIBILITIES OF PATHOGENETIC THERAPY FOR PATIENTS WITH DRY EYE SYNDROME. Vladimir V. Brzheshkiy ¹ , <u>Sergey Y. Golubev</u> ² , Oleg I. Lebedev ³ , Evgeny S. Milyudin ⁴ . ¹ Saint-Petersburg State Pediatric Medical University, Saint-Petersburg, Russia. ² Electronic media ophthalmological portal Organum-visus, Moscow, Russia. ³ Omsk State Medical University, Omsk, Russia. ⁴ Samara State Medical University, Samara, Russia.
13	THE FREQUENCY OF MEIBOMIAN GLAND DYSFUNCTION (MGD) IN MODERATE TO SEVERE DRY EYE DISEASE (DED): RESULTS FROM THE DREAM TRIAL. P Asbell, ¹ M. Lin, ² F Stapleton, ³ D Jagadeesh, ³ J. He, GS Ying. ⁴ ¹ Bioengineering, U of Memphis, Memphis TN, USA, ² U of California, Berkeley CA, USA, ³ School of Optometry and Vision Science, UNSW, Sydney Australia, ⁴ Department of Ophthalmology, Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA

14	PREVALENCE OF MEIBOMIAN GLAND ATROPHY IN KERATOCONUS. Amy <u>Nau</u> ^{1,2,3} , Kristen Brown ^{1,2,3} , Andrew McLeod ^{1,2,3} ¹ Forefront Eye Care, ¹ Eyewell, ¹ New England College of Optometry Boston, MA USA
15	OBJECTIVE ANALYSIS OF MEIBOMIAN GLANDS FEATURES IN CONTACT LENS AND NON-CONTACT LENS WEARERS. <u>Dorota H. Szczesna-Iskander</u> , Agnieszka Pasciak, Patrycja Piwowarczyk. Department of Optics and Photonics, Wroclaw University of Science and Technology, Wroclaw, Poland
16	COMPARISON OF THE EASYTEAR VIEW + AND THE 5M KERATOGRAPH FOR THE MEASUREMENT OF TEAR FILM STABILITY AND MEIBOMIAN GLAND DROPOUT. Etty Bitton, ¹ Sidra Qamar, ² Fiona Stapleton. ² Ecole d'optométrie, Université de Montréal, Montreal, Canada, ¹ School of Optometry & Vision Science, UNSW Sydney, NSW, Australia ²
17	EXPRESSION OF THERMOSENSITIVE TRP CHANNELS IN HUMAN MEIBOMIAN GLANDS:IMPLICATIONS FOR DRY EYE DISEASE TREATMENT. <u>Fabian Garreis</u> , ¹ Melina Keller, ¹ Aruna Li, ² Stefan Mergler, ² Friedrich Paulsen, ¹ Department of Functional and Clinical Anatomy, Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Germany, ² Department of Ophthalmology, Charité Berlin, Germany
18	DEVELOPMENT OF MOUSE MEIBOMIAN GLAND ORGANOIDs. <u>Sun Woong Kim</u> ^{1,2,3} , Na-young Park ² , Hee Joo Park ³ ¹ Department of Ophthalmology, Yonsei University Wonju College of Medicine, Woonju, Korea, ² Research Institute of Metabolism and Inflammation, Yonsei University Wonju College of Medicine, Wonju, Korea, ³ Global medical science, Yonsei University Wonju College of Medicine, Wonju, Korea
19	EVALUATION OF MEIBOMIAN GLAND LOSS: COMPARISON BETWEEN GRADING SCALE AND SEMI-AUTOMATED COMPUTERIZED CLASSIFICATION. <u>Giulia C. Rizzo</u> , ^{1,2} Stefano Barabino, ³ Joanna Ginatis, ¹ Alessandro Borghesi, ^{1,2} Silvia Tavazzi, ^{1,2} Erika Ponzini, ^{1,2} Fabrizio Zeri. ^{1,2,4} Department of Materials Science, ¹ CO-MiB Research Centre in Optics and Optometry, ² University of Milano-Bicocca, Milan, Italy; Ocular Surface & Dry Eye Center ³ , ASST Fatebenefratelli SAC-CO-Milan University, Milan, Italy; College of Health and Life Sciences, ⁴ Aston University, Aston, United Kingdom.

20	BLOOD AND LYMPH VESSEL SUPPLY OF THE MEIBOMIAN GLANDS OF HUMANS AND MICE. Jakob Kerres, ¹ Ingrid Zahn, ¹ Jana Dietrich, ¹ Michael Scholz, ¹ Simone Gaffling, ¹ Lucas Hoffmann, ³ <u>Friedrich Paulsen</u> ¹ ¹ Institute of Functional and Clinical Anatomy, Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Erlangen, Germany, ² Institute of Neuropathology, University Hospital Erlangen, Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Erlangen, Germany
21	GENERATION OF A NOVEL CHEMICAL CAUTERIZATION MODEL FOR OBSTRUCTIVE MEIBOMIAN GLAND DYSFUNCTION: COMPARING MORPHO-FUNCTIONAL ALTERATIONS WITH ELECTRO-CAUTERIZATION MODEL. <u>Pragnya Rao Donthineni</u> ^{1,2} Deeksha Prasad ² , Saumya Jakati ¹ , Kiran Kumar Bokara ³ , Sayan Basu ^{1,2} , Vivek Singh. ³ L.V. Prasad Eye Institute, ¹ Prof. Brien Holden Eye Research Centre, ² CSIR-Centre for Cellular and Molecular Biology, ³ Hyderabad, Telangana, India.
22	ADIPOKINES CTRP1 AND CTRP6 INFLUENCE LIPID METABOLISM OF MEIBOMIAN GLANDS. <u>Hagen Nicolaus</u> , ^{1,2} Lara Steudte, ³ Antonia Pommer, ³ Andreas Ludwig, ¹ Fabian Garreis. ³ Institute of Experimental and Clinical Pharmacology and Toxicology, Friedrich-Alexander-Universität Erlangen-Nürnberg, ¹ Universitätsklinikum Erlangen, ² Institute of Functional and Clinical Anatomy, Friedrich-Alexander-Universität Erlangen-Nürnberg, ³ Erlangen, Germany
23	TRANSCRIPTOME MICROSCOPY ANALYSIS OF THE HUMAN EYELID CHARACTERIZES MEIBOCYTE MATURATION WITH SINGLE CELL RESOLUTION. <u>Ulrike Hampel</u> ¹ , Maria Schmidt ² , Julia Nilam Schauer ² , Henry Löffler-Wirth ² , Hans Binder ² , Marlon Schneider ³ ¹ Department of Ophthalmology, University of Leipzig, Leipzig, Germany ² Interdisciplinary Centre for Bioinformatics, University of Leipzig, Leipzig, Germany. ³ Institute of Veterinary Physiology, Veterinary Faculty, University of Leipzig, Leipzig, Germany.
24	COMPARISON OF DIFFERENT FORMULATIONS OF A NOVEL RABBIT DERIVED HARDERIAN NONPOLAR LIPID ON TEAR FILM STABILITY IN THE DOG. <u>Brian C. Leonard</u> , ^{1,2} Nayone L. Araujo, ¹ Sara M. Thomasy, ^{1,2} Daniel M. Albert, ^{3,4} Christopher J. Murphy, ³ Charles A. O'Neill, ³ Thomas R. Gadek. ³ Department of Surgical and Radiological Sciences, School of Veterinary Medicine, University of California Davis, ¹ Department of Ophthalmology & Vision Science, School of Medicine, University of California, ² Davis, Davis, CA, MCAL Therapeutics, ³ Park City, UT, Oregon Health & Science University, ⁴ Portland, OR, USA

25	UNVEILING THE HIDDEN INTENSE PULSED LIGHT THERAPY IN LACRIMAL GLAND DYSFUNCTION INDUCED BY HYPERLIPIDEMIA IN APOE-/- MOUSE. <u>Wenjing Song</u> . ^{1,2} Department of Ophthalmology, Peking University First Hospital, ¹ Peking University, ² Beijing, China
26	COMPARATIVE PROTEOMICS REVEALS DIFFERENTIALLY EXPRESSED PROTEINS IN HEALTHY VERSUS CHRONICALLY INFLAMED LACRIMAL GLANDS FROM A SJÖGREN'S DISEASE ANIMAL MODEL. Danny Toribio ¹ , Junji Morokuma ¹ , Markus Hardt ² , <u>Driss Zoukhri</u> . ¹ Department of Comprehensive Care, Tufts University School of Dental Medicine, Boston, MA, USA. ² Center for Salivary Diagnostics and Department of Inflammation and Immunology, ADA Forsyth Institute, Cambridge, MA, USA.
27	LACRIMAL GLAND INJECTION OF PLATELET RICH PLASMA (PRP) FOR TREATMENT OF SEVERE DRY EYE DISEASE. Mohamed Shafik Shaheen ¹ , Mai A. Mohammed ¹ , Ibrahim Y. Allam ¹ , Mohamed Fahmy Doheim ¹ and Sihem Lazreg ² 1. Department of Ophthalmology, Alexandria University, Egypt, 2. Center of Ocular Surface, Alger, Algeria
28	PLATELET-RICH-PLASMA THERAPY FOR OCULAR SURFACE DISEASE OUTCOMES IN GLAUCOMA PATIENTS. Marcela Huertas-Bello ¹ , Mor Bareket ¹ , Manokamna Agarwal ¹ , Timothy McCowan ² , <u>Allan R Slomovic</u> ¹ . ¹ Department of Ophthalmology and Vision Sciences, University of Toronto, Toronto, Canada. ² Medical Sciences Program, Faculties of Science and Medicine, Dalhousie University, Halifax, Canada.
29	OUTCOMES OF PLATELET-RICH-PLASMA FOR OCULAR SURFACE DISEASES IN A LARGE COHORT. Mor Bareket ¹ , Marcela Huertas-Bello ¹ , Manokamna Agarwal ¹ , Timothy McCowan ² , <u>Allan R Slomovic</u> ¹ . ¹ Department of Ophthalmology and Vision Sciences, University of Toronto, Toronto, Canada. ² Medical Sciences Program, Faculties of Science and Medicine, Dalhousie University, Halifax, Canada.
30	NEW APPROACH TO CONTROL CONJUNCTIVAL HYPEREMIA IN EUROPE. <u>J. Salgado-Borges</u> , R. Machado Soares, F. Esteves, A. Borges, I. Ferreira and C. Vêrges, Clinsborges, Porto, Portugal
31	CONJUNCTIVAL HYPERAEMIA: HEALTHCARE PROFESSIONALS' PERSPECTIVES ON THE TREATMENT LANDSCAPE IN EUROPE. <u>Serge Doan</u> ¹ , Saskia Aguado ² , Kelly Nichols ³ on behalf of the study investigators, ¹ Fondation A de Rothschild Hôpital, ² Bausch+Lomb, ³ University of Alabama at Birmingham

32	MOUSE EXPERIMENTAL MODEL FOR DRY EYE DIAGNOSIS USING CONJUNCTIVAL GOBLET CELL IMAGE CAPTURED BY MOXIFLOXACIN-BASED FLUORESCENCE MICROSCOPY. <u>Hong Kyun Kim</u> , ^{1,2} Che Gyem Yae, ¹ Sang Bum Kim, ¹ Jeongmun Choi, ¹ Jeongho Kim, ² Ki Hean Kim. ³ Department of Ophthalmology, School of Medicine, Kyungpook National University, ¹ Bio-Medical Institute, Kyungpook National University Hospital, ² Department of Mechanical Engineering, Pohang University of Science and Technology, ³ Republic of Korea
33	MOXIFLOXACIN-BASED FLUORESCENCE IMAGING OF HUMAN CONJUNCTIVAL GOBLET CELLS USING PTERYGIUM TISSUES. Hosik Hwang. Department of Ophthalmology, Catholic University of Korea, Seoul, Korea.
34	NOVEL ANTERIOR SEGMENT IMAGING DEVICE FOR RAPID NON-CONTACT EXAMINATION OF CONJUNCTIVAL GOBLET CELLS IN HUMANS: INVESTIGATOR-INITIATED EXPLORATORY CLINICAL TRIAL. <u>Chung Young Kim</u> , ^{1,2} Young In Yoon, ^{1,2} Jungbin Lee, ³ Jieun Yun, ³ Seonghan Kim, ³ Man Ji, ^{1,2} Gahye Lee, ^{1,2} Jin Suk Ryu, ² Mee Kum Kim, ^{1,2} Ki Hean Kim, ³ Chang Ho Yoon. ^{1,2} ¹ Department of Ophthalmology, Seoul National University College of Medicine, Seoul, Rep. of Korea ² Laboratory of Ocular Regenerative Medicine and Immunology, Biomedical Research Institute, Seoul National University Hospital, Seoul, Rep. of Korea. ³ Department of Mechanical Engineering, Pohang University of Science and Technology, Pohang, Gyeongbuk, Rep. of Korea.
35	ACCOMMODATIVE AND VERGENCE DYSFUNCTION AS A POTENTIAL CAUSE OF RECALCITRANT SYMPTOMS IN PATIENTS WITH DRY EYE DISEASE. <u>Lingyi Liang</u> , Jing Li, State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangdong Provincial Key Laboratory of Ophthalmology and Visual Science, Guangdong Provincial Clinical Research Center for Ocular Diseases, Guangzhou 510060, China
36	DIETARY INFLUENCES ON THE SIGNS AND SYMPTOMS OF DRY EYE DISEASE. <u>Azadeh Tavakoli</u> , ¹ Maria Markoulli, ¹ Eric Papas, ¹ Judith Flanagan. ² UNSW School of Optometry ¹ , The University of Sydney ² , Sydney, Australia
37	CORRELATION BETWEEN SLEEP DISORDERS AND DRY EYE BASED ON WEARABLE SMART DEVICES. <u>Ao Li</u> , Lei Tian, ¹ Ying Jie. Beijing Institute of Ophthalmology, Beijing Tongren Eye Center, Beijing Tongren Hospital, Capital Medical University, Beijing Ophthalmology & Visual Sciences Key Laboratory, Beijing, China

38	DIFFERENTIAL DIAGNOSIS OF SJÖGREN VERSUS NON-SJÖGREN DRY EYE THROUGH CONJUNCTIVAL MICROVASCULATURE. <u>Jiyoung Emily Lee</u> , ¹ Young Chae Yoon, ² Woong-Joo Whang, ¹ Ho Sik Hwang, ¹ Hyun-Seung Kim, ¹ Dae-Yu Kim, ³ Kyung Sun Na. ¹ Department of Ophthalmology, College of Medicine, The Catholic University of Korea, ¹ and Kim's Eye Hospital, ² Seoul, Department of Electrical and Computer Engineering, Inha University, Incheon, ³ Korea
39	MEIBOMIAN GLAND DYSFUNCTION AND MEIBOMIAN GLAND DROPOUT IN PRIMARY AND SECONDARY SJÖGREN SYNDROME. Karim Mohamed-Noriega ¹ , Maximiliano A. Rocha-Rojas ¹ , Carla Gonzalez-Arocha ¹ , Fernando Morales-Wong ¹ , José F. Martínez-Delgado ¹ , Janett L. Riega-Torres ² , Dionicio Galarza-Delgado ² , Jesús Mohamed-Hamsho ¹ ¹ Ophthalmology Department, University Hospital and Faculty of Medicine, Autonomous University of Nuevo Leon (UANL), Monterrey, Mexico; ² Rheumatology Department, University Hospital and Faculty of Medicine, Autonomous University of Nuevo Leon (UANL), Monterrey, Mexico.
40	SLEEP DISTURBANCE, DEPRESSION AND FATIGUE IN SJÖGREN'S DISEASE: THE IMPACT ON OCCUPATIONAL HEALTH. <u>Beatriz C Cintra</u> , Mateus Marzola, Fabíola R Oliveira, Eduardo M Rocha. Ribeirao Preto Medical School, University of Sao Paulo, Ribeirao Preto, SP, Brazil.
41	SJÖGREN'S DISEASE AND WORK: DESCRIPTION OF IMPACTS FROM THE PERSPECTIVE OF OCCUPATIONAL THERAPY. <u>Beatriz C Cintra</u> , Mateus Marzola, Fabíola R Oliveira, Eduardo M Rocha. Ribeirao Preto Medical School, University of Sao Paulo, Ribeirao Preto, SP, Brazil.
42	INCREASED METTL3 EXPRESSION AND M ⁶ A RNA METHYLATION MAY PLAY A ROLE IN THE PATHOGENESIS OF DRY EYE IN SJÖGREN'S SYNDROME. <u>Qi Zhang</u> , Xue Yang, The First Affiliated Hospital of Chongqing Medical University, Chongqing, China
43	TEAR miRNAs IN DRY EYE PATIENTS AS INDICATORS OF PATHOLOGICAL MECHANISMS INVOLVED IN SJÖGREN SYNDROME. <u>Carmen Ciavarella</u> , ¹ Gianandrea Pasquinelli, ^{1,2} Luigi Fontana, ^{1,3} Piera Versura. ^{1,3} DIMEC Alma Mater Studiorum University of Bologna, ¹ Pathology Unit, IRCCS Azienda Ospedaliero-Universitaria di Bologna, ² Italy, IRCCS Azienda Ospedaliero-Universitaria di Bologna, ³ Italy
44	A TEAR CYTOKINE PANEL AND MUCIN ASSESSMENT CORRELATE WITH SIGNS AND SYMPTOMS IN DRY EYE DISEASE PATIENTS. <u>Carmen Ciavarella</u> , ¹ Silvia Odorici ¹ , Luigi Fontana ^{1,2} , Piera Versura ^{1,2} DIMEC Alma Mater Studiorum University of Bologna ¹ , IRCCS Azienda Ospedaliero-Universitaria di Bologna ² , Italy

45	THE EFFECT OF MESENCHYMAL STEM CELLS-DERIVED EXOSOMES ON DRY EYE IN SJOGREN'S SYNDROME MURINE MODEL. Soojung Shin, ¹ Youngseo Jeon, ¹ Eun Jeong Cheon, ¹ Hyun Jung Lee, ² <u>So-Hyang Chung</u> . ¹ Seoul St. Mary's Hospital, College of Medicine, The Catholic University of Korea, ¹ Seoil University, ² Seoul, Korea
46	NOX-MEDIATED OXIDATIVE STRESS CREATES A FIBROTIC AND INFLAMMATORY MILIEU IN VERNAL KERATOCONJUNCTIVITIS. Virender Singh Sangwan ^{1,2} Abha Gour ^{1,2} , Prisha Warikoo ^{1,3} , Jyoti Sangwan ¹ , Mehak Vohra ² , Shailja Tibrewal ^{4,5} , Anil Tiwari ^{1,2} ¹ Eicher-Shroff Centre for Stem Cell Research, Dr Shroff's Charity Eye Hospital Delhi, New Delhi, Delhi, India; ² Shroff-Pandorum Centre for Ocular Regeneration, Dr Shroff's Charity Eye Hospital Delhi, New Delhi, Delhi, India; ³ Amity University System, Noida, Uttar Pradesh, India; ⁴ Department of Paediatric Ophthalmology, Dr Shroff's Charity Eye Hospital Delhi, New Delhi, Delhi, India; ⁵ Centre for Unknown and Rare Eye Diseases, Dr Shroff's Charity Eye Hospital Delhi, New Delhi, Delhi, India
47	A POLYDOPAMINE NANOPARTICLE-BASED MILD PHOTOTHERMAL LOOP THERAPY FOR EFFICIENT TREATMENT IN REFRACTORY KERATITIS. Lei Lin. Eye Hospital, Wenzhou Medical University, Wenzhou, China
48	OCULAR AND ORAL MICROBIOME IN DRY EYE. <u>Yuichi Okumura</u> , ^{1,2} Takenori Inomata, ^{1,2,3} Ken Nagino, ^{1,2,3} Shintaro Nakao, ¹ Akira Murakami. ¹ Department of Ophthalmology, Juntendo University, ¹ Department of Telemedicine and Mobile Health, Juntendo University, ² Department of Hospital Administration, Juntendo University, ³ Tokyo, Japan
49	DUPILUMAB-ASSOCIATED CONJUNCTIVITIS IN ATOPIC DERMATITIS PATIENTS IS ASSOCIATED WITH A UNIQUE OCULAR SURFACE MICROBIOME. Vijay Kumar Patra, ^{1,2} Nora Woltsche, ³ Urban Cerpes, ¹ Danijela Bokanovic, ¹ Maria Repelnig ¹ , Aaroh Joshi ¹ , Isabella Perchthaler ¹ , Manuela Fischl ³ , Marc Vocanson ² , Natalie Bordag ¹ , Marija Durdevic ^{4,5,6} , Johannes Woltsche ¹ , Franz Quehenberger ¹ , Franz Legat ¹ , Andreas Wedrich ³ , <u>Jutta Horwath-Winter</u> ³ , Peter Wolf ^{1,7}
50	ALTERED OCULAR SURFACE MICROBIOME IN KERATOCONUS PATIENTS CORRELATES WITH LOCAL IMMUNE FACTOR DYSREGULATION. Arkasubhra Ghosh ¹ , Archana Padmanabhan ¹ , Tanuja Vaidya ¹ , Nimisha R. Kumar ¹ , Rohit Shetty ² , Sharon D'Souza ² , <u>Pooja Khamar</u> ² , Swaminathan Sethu ¹ ¹ GROW Research Lab, Narayana Nethralaya Foundation, Bangalore, India ² Cornea Department, Narayana Nethralaya, Bangalore, India

51	GLAUCOMA CASES MANY YEARS AFTER REFRACTIVE SURGERY TREATMENT. <u>Enesa Begovi</u> . Private Ophthalmological Practice Lacrima Dr Enesa Begovic, Institute for Occupational Medicine Sarajevo Canton, Bosnia and Herzegovina
52	CLINICAL PRESENTATION AND PROGNOSIS OF PATIENTS WITH OCULAR ADNEXAL LYMPHOMA IN KOREA. <u>Min Seob Park</u> , ¹ Woo Jin Shin, ² Joon Young Hyon, ^{1,2} Namju Kim, ^{1,2} Hyun Sun Jeon. ^{1,2} Department of Ophthalmology, Seoul National University Bundang Hospital, ¹ Department of Ophthalmology, Seoul National University College of Medicine. ²
53	BILATERAL ASYMMETRY IN OCULAR GRAFT-VERSUS-HOST DISEASE. <u>Sang Jae Lee</u> , ¹ Han Song, ² Hyun Sun Jeon, ¹ Joon Young Hyon. ¹ Department of Ophthalmology, Seoul National University Bundang Hospital, Seoul National University College of Medicine, Seongnam, Korea ¹ , Department of Ophthalmology, Uijeongbu St. Mary's Hospital, The Catholic University of Korea College of Medicine, Uijeongbu, Korea. ²
54	MASK-ASSOCIATED CHANGES IN OCULAR SURFACE PARAMETERS. <u>Alvin L Young</u> , Victor Chan, Ka Wai Kam, Wai Kuen Yip. Prince of Wales Hospital, The Chinese University of Hong Kong, China
55	COVID-19 PANDEMIC EFFECTS ON OCULAR SURFACE HEALTH AND BEHAVIORS USING THE DRYEYERHYTHM SMARTPHONE APPLICATION: A CROSS-SECTIONAL OBSERVATIONAL STUDY. <u>Kaho Omori</u> , ¹ Ken Nagino, ^{1,2,3} Xinrong Zou, ¹ Takenori Inomata, ^{1,2,3,4} Akie-Midorikawa-Inomata, ^{2,3} Atsuko Eguchi, ² Yuichi Okumura, ^{1,3} Mako Watanabe, ¹ Shintaro Nakao. ¹ Juntendo University Graduate School of Medicine, Department of Ophthalmology, ¹ Department of Hospital Administration, ² Department of Telemedicine and Mobile Health, ³ Data Science, ⁴ Tokyo, Japan.
56	DEPRESSION IS ASSOCIATED WITH INCREASED ACTIVATION OF PHOTOPHOBIA BRAIN CIRCUITS AND LIMBIC STRUCTURES IN INDIVIDUALS WITH CHRONIC OCULAR PAIN. <u>Ema Karakoleva</u> , ^{1,2} David Valdes, ² Nicholas Reyes, ^{1,2} Nicholas Pondelis, ³ Elizabeth Felix, ^{4,5} Anat Galor, ^{1,2} Eric Moulton. ^{3,6} Surgical Services, Miami Veterans Administration Medical Center ¹ , Bascom Palmer Eye Institute, University of Miami ² , Miami, FL, USA, Brain and Eye Pain Imaging Lab, Pain and Affective Neuroscience Center, Department of Anesthesia, Critical Care and Pain Medicine, Boston Children's Hospital and Harvard Medical School ³ , Boston, MA, USA, Research Service, Miami Veterans Administration Medical Center ⁴ , Miami, FL, USA, Physical Medicine and Rehabilitation, University of Miami ⁵ , Miami, FL, USA, Department of Ophthalmology, Boston Children's Hospital and Harvard Medical School ⁶ , Boston, MA, USA

57	USING NARRATIVE MEDICINE TO IDENTIFY KEY FACTORS AFFECTING QUALITY OF LIFE IN DRY EYE DISEASE. <u>Emanuela Aragona</u> ¹ , Stefano Bonini ² , Maurizio Rolando ³ , Linda Landini ⁴ , Anne Argullos ⁴ , Stefano Barabino ⁵ , Pasquale Aragona ⁶ ¹ IRCCS San Raffaele Scientific Institute, Milan, Italy; ² Department of Ophthalmology, University of Rome Campus Biomedico, Rome, Italy; ³ ISPRE Oftalmics, Genoa, Italy; ⁴ Bausch + Lomb; ⁵ Ocular Surface and Dry Eye Center, Ospedale L. Sacco, University of Milan, Italy; ⁶ Department of Biomedical Sciences, Ophthalmology Clinic, University of Messina, Italy
58	IMPACT OF PTERYGIUM MORPHOLOGICAL PROFILES ON DRY EYE PARAMETERS. <u>Seung Hyeun Lee</u> , ¹ Dong Hee Ha, ² Kyoung Woo Kim. ² Department of Ophthalmology, Chung-Ang University Gwangmyeong Hospital, ¹ Department of Ophthalmology, Chung-Ang University Seoul Hospital, Republic of Korea ²
59	LOW EXPRESSION OF VITAMIN D RECEPTOR IN PATIENTS WITH DRY EYE DISEASE. Arturo E. Grau ^{1,2} , Pablo Zoroquiain ^{1,3} ¹ Pontificia Universidad Catolica de Chile (UC), ² Ophthalmology Department UC, ³ Pathology Department UC
60	CIRCADIAN DISRUPTION REDUCES MUC4 EXPRESSION VIA BMAL1 IN DRY EYE. Bowen Wang, Hao Zeng, Jin Yuan, Zhongshan Ophthalmic Center, Sun Yat-sen University, GZ, China
61	A PROSPECTIVE SELF-CONTROLLED STUDY ON THE ALTERATIONS OF THE OCULAR SURFACE AND TRANSCRIPTOMIC PROFILE ASSOCIATED WITH PROLONGED EXPOSURE TO VIDEO DISPLAY TERMINALS. Ling Li ^{1,2} , Xinhao Z ² , Weihao Xu ² , Mali Dai ² , Zihao Liu ² , Yanxiao Li ² , Yiting Fang ³ , Jinyang Li ² , Wei Chen, ^{2,4} Ningbo Eye Hospital, Wenzhou Medical University, Ningbo, ¹ National Clinical Research Center for Ocular Diseases, Eye Hospital, Wenzhou Medical University, Wenzhou, ² Hangzhou Lin'an Traditional Chinese Medicine Hospital, Hangzhou, ³ Ningbo Eye Institute, Ningbo Eye Hospital, Wenzhou Medical University, Ningbo, China. ⁴
62	UPTAKE OF MICRO- AND NANOPLASTICS IN OCULAR SURFACE CELLS AND IMPACT ON CELL VIABILITY. <u>Katharina Jüngert</u> ¹ , Agatha Raffauf ¹ , Jutta Horwath-Winter ² , Friedrich Paulsen ¹ , Fabian Garreis ¹ , Ingrid Zahn ¹ . ¹ Functional and Clinical Anatomy, Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen, Germany, ² Department of Ophthalmology, Medical University of Graz, Graz, Austria
63	NONLINEAR ASSOCIATIONS BETWEEN PARTICULATE MATTER 2.5 AND THE RISK OF HORDEOLUM-RELATED VISITS TO SHANGHAI: A TIME SERIES ANALYSIS. Yue Tan, Yue Yin, Lan Gong. Eye & ENT Hospital, Fudan University

Friday, November 1, 2024

SESSION II

Seeing differently: The meaning of blindness

Chairpersons - Esen Akpek (USA), Gerd Geerling (Germany)

- 8:00** Seeing art through different eyes. Deborah Tramentozzi, Italy
- 8:15** The vision of individuals with visual impairment and blindness. Lotfi B. Merabet, Laboratory for Visual Neuroplasticity, Massachusetts Eye and Ear, and Department of Ophthalmology, Massachusetts Eye and Ear, Boston, MA, USA

Meibomian gland dysfunction update

Chairpersons - Kyung-Sun Na (South Korea), Kelly Nichols (USA)

- 8:30** Prevalence of meibomian gland dysfunction in adults. Fiona Stapleton, UNSW Sydney, NSW, Australia
- 8:45** Prevalence of meibomian gland atrophy in a pediatric population. Preeya K. Gupta, Triangle Eye Consultants, Raleigh, NC, USA
- 9:00** Hyperlipidemia induces meibomian gland dysfunction. Jinghua Bu¹, Minjie Zhang¹, Yang Wu^{1,2}, Nan Jiang¹, Yuli Guo¹, Xin He¹, Hui He¹, M. Vimalin Jeyalatha¹, Zuguo Liu^{1,3}, Wei Li^{1,3}. Department of Ophthalmology, Xiang'an Hospital of Xiamen University; Eye Institute of Xiamen University; School of Medicine, Xiamen University¹. Xiamen branch, Zhongshan Hospital, Fudan University². Xiamen University affiliated Xiamen Eye Center, Xiamen, China ³.
- 9:15** Advances in meibography for the diagnosis of meibomian gland dysfunction. Reiko Arita, Department of Ophthalmology, Itoh Clinic, Saitama, Japan

9:30 Intense pulsed light therapy for meibomian gland dysfunction and dry eye disease. Jose Benitez-del-Castillo. University Complutense, HCSC, Clinica Rementeria, Madrid, Spain.

9:45 Hypoxia: a breath of fresh air for optimal meibomian gland function. Shan Yang², Yaoyao Ren¹, Wenjing Li¹, Yang Liu,¹ ¹Department of Ophthalmology, Zhongnan Hospital of Wuhan University, Wuhan, China, ²Department of Ophthalmology, Peking Union Medical College Hospital, Chinese Academy of Medical Sciences & Peking Union Medical College, Beijing, China

10:00 Poster Session II (with Coffee & Tea)

Chairpersons - Heiko Pult (Germany), Adriana Stanila (Romania)

TFOS Dry Eye Workshop III

Chairpersons - Friedrich Paulsen (Germany), David A Sullivan (USA)

10:50 Introduction - Victor L Perez. Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Florida, USA

10:55 Definition, classification and diagnosis of dry eye disease. James S. Wolffsohn. College of Health and Life Sciences, Aston University, Birmingham, UK

11:10 Management and therapy of dry eye disease. Lyndon Jones. Centre for Ocular Research & Education, School of Optometry & Vision Science, University of Waterloo, Canada

11:25 TFOS DEWS III Digest. Fiona Stapleton. School of Optometry and Vision Science, UNSW Sydney, NSW, Australia.

11:40 Delphi panel initiative. Jennifer P. Craig. Department of Ophthalmology, The University of Auckland, Auckland, New Zealand

11:55 Discussion

12:20 Poster Viewing & Lunch

Did you know?

Chairpersons - Pasquale Aragona (Italy), Jesús Merayo-Llodes (Spain)

- 13:40** Convergence of artificial intelligence and microelectronics with ocular surface biology and disease. Dimitri Azar, University of Illinois College of Medicine, Chicago, IL, USA
- 13:55** Disruptive contact lens technologies. Philip B. Morgan, Eurolens Research, Division of Pharmacy and Optometry, University of Manchester, United Kingdom
- 14:10** Human ocular mucins and beyond. Pablo Argüeso, Department of Ophthalmology, Tufts Medical Center, Tufts University School of Medicine, Boston, MA, USA
- 14:25** Importance of circadian rhythms in the ocular surface. Ying Jie, Beijing Institute of Ophthalmology, Beijing Tongren Eye Center, Beijing Tongren Hospital, Capital Medical University, No.1 Dong Jiao Min Xiang, Dong Cheng District, Beijing, China
- 14:40** Obstructive sleep apnea affects lacrimal gland function. Shaopan Wang^{1,2,8}, Xin He^{1,2,3}, Qingmin Li⁴, Yuhang Zhang^{1,2}, Jiaoyue Hu^{1,2,5,6}, Rongrong Zong^{1,2}, Jingyi Zhuang³, Andrew J. Quantock⁷, Yingying Gao^{4*}, Wei Li^{1,2,5,6*}, Zuguo Liu^{1,2,5,6} ¹Eye Institute of Xiamen University, School of Medicine, Xiamen University, Xiamen, Fujian, China, ²Fujian Provincial Key Laboratory of Ophthalmology and Visual Science, Xiamen University, ³Department of Ophthalmology, the First Affiliated Hospital of Xiamen University, ⁴Department of Ophthalmology, the Second Affiliated Hospital, Fujian Medical University, Quanzhou, Fujian, China, ⁵Department of Ophthalmology, Xiang'an Hospital of Xiamen University, ⁶Xiamen University Affiliated Xiamen Eye Center, Xiamen University. ⁷School of Optometry and Vision Sciences, Cardiff University, Cardiff, Wales, United Kingdom. ⁸Institute of Artificial Intelligence, Xiamen University
- 14:55** Novel role of lymphatic vessels in the pathogenesis of ocular surface disease. Claus Cursiefen, Department of Ophthalmology, University of Cologne and University Hospital Cologne, Köln, Germany
- 15:10** **Poster Session II (with Coffee & Tea)**
Chairpersons - Heiko Pult (Germany), Adriana Stanila (Romania)

New insights into the pathophysiology and management of catastrophic ocular surface diseases

Chairpersons - Alejandro Navas (Mexico), Kyung Chul Yoon (South Korea)

- 16:00** The coming revolution in the management of microbial keratitis. James Chodosh,^{1,2,3} Departments of Ophthalmology and Visual Sciences,¹ Molecular Genetics and Microbiology,² and Neurosciences,³ University of New Mexico School of Medicine, Albuquerque, NM, USA
- 16:15** Improving outcomes in acute ocular burns. Geetha Iyer, Code Eye Care, Chennai, India
- 16:30** Ocular graft versus host disease. Victor L Perez, Robert Levy, Bascom Palmer Eye Institute, University of Miami Miller School of Medicine, Florida, USA
- 16:45** Stevens Johnson syndrome/toxic epidermal necrolysis. Haji Saeed, Illinois Eye and Ear, Department of Ophthalmology, University of Illinois at Chicago, Chicago, IL; Department of Ophthalmology, Loyola University Medical Center, Maywood, IL, Harvard Medical School, Boston, MA USA
- 17:00** Neurotrophic keratopathy. Harminder Singh Dua, University of Nottingham and Queens Medical Centre, Nottingham, England, United Kingdom
- 17:15** Ocular surface squamous neoplasia: What is new and exciting! Carol L. Karp, Bascom Palmer Eye Institute, Miami, FL, USA

Poster Session II

Chairpersons - Heiko Pult (Germany), Adriana Stanila (Romania)

1	HYPEROSMOLARITY IS ASSOCIATED WITH INCREASED VARIATION OF LIGHT SCATTER FOLLOWING CATARACT SURGERY. Benjamin D. Sullivan, ¹ Marta Palazon ² , Ines Yago ² , Raúl Duarte ³ , Julie M. Schallhorn ⁴ , Lisa M. Nijm ⁵ , Darrel E. White ⁶ , Michael S. Berg ¹ , Pablo Artal ³ Trukera Medical, TX, USA, ¹ Hospital Universitario Virgen de la Arrixaca, Murcia, Spain, ² Universidad de Murcia, Murcia, Spain, ³ University of California, San Francisco, CA, USA, ⁴ University of Illinois Eye and Ear Infirmary, IL, USA, ⁵ SkyVision Centers, OH, USA ⁶
2	ENDOPLASMIC RETICULUM STRESS INDUCES CORNEAL EPITHELIAL CELL INFLAMMATION THROUGH THE PERK-CHOP SIGNALING PATHWAY IN DRY EYE DISEASE. Zhiwei Zha, ^{1,2} Decheng Xiao, ¹ Zihao Liu, ¹ Yang Liu, ³ Wei Chen. ^{1,2} School of Ophthalmology and Optometry and Eye Hospital, Wenzhou Medical University, Wenzhou, Zhejiang, China, ¹ The Affiliated Ningbo Eye Hospital of Wenzhou Medical University, Ningbo, Zhejiang, China, ² Department of ophthalmology, Zhongnan Hospital of Wuhan University, Wuhan, Hubei, China. ³
3	HYPEROSMOLARITY IMPAIRS CORNEAL EPITHELIAL BARRIER FUNCTION AND WOUND HEALING VIA DYSREGULATED WNT/b-CATENIN SIGNALING: AN IN VITRO STUDY. Shruti Sharma ^{1,2} , Richard Kontoh-Twumasi ¹ , Ashok Sharma ^{1,2}
4	THE EFFECT OF AN ACUTE HYPER-OSMOLAR STIMULUS ON THE <i>IN VIVO</i> MORPHODYNAMICS OF HUMAN CORNEAL IMMUNE CELLS. Laura E Downie, Rajni Rajan, Mengliang Wu, ¹ Senuri Karunaratne, Ji-hyun Lee, ¹ Phillip Bedggood, Holly R Chinnery, Department of Optometry and Vision Sciences, The University of Melbourne, Victoria, Australia
5	A PROSPECTIVE, MASKED, STUDY OF DRY EYE TEAR FLUID BIOMARKERS COMPARING A NOVEL, ELECTROCHEMICAL TO COMMERCIALLY AVAILABLE DEVICES. Maria A. Beatty, Grant L. Smyth, Elli K. Davis, Kathleen G. Campbell, and Leanne T. Labriola. Allegheny Ophthalmic and Orbital Associates, Pittsburgh, PA, USA, Conemaugh Memorial Medical Center, Johnstown, PA, USA, Southwestern Pennsylvania Eye Center, Washington, PA, USA, InnSight Technology Inc. Pittsburgh, PA, USA, Haub Business School, St. Joseph University, PA, USA Vision Institute, University of Pittsburgh Medical Center, Pittsburgh, PA, USA

6	NEUROFILAMENTS IN TEARS AS BIOMARKERS OF RETINAL NEURONAL DEGENERATION IN DIABETIC PATIENTS. A PILOT STUDY. G.W Oliverio ¹ ; M. Mancini ¹ ; E. Aragona ² ; A. Calderone ¹ ; P. Palino ¹ ; F. Polito ³ ; M. Torre ³ ; V. Macaione ³ ; M. Aguenouz ³ ; P. Aragona ¹ . ¹ Department of Biomedical Sciences, University of Messina, Italy; ² University Vita-Salute, San Raffaele Hospital, Milan, Italy; ³ Department of Clinical and Experimental Medicine, University of Messina, Italy
7	TEAR PROTEINS AS DISEASE BIOMARKERS: YES AND (PROBABLY) NO!? Remco Crefcoeur ^{1,2} , Peter Raus ^{2,3} , <u>Peter Verhaert</u> ^{1,2} . ¹ Department of Biotechnology, Delft University of Technology, Delft, Netherlands; ² ProteoFormiX, Vorselaar, Belgium; ³ Miró Center for Ophthalmology, Geel, Belgium
8	EVALUATING MOLECULAR BIOMARKERS IN TEARS OF PATIENTS WITH OCULAR GRAFT VERSUS HOST DISEASE. <u>S.B. Sunshine</u> , C. Beck, S. Chang, R. Talwar, X Cao. Ophthalmology and Visual Sciences, University of Maryland School of Medicine, Baltimore, MD.
9	THE EFFECT OF LIFITEGRAST 5.0% SOLUTION ON CLINICAL SIGNS AND BIOMARKERS IN DRY EYE DISEASE. <u>Paul Karpecki</u> ¹ , James Thimons ² , Miranda Koehler ³ , Eric Donnenfeld ⁴ ¹ Kentucky Eye Institute, ² Ophthalmic Consultants of Connecticut, ³ Kentucky Eye Institute, ⁴ Ophthalmic Consultants of Long Island
10	TREATMENT OF DRY EYES WITH LIFITEGRAST 5% PRIOR TO CATARACT SURGERY: A PROSPECTIVE TRIAL. Yelin Yang*, ¹ Larissa Gouvea*, ¹ Michael Mimouni ¹ , Tanya Trinh, ¹ Gisella Santaella, ¹ Eyal Cohen, ¹ Nir Sorkin, ¹ <u>Allan Slomovic</u> ¹ ¹ University of Toronto, Department of Ophthalmology and Vision Sciences, Toronto, Ontario, Canada *co-first authors
11	THE ROLE OF LID HYGIENE AND ITS EFFECT ON OCULAR SURFACE INFLAMMATORY BIOMARKERS. Swaminathan Sethu, ¹ Rohit Shetty, ² Pooja Khamar, ² Abha Shah, ² Sri Hari B. ² GROW Research Lab, Narayana Nethralaya Foundation, ¹ Department of Cornea & Refractive Surgery, Narayana Nethralaya, ² Bangalore, India
12	AI-BASED CLINICAL STRATIFICATION USING TEAR FILM BIOMARKERS IN DED TO IDENTIFY SUB-CLINICAL DISEASE. <u>Pooja Khamar</u> , Rohit Shetty, Raghav N, Swaminathan S, Arkasubhra Ghosh. Narayana Nethralaya Eye Hospital, Bengaluru, India
13	CAN CORNEAL COLLAGEN BE MODULATED THROUGH THE REGULATION OF AUTOPHAGY AND INFLAMMATION? <u>Pooja Khamar</u> , Rohit Shetty, Swaminathan S, Arkasubhra Ghosh, Narayana Nethralaya Eye Hospital, Bengaluru, India
14	NANOSTRING ANALYSIS OF MicroRNA PROFILES IN PRIMARY SJÖGREN SYNDROME. <u>Francesca Giovannetti</u> , Paola Pontecorvi, Marta Armentano, Francesca Megiorni, Ludovico Alisi, Enrico Romano, Alice Bruscolini. Sapienza University of Rome, Italy

15	AN INNOVATIVE BIOSENSOR FOR QUICK, QUANTITATIVE, IN SITU DETECTION OF ANALYTES AND PROTEINS IN TEARS. <u>Francesco Decataldo</u> ¹ , Lia Giulia D'Amico, ² Justin Lemarchand, ² Vito Vurro, ² Marta Tessarolo, ² Luigi Fontana, ^{1,3} Gianandrea Pasquinelli, ¹ Beatrice Fraboni, ² Piera Versura ^{1,3} ¹ University of Bologna, Department of Medical and Surgical Sciences, Bologna, Italy ² University of Bologna, Department of Physics and Astronomy, Bologna, Italy ³ Ophthalmology Unit, University of Bologna and IRCCS Azienda Ospedaliero-Universitaria di Bologna, Bologna, Italy
16	MicroRNAs UP-REGULATED IN STEVENS-JOHNSON SYNDROME WITH SEVERE OCULAR COMPLICATIONS. Mayumi Ueta, Hiromi Nishigaki, Hokoru Yoshioka, Shigeru Kinoshita, Chie Sotozono. Department of Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan
17	A WORLD BEHIND LOW VOLUME TEARS: THE PROTEIN AND IMMUNE CELL MARKER PROFILES IN DRY EYE PATIENTS IN A CLINICAL SETTING Carmen Ciavarella ¹ , Annalisa Astolfi ¹ , <u>Piera Versura</u> ^{1,2} DIMEC Alma Mater Studiorum University of Bologna ¹ , IRCCS Azienda Ospedaliero-Universitaria di Bologna ² , Italy
18	COMPARISON OF OCULAR MANIFESTATIONS IN RELATION TO IMMUNOGLOBULIN LEVELS IN INDIVIDUALS WITH DRY EYE. Chloe Shields ^{1,2} , Pragnya Rao Donthineni ^{1,3} , Rohit Muralidhar ⁴ , Sara S. McCoy ⁵ , Alan Baer ⁶ , Robert Fox, Anat Galor. ^{1,2} Bascom Palmer Eye Institute, University of Miami ¹ , Miami, FL, USA, Ophthalmology, Miami Veterans Affairs Medical Center ² , Miami, FL, USA, Shantilal Shanghvi Cornea Institute, L.V. Prasad eye Institute ³ , Hyderabad, India, Nova Southeastern University College of Osteopathic Medicine ⁴ , Davie, FL, USA, University of Wisconsin School of Medicine and Public Health ⁵ , Madison, WI, USA, Division of Rheumatology, Johns Hopkins University School of Medicine ⁶ , Baltimore, MD, USA
19	PRO- INFLAMMATORY CYTOKINES ASSOCIATED WITH CLINICAL SEVERITY OF DRY EYE DISEASE OF PATIENTS WITH DEPRESSION. Mrugacz Malgorzata, ¹ Beata elazowska. ² Department of Ophthalmology and Eye Rehabilitation, ¹ Department of Paediatric Laboratory Diagnostics, ² Medical University of Bialystok, Poland
20	SALIVARY AND URINARY CONCENTRATIONS OF METALS IN SJÖGREN'S DISEASE. <u>Mateus M. Marzola</u> ¹ , Fabíola Reis Oliveira ¹ , Lina do Prado Baffa ¹ , Ana Luisa da Cunha Almeida ¹ , Adriana Andrade Batista Murashima ¹ , Beatriz C. Cintra ¹ , Bruno Alves Rocha ² , Fernando Barbosa Junior ² , Denny M. Garcia ¹ , Eduardo M. Rocha. ¹ Ribeirao Preto Medical School, University of Sao Paulo, Ribeirao Preto, SP, Brazil.

21	IMPACT OF PALPEBRAL FISSURE HEIGHT ALTERATIONS ON NON-INVASIVE ASSESSMENT OF TEAR FILM IN DRY EYE DISEASE. Pragnya Rao Donthineni, ^{1,2} Shinjini Basak, ³ Moumi Maity, ² Rohit Muralidhar, ⁴ Sayan Basu. ^{1,2} L.V. Prasad Eye Institute, ¹ Prof. Brien Holden Eye Research Centre, ² Hyderabad, Telangana, India, College of Optometry, University of Houston, TX, USA, ³ Nova Southeastern University, FL, USA. ⁴
22	ASSESSMENT OF THE TEAR FILM SUBLAYERS IN DRY EYE DISEASE PATIENTS AND CONTROLS USING THE TEAR FILM IMAGER (TFI). Yael Yohai Patael, ^{2,3} Emmanuel Bettach ¹ , Raanan Gefen ² , David Zadok ¹ . Shaare Zedek Medical Center ¹ , Adom (Advanced Optical Technologies) ² , Clalit Health Services ³ .
23	WHAT WERE THE DIFFERENCES IN TEAR FILM AND MEIBOMIAN GLAND-RELATED PARAMETERS ASSOCIATED WITH THE EFFECTIVENESS OF IPL TREATMENT? A RETROSPECTIVE STUDY. Reiko Arita, ^{1,2} Mansaku Takano, ² Shima Fukuoka. ^{2,3} Itoh clinic, ¹ Saitama, Japan, Lid and meibomian gland working group, ² Saitama, Japan, Omiya Hamada Eye Clinic, ³ Saitama, Japan
24	CHANGES IN LIPID LAYER THICKNESS PATTERNS OF THE TEAR FILM FOLLOWING INTENSE PULSED LIGHT (IPL) THERAPY. Young Chae Yoon. Kim's Eye Hospital, Seoul, Korea.
25	EFFECT OF SHORT-TERM APPLICATION OF EYELID CLEANING WIPES ON TEAR FILM PARAMETERS Amal Aldarwesh, Ali Almustanyir, Raied Fagehi, Khalaf Alruways, Abdulaziz Bin Turki, Mansour Alghamdi, Muteb Khalaf Alanazi, Balsam Alabdulkader, Wafa Alotaibi, Mosaad Alhassan. Department of Optometry, College of Applied Medical Sciences, King Saud University
26	COMPARISON OF A NOVEL LIPID NANO-EMULSION EYE DROP WITH AN EXISTING EFFECT OF SHORT-TERM APPLICATION OF EYELID CLEANING WIPES ON TEAR FILM PARAMETERS. Amal Aldarwesh, Ali Almustanyir, Raied Fagehi, Khalaf Alruways, Abdulaziz Bin Turki, Mansour Alghamdi, Muteb Khalaf Alanazi, Balsam Alabdulkader, Wafa Alotaibi, Mosaad Alhassan. Department of Optometry, College of Applied Medical Sciences, King Saud University
27	CHARACTERISTICS OF TEAR FILM IN SJÖGREN'S SYNDROME PATIENTS AS MEASURED BY A NOVEL TEAR FILM IMAGER (TFI). Annette M. Goulak ¹ , Sophie Z. Gu ¹ , Andres Serrano ¹ , Yael Yohai Patael ² , Gal Antman ³ , Teja Kapoor ¹ , Sharon Keh ¹ , Stephen Trokel ¹ , Leejee H. Suh ¹ . ¹ Harkness Eye Institute, Columbia University Medical Center, USA. ² AdOM (Advanced Optical Technologies), Israel. ³ Rabin Medical Center, Israel.

28	EYE MOVEMENTS REVEAL THE DYNAMICS OF THE TEAR FILM MARGINS. <u>Timon Ax</u> , ^{1, 2} Francesc March de Ribot, ³ Fabian N. Fries, ¹ Slade O. Jensen, ² Berthold Seitz, ¹ Thomas James Millar. ⁶ Department of Ophthalmology, Saarland University Medical Center, Homburg/Saar, Germany, ¹ Western Sydney University, School of Medicine, Sydney, NSW, Australia, ² Department of Ophthalmology, Otago University, Dunedin, New Zealand, ³ Beyond 700 Pty Ltd, Sydney, NSW, Australia ⁴
29	EFFECTS OF BLEPHAROPLASTY IN OCULAR SURFACE AND TEAR FILM. <u>Carolina Mosena Angeloni</u> , ^{1,2} Allanderson Castro, ² Jose Alvaro Pereira Gomes. ¹ Universidade Federal de São Paulo, Ophthalmology Department, ¹ Centro Oftalmológico de Cáceres. ²
30	POSTOPERATIVE OUTCOMES REGARDING TEAR FILM CHANGES AND DRY EYE SYMPTOMS IN PRIMARY PTERYGIUM EXCISION. <u>Alejandro Navas</u> , ¹ Naomi C. Zatarain-Barrón, ¹ Norma Morales Flores, ¹ Guillermo R. Vera-Duarte, ¹ Arturo Ramirez-Miranda, ¹ Enrique O. Graue-Hernández. ¹ Department of Cornea and Refractive Surgery, Instituto de Oftalmología FAP Conde de Valenciana, Mexico City, Mexico.
31	TEAR FILM BREAK-UP TIME EVALUATED BY MEANS OF A CONFOCAL BLUE LIGHT. <u>Emanuela Aragona</u> ¹ , Alessandro Arrigo ^{1,2} , Edoardo Balduzzi ^{1,3} , Francesco Bandello ^{1,3} , Elisabetta Miserocchi ^{1,3} ¹ IRCCS San Raffaele Scientific Institute, Milan, Italy, ² Eye Repair Lab, Division of Neuroscience, IRCCS San Raffaele Scientific Institute, Milan, Italy, ³ School of Medicine, Vita-Salute San Raffaele University, Milan, Italy
32	A NEW METHOD OF MEASURING TEAR FILM CLEARANCE USING A MODIFIED SLIT-LAMP BIOMICROSCOPE AND ITS UTILITY IN DRY EYE DISEASE DIAGNOSIS. Izabela K. Garaszczuk, Karolina Jarosz, Dorota Szczesna-Iskander. Department of Optics and Photonics, Wroclaw University of Science and Technology, Wroclaw, Poland
33	INFLUENCE OF TEAR FILM LIPID LAYER THICKNESS PATTERNS ON DRY EYE DISEASE PARAMETERS AND ASSOCIATED FACTORS IN DIFFERENT GROUPS. Jiyoung Emily Lee, Kyung Sun Na, Department of Ophthalmology, College of Medicine, The Catholic University of Korea, Seoul, Korea
34	BIOPHYSICAL INTERACTIONS OF SILICON QUANTUM DOTS WITH TEAR MIMICS AT THE AIR-WATER INTERFACE. <u>Sidra Sarwat</u> , ¹ Fiona Stapleton, ¹ Mark Willcox, ¹ Richard Tilley, ² and Maitreyee Roy ¹ School of Optometry and Vision Science, ¹ School of Chemistry and Australian Centre for NanoMedicine, ² UNSW, Sydney, Australia

35	OCULAR SURFACE PROTECTION WITH SOFT THERAPEUTIC CONTACT LENSES IN TREATMENT OF PERSISTENT CORNEAL DEFECT. Adriana Stanila, Dan Mircea Stanila. Alina Stanila. University Lucian Blaga, Sibiu, Medical Centru Dr Stanila, Ofta Total Clinic, Sibiu. Romania.
36	EVALUATING DEHYDRATION KINETICS OF KALIFILCON A AND OTHER CONTACT LENS MATERIALS USING WATER KINETIC COEFFICIENTS. <u>Giulia C. Rizzo</u> , ^{1,2} Francesco Maspero, ¹ Fabrizio Zeri, ^{1,2,3} Alessandro Borghesi, ^{1,2} Anna Galli, ¹ Silvia Tavazzi, ^{1,2} Erika Ponzini, ^{1,2} Department of Materials Science, ¹ COMiB Research Centre in Optics and Optometry, ² University of Milano-Bicocca, Milan, Italy; College of Health and Life Sciences, ³ Aston University, Aston, United Kingdom.
37	DRY EYE RELATED SIGNS AND SYMPTOMS IN PROFESSIONALLY MANAGED VS SELF-MANAGED SOFT HYDROGEL AND SILICONE HYDROGEL CONTACT LENS WEARERS COMPARED WITH NON CONTACT LENS WEARING CONTROLS. <u>Liat Gantz</u> ¹ , Barry Weisman ^{2,3} , Reut Ifrah ¹ . Department of Optometry and Vision Science, Hadassah Academic College, Jerusalem, Israel ¹ Southern California College of Optometry at Marshall B. Ketchum University, Fullerton CA, USA ² Stein Eye Institute and Department of Ophthalmology, David Geffen School of Medicine at UCLA, Los Angeles CA, USA ³
38	REPEATABILITY OF LIPIVIEW® INTERFEROMETER MEASUREMENTS DURING CONTACT LENS WEAR WITH TWO TYPES OF DAILY DISPOSABLE SILICONE HYDROGEL CONTACT LENSES AND EXAMINATION OF LIPID LAYER THICKNESS CONTRIBUTION TO CONTACT LENS COMFORT. Mukesh Kumar, Simin Masoudi, Ajay Kumar Vijay, <u>Mark Willcox</u> , University of New South Wales, Sydney, Australia
39	DO SYMPTOMATIC CONTACT LENS WEARERS BENEFIT FROM USING LIFITEGRAST? <u>Marc-Matthias Schulze</u> , Sarah Guthrie, Brandon Ho, Jill Woods, Lyndon Jones. Centre for Ocular Research & Education, School of Optometry & Vision Science, University of Waterloo, Canada
40	CONTACT LENS SURFACE DE-WETTING KINEMATICS METHODOLOGY VALIDATION. Michel Guillon ¹ , Pasquale Pepe ¹ , Lakshman Subbaraman ² , Rajaraman Suryakumar ² ¹ Ocular Technology Group International London UK, ² Alcon Inc. Fort Worth USA.
41	INNOVATION IN DRUG DELIVERY: DRUG ELUTING CONTACT LENSES: ADDRESSING UNMET MEDICAL NEEDS. Penny Asbell, University of Memphis, Bioengineering, Memphis TN

42	<p>DRY EYE DAILY LIFE (DEAL) QUESTIONNAIRE: PSYCHOMETRIC VALIDATION OF A NEW INSTRUMENT FOR MEASURING THE IMPACT OF DRY EYE ON DAILY LIFE AND PATIENT SATISFACTION WHILE USING EYE DROPS. <u>Sarah Farrant</u>¹, Olivier Chassany², Martin Duracinsky²,¹Earlam and Christopher Optometrists and Contact Lens Specialists, Taunton, UK.²Patient-Reported Outcomes, Health Economics Clinical Trial unit, Hotel-Dieu Hospital, AP-HP & UPC, Paris, France.</p>
43	<p>SMART COATING BY THERMO-SENSITIVE PF127 FOR ENHANCED CORNEAL HEALING VIA DELIVERY OF BIOLOGICAL MACROMOLECULES PROGRANULIN. <u>Dan Yan</u>,¹ Weijie Ouyang,¹ Zuguo Liu.^{1,2} Xiamen University affiliated Xiamen Eye Center,¹ Fujian, China, The First Affiliated Hospital of University of South China,² Hengyang, Hunan, China.</p>
44	<p>LARGE-SCALE TWO-PHOTON IMAGING AND SEMI-AUTOMATED QUANTITATIVE ANALYSIS OF WHOLE CORNEAL NERVES IN A MURINE MODEL OF DRY EYE. Wenxin Zhao¹, Zhen Zhang¹, YanLong Yang², Li Li,¹ ¹ Department of Ophthalmology, The First Affiliated Hospital of Xi'an Jiaotong University, Xi'an, China. ²Xi'a Institute of Optics and Precision Mechanics, Chinese Academy of Sciences, Xi'an, China.</p>
45	<p>DIGITAL LIGHT BIOPRINTING OF A 3D CORNEAL-LIMBAL NICHE MODEL. Ioannis Paschalidis^{1,2,3}, <u>Benoit Souquet</u>^{1,2}, François Chatelain^{2,3}, Alexandra Fuchs^{2,3}, Eric Gabison^{1,2} Hôpital Fondation A. de Rothschild¹; HIPI UMR976, INSERM/Université Paris Cité, Paris, France²; CEA, IRIG, Grenoble, France³</p>
46	<p>COMPARATIVE ANALYSIS OF ANTI-FIBROTIC PROPERTIES OF PLASMA RICH IN GROWTH FACTORS AND AUTOLOGOUS SERUM IN VITRO ON CORNEAL FIBROBLASTS. <u>Catalina Tolosa Leal</u>^{1,2,3}, Benoit Souquet^{1,3}, Eric Gabison^{1,3}. Hôpital Fondation Adolphe de Rothschild¹, Paris, France ; Laboratoires Horus Pharma², Nice, France ; HIPI UMR976³, INSERM, Université Paris Cité, Paris, France.</p>
47	<p>THE IMPORTANCE OF CORNEAL SENSITIVITY IN DRY EYE DISEASE DIAGNOSTICS. <u>Tedesco GR</u>, Studio Oculistico Tedesco, Girifalco, 88100 Catanzaro, Italy.</p>
48	<p>MITOCHONDRIAL IMPAIRMENT AND MITOPHAGY IN THE DIABETIC CORNEAL EPITHELIUM. <u>Danielle M. Robertson</u>, Santiago Vizcaino, Shruti Patel, Madeline E. Myers, Harrison Lee, Rajalakshmy Ayilam Ramachandran, and Mou Cao. Department of Ophthalmology, UT Southwestern Medical Center, Dallas, TX, USA</p>
49	<p>CHANGES IN CORNEAL PERSISTENT EPITHELIAL DEFECTS WITH INSULIN COMBINATES WITH AUTOLOGOUS SERUM EYE DROPS IN SJÖGREN'S SYNDROME. <u>Jo-hanna Garzón-Parra</u>^{1,2}, Carolina Hernández¹, Catalina Cortés¹, Adriana Navarrete¹, Diana Guerrero¹ ¹ School of Optometry University Antonio Nariño, Colombia. Optometry Research group UAN. ² Department of Optics and Optometry and Vision Sciences. Faculty of Physics Master's Degree in Optometry and Vision Sciences - Universitat de València, Spain.</p>

50	NEUROPATHIC CORNEAL PAIN FOLLOWING REFRACTIVE SURGERY: RISK FACTORS, CLINICAL MANIFESTATIONS, IMAGING, AND PROTEOMIC CHARACTERISTICS. <u>Yu-Chi Liu</u> ^{1,2} , Calesta Hui Yi Teo ² , Louis Tong ^{1,2} , Jodhbir Mehta ^{1,2} . ¹ Singapore National Eye Centre; ² Singapore Eye Research Institute, Singapore
51	CHRONIC OCULAR SURFACE PAIN AS A DEFINING CHARACTERISTIC OF DRY EYE DISEASE Rebecca Petris, Aidan Moore, Sandra Brown. Dry Eye Foundation, Poulsbo, WA, USA
52	IMPROVING CORNEAL NERVE MORPHOLOGY DYSREGULATION IN CAFETERIA DIET-INDUCED PREDIABETIC RATS: A DIET REVERSAL APPROACH. Samea Khan, ¹ Mark Willcox, ¹ Maria Markoulli, ¹ Nick Di Girolamo, ² Lamia Nureen, ² Md Jakir Hossain, ³ Margaret Morris. ⁴ School of Optometry and Vision Science, ¹ School of Biomedical Sciences, ² University of New South Wales, Sydney, New South Wales, Australia, Macquarie University, Australia, ³ School of Medical Sciences, University of NSW, Australia. ⁴
53	CORNEAL STAINING SCORE RESPONDER AS A CLINICALLY MEANINGFUL DRY EYE OUTCOME. <u>Esen K. Akpek</u> ¹ ; John D. Sheppard ² , Sonja Krösse, ³ ¹ The Wilmer Eye Institute, The Johns Hopkins University, Baltimore, Maryland, ² Virginia Eye Consultants, Norfolk, Virginia, ³ Novaliq GmbH, Heidelberg, Germany
54	EPITHELIAL HEALING OF AN INJURED MOUSE CORNEA USING HUMAN SERUM EYE DROPS WITH AND WITHOUT CHITOSAN. <u>Blasberg, Sophie</u> ¹ ; Galante, Mia ¹ ; Carr, Dan ² ; Filiberto, Adrian ² ; Gentile, Ronald ¹ ; Weiner, Elan ¹ ¹ ECI Therapeutics; ² University of Oklahoma
55	MOLECULAR AND CLINICAL CHARACTERIZATION ON THE OCULAR SURFACE IN GLAUCOMA. <u>Sandra Durán-Cristiano</u> ^{1,2} Alba Martin-Gil, ² Geysson Javier Fernández, ³ J Gonzalo Carracedo ² . ¹ Grupo de Investigación en Ciencias Básicas, Facultad de Medicina, Universidad CES, Medellín, Colombia, ² Ocupharm Research Group, Faculty of Optics and Optometry, Complutense University of Madrid, Spain, ³ BCEI Universidad de Antioquia, Medellín, Colombia.
56	CLINICAL PRACTICE PATTERNS IN THE DIAGNOSIS OF DRY EYE DISEASE: A TFOS INTERNATIONAL LONGITUDINAL SURVEY <u>Jennifer P. Craig</u> ¹ , Michael T. M. Wang ¹ , Lyndon Jones ² , David Semp ³ , Sònia Travé-Huarte ³ , James S. Wolffsohn ^{3,1} and TFOS Ambassadors. ¹ Department of Ophthalmology, Aotearoa New Zealand National Eye Centre, The University of Auckland, New Zealand; ² Centre for Ocular Research and Education, University of Waterloo, Canada; ³ Ophthalmic Research Group, College of Health and Life Sciences, Aston University, Birmingham, United Kingdom

57	<p>CLINICAL FEATURES OF DRY EYE DISEASE AND TREATMENT TRENDS IN THE REAL WORLD: A SAVE SIGHT DRY EYE REGISTRY STUD. Ngozi C. Chidi-Egboka^{1,2}, Hima Kandel¹, Fiona Stapleton AO², Laura E. Downie³, Gerd Geerling⁴, Francisco Arnalich-Montiel⁵, David Mingo⁵, Saaeha Rauz⁶, Alberto Recchioni⁶, Jennifer P. Craig⁷, Vincent Daïen⁸, Fanny Babeau⁸, Sanjeeta Sitaula⁹, Stephanie L. Watson OAM¹</p> <p>¹Save Sight Institute, Faculty of Medicine and Health, The University of Sydney, NSW, Australia ²School of Optometry and Vision Science, Faculty of Medicine and Health, UNSW Sydney, Australia ³Department of Optometry and Vision Sciences, Faculty of Medicine, Dentistry and Health Sciences, The University of Melbourne, Victoria, Australia ⁴Department of Ophthalmology, University Hospital Duesseldorf, Duesseldorf, Germany ⁵Department of Ophthalmology, Hospital Universitario Ramon y Cajal, Madrid, Spain ⁶Academic Unit of Ophthalmology, Institute of Inflammation and Ageing, University of Birmingham, United Kingdom ⁷Department of Ophthalmology, New Zealand National Eye Centre, The University of Auckland, New Zealand ⁸Department of Ophthalmology, Centre Hospitalier Universitaire, Montpellier, France ⁹Department of Ophthalmology, B.P. Koirala Lions Centre for Ophthalmic Studies, Institute of Medicine, Kathmandu, Nepal</p>
58	<p>A FULLY AUTOMATED DEEP LEARNING-BASED GRADING SYSTEM FOR DRY EYE DISEASE SEVERITY BASED ON NEI GRADING SCALE. Seonghwan Kim,¹ Daseul Park,² Youmin Shin,² Mee Kum Kim,³ Hyun Sun Jeon,⁴ Young-Gon Kim,² Chang Ho Yoon,³ Department of Ophthalmology, SMG-SNU Boramae Medical Center,¹ Department of Transdisciplinary Medicine, Seoul National University Hospital,² Department of Ophthalmology, Seoul National University Hospital,³ Seoul, Korea, Department of Ophthalmology, Seoul National University Bundang Hospital,⁴ Gyeonggi-do, Korea.</p>
59	<p>A METHOD FOR QUANTIFYING THE DEGREE OF TELANGIECTASIS AND HYPEREMIA AT THE EYELID IN PATIENTS WITH BLEPHARITIS. Yue Yin, Gong Lan Eye & ENT Hospital, Fudan University</p>
60	<p>THE EFFICACY OF TEAR MENISCUS BY STRIP MENISCOMETRY IN ASSESSMENT OF DIFFERENT TYPE OF DRY EYE DISEASES Yuqian Wang^{1,2,3} Zuguo Liu^{1,2,3} Eye Institute of Xiamen University; School of Medicine, Xiamen University, Fujian Provincial Key Laboratory of Ophthalmology and Visual Science, Fujian Engineering and Research Center of Eye Regenerative Medicine,¹ Department of Ophthalmology, Xiang'an Hospital of Xiamen University,² Xiamen University affiliated Xiamen Eye Center,³ Xiamen, Fujian, China.</p>
61	<p>NON-INVASIVE TEAR BREAK-UP TIME VERSUS FLUORESCEIN TEAR BREAK-UP TIME. Rebecca Cairns^{1,2}, Raquel Gil-Cazorla², Mark Dunne², Jonathon Moore^{1,2}, Shehzad Naroo². Cathedral Eye Clinic¹ Aston University²</p>

62	DRY EYE PARAMETERS ASSESSMENT AFTER KERATOPLASTY. Kaevin Lekhanont, Pathara Sukvaree, Nontawat Cheewaruangroj, Prae Phimpho, Punyanuch Pisitpayat, Weerapat Udomwong. Department of Ophthalmology, Faculty of Medicine Ramathibodi Hospital, Mahidol university, Bangkok, Thailand
63	THE USE OF DIGITAL PCR FOR THE DIAGNOSIS OF <i>DEMODEX</i> BLEPHARITIS. Na An ^{1,2} , Xiuhong Dou ² , Ni Yin ^{1 2} , Haiqing Lu ^{1,2} , Jie Zheng ³ , Xianning Liu ^{1,2} , Hua Yang ^{1,2} , Xiuping Zhu ^{1,2} , Xianghua Xiao ^{1,2} ¹ Shaanxi Provincial Clinical Research Center for Ophthalmic Diseases, Xi'an City First Hospital, Xi'an, China. ² Shaanxi Key Laboratory of Ophthalmology, Shaanxi Institute of Ophthalmology, Xi'an, China. ³ Clinical Research Center, The First Affiliated Hospital of Xi'an Jiaotong University, Xi'an, China.
64	CHANGES TO STANDARD PATIENT EVALUATION OF EYE DRYNESS (SPEED) QUESTIONNAIRE AFTER INCORPORATION OF IRRIGATING EYELID RETRACTOR INTO DRY EYE DISEASE PROTOCOL: RETROSPECTIVE CASE SERIES. <u>Jessilin Quint</u> , Smart Eye Care, ME, USA. Srinivas Sai Kondapalli, Everett Hurite, USA
65	PREVALENCE OF <i>DEMODEX</i> FOLLICULORUM IN A UNIVERSITY POPULATION IN ISRAEL <u>Reut Ifrah</u> ¹ , Etty Bitton ² , Liat Gantz ¹ Department of Optometry and Vision Science, Hadassah Academic College, Jerusalem, Israel ¹ École d'optométrie, Université de Montréal, Montreal, Quebec, Canada ²
66	LONGITUDINAL EVALUATION OF DISEASE BURDEN AND TREATMENT EFFICACY IN PATIENTS WITH <i>DEMODEX</i> BLEPHARITIS: ORION REGISTRY. <u>Cecelia Koetting</u> , ¹ Keith Wan, ² Cory Lappin, ³ James Mun, ⁴ Kavita Dhamdhere, ⁴ Elizabeth Yeu. ⁵ University of Colorado Anschutz Medical Campus, ¹ Scripps Poway Eyecare, ² Phoenix Eye Care, ³ Tarsus Pharmaceuticals, ⁴ Virginia Eye Consultants ⁵

Saturday, November 2, 2024

SESSION III

Limbal stem cell deficiency

Chairpersons - Paolo Rama (Italy), Virender Sangwan (India)

- 8:30** The promise and challenge of stem cells in regenerative medicine. Graziella Pellegrini, Centre for Regenerative Medicine, University of Modena and Reggio Emilia, Modena, Italy
- 8:45** Homeostasis of the corneal stem cell niche from a single cell analysis prospective. Joseph Collin¹, Rachel Queen¹, Darin Zerti¹, Sanja Bojic¹, Birthe Dorgau¹, Marina Moya Molina¹, Chunbo Yang¹, Francisco Figueiredo^{1,2}, Lyle Armstrong¹ and Majlinda Lako¹ Biosciences Institute, Faculty of Medical Sciences, Newcastle University, UK¹. UK Department of Ophthalmology, Royal Victoria Infirmary and Newcastle University, Newcastle, UK²
- 9:00** Mapping the limbal stem cell niche and limbal stem cell deficiency in animal models. Nick Di Girolamo. School of Biomedical Sciences, University of New South Wales, Sydney, Australia.
- 9:15** Diagnosis and staging of limbal stem cell deficiency. Sophie Deng, Stein Eye Institute, University of California, Los Angeles, CA
- 9:30** Advances in the treatment of limbal stem cell deficiency. Sayan Basu, Centre for Ocular Regeneration, L V Prasad Eye Institute, Kallam Anji Reddy Campus, L V Prasad Marg, Hyderabad, India
- 9:45** Bioengineered corneal constructs. May Griffith,^{1,2,*} Mostafa Zamani-Roudbaraki,^{1,2} Michel Haagdorens,^{1,3} Hamid Goodarzi,^{1,2} Isabelle Brunette,^{1,2} Christos Boutopoulos,^{1,2,*} Marie-Claude Robert^{1,3,*}. Dept. of Ophthalmology, Université de Montréal,¹ Maisonneuve-Rosemont Hospital Research Centre,² Centre hospitalier de l'Université de Montréal,³ Montreal, QC, Canada. *, equivalent contributions

10:00 Poster Session III (with Coffee & Tea)

Chairpersons - Penny Asbell (USA), Cecilia Marini (Argentina)

Eye surgery, intravitreal injections and iatrogenic ocular surface disease

Chairpersons - Christina Grupcheva (Bulgaria), Mohamed Shafik Shaheen (Egypt)

- 10:50** Refractive surgery-induced dry eye disease. Ikuko Toda, Minamiaoyama Eye Clinic, Tokyo, Japan
- 11:05** Cataract surgery-induced dry eye disease. Edoardo Villani, Department of Clinical Science and Community Health, University of Milan. Eye Clinic San Giuseppe Hospital, IRCCS Multimedica, Milan, Italy
- 11:20** An algorithm for the preoperative diagnosis and treatment of ocular surface disease in refractive surgery patients. Christopher E. Starr, Weill Cornell Medical Center, New York, NY, USA
- 11:35** Iatrogenic ocular surface diseases after surgery for ocular tumors. Giuseppe Giannaccare, Eye Clinic, Department of Surgical Sciences, University of Cagliari, Cagliari, Italy
- 11:50** Impact of posterior segment surgery on the ocular surface. Marco Coassin, Vincenzo Barone. Ophthalmology, University Campus Bio-Medico, Rome, Italy.
- 12:05** Impact of intravitreal injections on the ocular surface. Corinne Dot, Sarah Verrecchia, Nicolas Chirpaz, Jeremy Billant, Roman Chudzinski, Christelle Gilli, Sandra Elbany, Carole Burillon, University Hospital of E. Herriot, Lyon, France
- 12:20** **Poster Viewing & Lunch**

What a nerve!

Chairpersons - Carlos Belmonte (Spain), Murat Dogru (Japan)

13:40 What is neuropathic pain, and what are the underlying mechanisms? Anat Galor, Bascom Palmer Eye Institute, Miami, FL, USA

13:55 Management of neuropathic pain. Pedram Hamrah, Center for Translational Ocular Immunology and Cornea Service, Department of Ophthalmology, Tufts Medical Center, Tufts University School of Medicine, Boston, MA, USA

14:10 Depletion of dendritic cells in the quiescent cornea alters sensory nerve activity. Juana Gallar,^{1,2} Laura Frutos-Rincón,¹ M. Carmen Acosta¹ ¹Instituto de Neurociencias, Universidad Miguel Hernández-CSIC, San Juan de Alicante, Spain. ²ISABIAL, Alicante, Spain

14:25 What damages corneal nerves in dry eye? Jeremias G. Galletti, Institute of Experimental Medicine, Buenos Aires, Argentina

14:40 Corneal neurotization: indications, surgical techniques and outcomes. Roberto Pineda, Department of Ophthalmology, Harvard Medical School, and Cornea and Refractive Surgery Service, Massachusetts Eye and Ear, Boston, USA

14:55 Poster Session III (with Coffee & Tea)

Chairpersons - Penny Asbell (USA), Cecilia Marini (Argentina)

The microbiome: Do we need to keep an eye on it?

Chairpersons - Hiroshi Eguchi (Japan), Marc Labetoulle (France)

- 15:45** New insights into the identification and role of the microbiome. François Majo, Lausanne University, Lausanne, Switzerland
- 16:00** Exposomes, microbiome and ocular surface disease. Louis Tong, Hon Shing Ong, Singapore National Eye Center, Singapore Eye Research Institute, Singapore
- 16:15** Ocular surface microbiota in naïve keratoconus: a multicenter validation study. Rocha-de-Lossada C.^{1,2,3} Mazzotta C.^{4,5,6} Gabrielli F.⁷ Papa FT.⁷ Gómez-Huertas C.⁸ García-López C.⁸ Urbinati F.³ Rachwani-Anil R.⁹ García-Lorente M.⁹ Sánchez-González JM.¹⁰ Rechichi M.¹¹ Rubegni G.⁶ Borroni D.¹ ¹Eyemetagenomics Ltd., London UK. ²Ophthalmology Department, QVision, Almeria, Spain. ³Ophthalmology Department, Hospital Regional Universitario Málaga, Malaga, Spain. ⁴Siena Crosslinking Center, Siena, Italy. ⁵Department of Ophthalmology Unit, USL Toscana Siena, Italy. ⁶Postgraduate Ophthalmology School, University of Siena, Siena, Italy. ⁷Biolab SRL, Laboratorio di Genetica e Genomica Molecolare, Ascoli Piceno, Italy. ⁸Department of Ophthalmology, Hospital Universitario Virgen de las Nieves, Granada, Spain. ⁹Department of Ophthalmology, Hospital de Antequera, Malaga, Spain. ¹⁰Department of Physics of Condensed Matter, Optics Area, University of Seville, Seville, Spain. ¹¹Centro Polispecialistico Mediterraneo, Sellia Marina, Italy
- 16:30** Ocular microbiome changes in dry eye disease. Jerome Ozkan, School of Optometry and Vision Science, Faculty of Medicine and Health, University of New South Wales, Sydney, Australia
- 16:45** Role of nerve-associated TRPV1 and TRPA1 in resisting bacterial adhesion to the corneal surface. Fleiszig SMJ¹ and Evans DJ.^{1,2} Herbert Wertheim School of Optometry & Vision Science, University of California, Berkeley, CA;¹ College of Pharmacy, Touro University California, Vallejo, CA,² USA
- 17:00** The gut-eye-microbiome axis in Sjögren disease. Laura Schaefer^{1,2}, Kaitlin K. Scholand^{2,3}, Vivien J. Coulson-Thomas⁴, Stephen C. Pflugfelder², Robert A. Britton¹, Cintia S. de Paiva^{2,3} ¹Center of Metagenomics and Microbiome Research, BCM, Houston, TX ²Ocular Surface Center, BCM, Houston, TX ³Biochemistry and Cell Biology Graduate Program, Rice University, Houston, TX ⁴University of Houston, Houston, TX, USA

Closing Remarks

- 17:15** David A. Sullivan, Tear Film & Ocular Surface Society, Boston, MA, USA

Poster Session III

Chairpersons - Penny Asbell (USA), Cecilia Marini (Argentina)

1	TRANSAPPENDAGEAL NEURAL DELIVERY METHOD OF PRO-OCULAR™ (PROGESTERONE) to FOREHEAD. <u>Pamela Gallin</u> , ¹ Tom Mitro, ² Zhonghui K. Luo, ³ Wei-wei Chang, ² Kenneth Sawyer, ² ¹ NY Presbyterian Columbia University, New York City, NY; ² Signal12, Inc.; ³ Mass Eye & Ear Infirmary, Boston, MA, USA
2	INSULAR INFRAORBITAL NEUROVASCULAR PEDICLE LABIAL SALIVARY GLAND TRANSPLANTATION FOR THE TREATMENT OF SEVERE DRY EYE DISEASE: A CASE SERIES. <u>Ying Jie</u> , Beijing Institute of Ophthalmology, Beijing Tongren Eye Center, Beijing Tongren Hospital, Capital Medical University, Beijing Ophthalmology & Visual Sciences Key Laboratory, Beijing, China
3	PERIOcular AND SYSTEMIC ADMINISTRATION OF RECOMBINANT HUMAN PROTEOGLYCAN 4 (rhPRG4) AMELIORATES OCULAR AND SYSTEMIC GVHD. Benjamin D. Sullivan ¹ , Hazem Mousa ² , Nadim Azar ² , Manuel E Quiroga Garza ² , Seitaro Komai ³ , Raul Ruiz-Lozano ³ , Tannin A. Schmidt ⁴ , Victor L. Perez. ³ Lpbis BioPharma, MA, United States ¹ Ophthalmology, Duke University School of Medicine, NC, USA, ² Ophthalmology, University of Miami Miller School of Medicine, FL, USA, ³ Biomedical Engineering, UConn Health, CT, USA ⁴
4	SIGN AND SYMPTOM IMPROVEMENTS RATES AMONG MGD PATIENTS FOLLOWING TREATMENT WITH AZR-MD-001 FOR 6 MONTHS. <u>Lyndon W. Jones</u> , ¹ Julie Schallhorn, ² Alison Ng, ¹ Yair Alster, ³ Charles Bosworth, ³ University of Waterloo, Waterloo, Ontario, Canada ¹ University of California, San Francisco, California, United States ² , Azura Ophthalmics Ltd, Tel Aviv, Israel ³
5	EVALUATION OF TYPE I INTERFERONS ON THE OCULAR SURFACE: TOXICITY AND EFFICACY IN IN VITRO, ANIMAL, AND CLINICAL STUDIES. <u>Young In Yun</u> ^{1,2,3} , Jung Hwa Ko ¹ , Jin Suk Ryu ¹ , Seonghwan Kim ^{1,3} , Hyun Sun Jeon ^{2,5} , Namju Kim ^{2,5} , Mee Kum Kim ^{1,2,3} , Joo Youn Oh. ^{1,2,3} Laboratory of Ocular Regenerative Medicine and Immunology, Biomedical Research Institute, ¹ Seoul National University College of Medicine, ² Seoul National University Hospital, ³ Seoul Metropolitan Government-Seoul National University Boramae Medical Center, ⁴ Seoul National University Bundang Hospital, ⁵ Seoul, Korea
6	SUTURELESS DEHYDRATED AMNIOTIC MEMBRANES FOR THE TREATMENT OF SEVERE DRY EYE DISEASE. <u>Sônia Travé Huarte</u> and James S W Wolffsohn. College of Health and Life Sciences, Aston University, Birmingham, UK.

7	USE OF CRYO-AMNIOTIC MEMBRANE IMPREGNATED WITH LIQUID PYO BACTERIOPHAGE IN CLINICAL OPHTHALMOLOGY. <u>Nino Karanadze</u> , ¹ Teona Tchanukvadze, ¹ Tinatin Jikurashvili. ² Tbilisi Sate Medical University, ¹ Chichua Medical Center Mzera. ²
8	UNLEASHING NOVEL THERAPEUTIC STRATEGIES FOR DRY EYE: TARGETING ROS AND THE CGAS-STING SIGNALING PATHWAY WITH TETRAHEDRAL FRAMEWORK NUCLEIC ACIDS. <u>Dan Yan</u> , ¹ Weijie Ouyang, ¹ Zuguo Liu. ^{1,2} Xiamen University affiliated Xiamen Eye Center, ¹ Fujian, China, The First Affiliated Hospital of University of South China, ² Hengyang, Hunan, China
9	EFFECT OF SEQUENTIAL EYELID HEAT THERAPY ON WAVEFRONT ABERRATIONS. <u>Christin Daoud</u> , Etty Bitton. École d'optométrie, Université de Montréal, Montreal, QC, Canada
10	IMPACT OF THERMAL PULSATION AND STANDARD-OF-CARE TREATMENTS FOR DRY EYE DISEASE ON TEAR INFLAMMATORY MARKERS. Dian Zhuang, Stuti L. Misra, Odunayo Mugisho, Catherine Jennings, Ilva D. Rupenthal, and Jennifer P. Craig. Department of Ophthalmology, Aotearoa New Zealand National Eye Centre, The University of Auckland, Auckland, New Zealand
11	HOT / COLD COMPRESS AND MASSAGE DEVICE'S EFFECT ON EYE COMFORT, SLEEP QUALITY & WELLBEING. Sharmin Habib, ¹ Brandon Hauer ² , Jay Vidyarthi ³ , Anna-Roza Tamas ³ , Michael Gradisar ⁴ , James.S. Wolffsohn. ⁵ Umay Care, Edmonton, AB, ¹ University of Alberta, Neuroscience and Mental Health Institute, Edmonton, AB, ² Still Ape UX Design, Toronto, ON, ³ Flinders University, Adelaide Australia, ⁴ School of Optometry, College of health and Life Sciences, Aston University, Birmingham, UK ⁵
12	CONTROLLED NON-CONTACT TEAR STIMULATION EVALUATION ON HEALTHY SUBJECTS AND DRY EYE PATIENTS WITH THE i-ONION® DEVICE. <u>Luis Rodriguez</u> ¹ , Ali Khodor ¹ , Symon Ma ¹ , Seitaro Komai ¹ , Raul Ruiz ¹ , Manuel Quiroga ¹ , Victor L. Perez ¹ . University of Miami ¹ , Miami, FL, USA
13	THERAPEUTIC EFFECT OF NCP112, A SELECTIVE PEPTIDE LIGAND OF N-FORMYL PEPTIDE RECEPTOR 2 (FPR2), IN AN EXPERIMENTAL DRY EYE MOUSE MODEL. <u>Kyung Chul Yoon</u> , Ying Li, Hui Jin, Enying Jiang, Jingting Liu, Hyun Jee Kim, Ja Young Moon, Hyeon Jeong Yoon. Department of Ophthalmology, Chonnam National University Medical School and Hospital, Gwangju, South Korea
14	ADVANCING WAVELIKE EPITHELIOPATHY TREATMENT WITH PHOTOTHERAPEUTIC KERATECTOMY COMBINED WITH CYCLOSPORINE-A DROPS. <u>V. Liarakos</u> ^{1,2} , M. Alexaki ¹ , M. Kafataris ^{1,2} , V. Giavi ¹ , I. Okoutsidou ^{1,2} , E. Mpourouki ¹ , G. Karastatiras ^{1,2} , M. Douvali ^{1 1} AKTINA CENTER, Athens, GREECE ² NAVAL HOSPITAL, Athens, GREECE

15	POST-LASIK EPITHELIAL INGROWTH TREATED WITH PROLONGED TOPICAL CYCLOSPORINE. A <u>V. Liarakos</u> ^{1,2} , M. Alexaki ¹ , M. Kafataris ^{1,2} , V. Giavi ¹ , I. Okoutsidou ^{1,2} , E. Mpourouki ¹ , G. Karastatiras ^{1,2} , M. Douvali ¹ ¹ AKTINA CENTER, Athens, Greece ² Naval Hospital, Athens, Greece
16	OVERVIEW OF CLINICAL EFFICACY AND SAFETY OF A WATER-FREE CYCLOSPORINE, 0.1% SOLUTION FOR TREATMENT OF DRY EYE DISEASE. <u>Anat Galor</u> , ¹ Paul Karpecki, ² Alice Meides, ³ Sonja Krösser, ^{3,1} Bascom Palmer Eye Institute ² Kentucky Eye Institute, ³ Novaliq GmbH
17	OCULAR SURFACE COMPLICATION RATE WITH CYCLOSPORINE A 0.1% CATIONIC EMULSION THERAPY OVER A 3-YEAR PERIOD IN PATIENTS WITH DRY EYE AND SEVERE KERATITIS. <u>Andrea Leonardi</u> ¹ , Christophe Baudouin ^{2,3} on behalf of the study investigators, Department of Neuroscience, Ophthalmology Unit, University of Padua, Padova, Italy, ² CHNO des Quinze-Vingts, IHU FORESIGHT, INSERM-DGOS CIC 1423, Paris, France, ³ Sorbonne Universités, INSERM, CNRS, Institut de la Vision, Paris, France
18	SYSTEMIC CYCLOSPORINE A IN THE TREATMENT OF SEVERE ALLERGIC KERATO-CONJUNCTIVITIS. Raysa Victoria de Oliveira Cechim; ¹ João Victor Borges Gomes, MD; ¹ Tais Hitomi Wakamatsu; ¹ Marcia Carvalho Mallozi; ² Telma Regina Maria Pereira Barreiro; ¹ Flávio Eduardo Hirai; ¹ José Álvaro Pereira Gomes; ¹ <u>Myrna Serapião dos Santos</u> . ¹ Department of Ophthalmology and Visual Sciences, Escola Paulista de Medicina, Hospital São Paulo, Federal University of São Paulo, São Paulo, SP, Brazil ¹ , Department of Allergy and Immunology, Escola Paulista de Medicina, Hospital São Paulo, Federal University of São Paulo, São Paulo, SP, Brazil. ²
19	THE EFFICACY AND SAFETY OF 0.05% CYCLOSPORINE A (ZIRUN) OPHTHALMIC DROP FOR THE SJÖGREN'S SYNDROME PATIENTS. Xiaoming Yan, ^{1,2} Wenjing Song. ^{1,2} Department of Ophthalmology, Peking University First Hospital, ¹ Peking University, ² Beijing, China
20	HIGHLY EFFECTIVE CORNEAL PERMEABILITY OF REACTIVE OXYGEN SPECIES-RESPONSIVE NANO-FORMULATION ENCAPSULATED CYCLOSPORINE A FOR DRY EYE MANAGEMENT. Wenying Guan, ¹ Yi Han, ¹ Zuguo Liu, ^{1,2} Eye Institute of Xiamen University, School of Medicine, Xiamen University, Xiamen Fujian, China, The First Affiliated Hospital of University of South China, Hengyang Hunan, China ²

21	COMPLEX TREATMENT OF NEUROTROPHIC KERATOPATHY IN ADULTS AND CHILDREN. Vladimir V. Brzhesky ¹ , Elena L. Efimova ² , Irina V. Brzheskaya ² , Diana A. Kumyкова ¹ ¹ St. Petersburg State Pediatric Medical University ² City Mariinsky Hospital, St.Petersburg, Russia.
22	LIGHT-ASSISTED ANTIFUNGAL TREATMENT OF FUNGAL KERATITIS. <u>Sanjay Marasini</u> , ¹ Mark Bosman, ¹ Simon Swift, ² Simon Dean, ¹ Jennifer Craig, ¹ Aotearoa New Zealand National Eye Centre, Department of Ophthalmology, The University of Auckland, ¹ Department of Molecular Medicine & Pathology, University of Auckland, ² Auckland, New Zealand
23	QUANTITATIVE AND QUALITATIVE ASSESSMENT OF REAL-WORLD LIFITEGRAST USAGE IN PATIENTS WITH DRY EYE DISEASE. <u>Christopher E. Starr</u> ¹ ; Clara C. Chan ² ; Megan E. Cavet ³ ; Eric D. Donnenfeld ⁴ ¹ Weill Cornell Medical Center, New York, NY, USA; ² University of Toronto, Toronto, Canada; ³ Medical Affairs, Bausch + Lomb, Rochester, NY, USA; ⁴ Island Eye Surgicenter, Westbury, NY, USA
24	THE MECHANISM OF ACTION OF LEUKOCYTE FUNCTION-ASSOCIATED ANTIGEN (LFA-1) ANTAGONIST LIFITEGRAST IN DRY EYE DISEASE. <u>Pedram Hamrah</u> ; Victor G Sendra; Flavia L Barbosa; Deshea L Harris; Center for Translational Ocular Immunology and Cornea Service, Department of Ophthalmology, Tufts Medical Center, Tufts University School of Medicine, Boston, MA, USA
25	LFA-1 INHIBITION IN DRY EYE DISEASE: THERAPEUTIC AND MECHANISTIC OUTCOMES. <u>Swaminathan Sethu</u> , ¹ Rohit Shetty, ² Pooja Khamar, ² Nikhil Ashok, ¹ Archana P Nair, ¹ Arkasubhra Ghosh. ¹ GROW Research Lab, Narayana Nethralaya Foundation, ¹ Department of Cornea & Refractive Surgery, Narayana Nethralaya, ² Bangalore, India
26	SAFETY OF LIFITEGRAST IN PATIENTS WITH DRY EYE DISEASE: ANALYSIS OF A POST-MARKETING DATABASE <u>Jessilyn M. Quint</u> , ¹ ; Michelle Ratay, ² Jason Vittitow, ² ; Crystal Brimer, ³ ¹ Smart Eye Care, Augusta, ME, USA; ² Medical Affairs, Bausch + Lomb, Bridgewater, NJ, USA; ³ Dry Eye Equation, Wilmington, NC, USA
27	INFLAMMATORY DRY-EYE DISEASE: AN ONGOING PHASE 2 TRIAL OF ILYX-002. <u>Fiona Stapleton</u> ¹ , Houman D. Hemmati ² , Erin Newman ² . ¹ School of Optometry and Vision Science, UNSW Sydney, NSW, Australia. ² Iolyx Australia Pty Ltd, Southbank, VIC, Australia

28	ASSOCIATION BETWEEN AGE-RELATED INFLAMMATORY CHANGES AND DRY EYE SEVERITY USING DRY EYE-INDUCED MIDDLE-AGED MICE. Mako Okamoto ¹ , Tianxiang Huang ¹ , Takenori Inomata ^{1,2,3} , Koji Kitazawa ⁵ , Hurrarnhon Shokirova ¹ , Yuki Morooka ¹ , Maria Miura ¹ , Keiichi Fujimoto ¹ , Shintaro Nakao, ¹ ¹ Department of Ophthalmology, Juntendo University Graduate School of Medicine ² Department of Telemedicine and Mobile Health, Juntendo University Graduate School of Medicine ³ Department of Hospital Administration, Juntendo University Graduate School of Medicine ⁴ Data Science, Juntendo University Graduate School of Medicine ⁵ Department of Ophthalmology, Kyoto Prefectural University of Medicine
29	BUTYRATE SUPPLEMENTATION REDUCES OCULAR SURFACE INFLAMMATION IN AGE-RELATED DRY EYE DISEASE. Chung Young Kim, ^{1,2,3} Jin Suk Ryu, ³ Chang Ho Yoon, ^{1,2,3} Mee Kum Kim ^{1,2,3} ¹ Department of Ophthalmology, Seoul National University College of Medicine, 103 Daehak-ro, Jongno-gu, Seoul, South Korea, ² Department of Ophthalmology, Seoul National University Hospital, Seoul, South Korea
30	NOVEL OCULAR FORMULATION OF PIMECROLIMUS FOR TREATMENT OF DRY EYE. Penny Asbell, ¹ Ian Vessey ² ¹ Department of Bioengineering, University of Memphis College of Arts and Sciences, USA, ¹ Premark Pharma, Switzerland ²
31	LONG-TERM SAFETY OF TOPICAL TACROLIMUS IN ALLERGIC CONJUNCTIVIS. <u>Samir Shoughy</u> ^{1,2} , Khalid F. Tabbara, ² Dr. Samir Eye Clinic ¹ , Alexandria, Egypt ,The Eye Center and the Eye Foundation for Research in Ophthalmology ² , Riyadh, Saudi Arabia
32	ADJUVANT ROLE OF TOPICAL LOW DOSE HEPARIN IN CHRONIC OCULAR SJS: A RANDOMIZED CONTROLLED TRIAL. Renu Venugopal, ¹ Shivam Singh, ¹ Lata Singh, ² Seema Sen, ¹ Seema Kashyap, ¹ Namrata Sharma. ¹ Dr R.P. Centre for Ophthalmic Sciences, All India Institute of Medical Sciences; Department of Paediatrics, All India Institute of Medical Sciences, New Delhi, India.
33	EFFICACY AND SAFETY RESULTS OF FIRST-IN-HUMAN PHASE 2 TRIAL OF OK-101 IN DRY EYE PATIENTS. Raj Patil, Gary S. Jacob. OKYO Pharma, New York, NY USA
34	INTERVENING IN THE DRY EYE INFLAMMATORY CYCLE WITH A NOVEL NUTRITIONAL SUPPLEMENT. Louis Tong ¹ , Robert Ryan ² , Krista Barbour ² , Neda Gioia ³ ¹ Singapore National Eye Centre, ² Bausch+Lomb, ³ Integrative Vision Corp
35	A NOVEL ORAL SUPPLEMENT IMPROVES DRY EYE SYMPTOMS AND TEAR VOLUME: RESULTS FROM A RANDOMIZED CLINICAL TRIAL. Louis Tong ¹ , Robert Ryan ² , Krista Barbour ² , Neda Gioia ³ ¹ Singapore National Eye Centre, ² Bausch+Lomb, ³ Integrative Vision Corp

36	EFFECTIVE TREATMENT OF OCULAR DEMODICOSIS WITH TOPICAL IVERMECTIN 1.0% CREAM. <u>Martin Smith</u> ¹ , James S. Wolffsohn ² , Jeremy Chung Bo Chiang ^{2,3} ¹ Martin Smith Opticians, Lincoln, United Kingdom ² School of Optometry, College of Health and Life Sciences, Aston University, Birmingham, United Kingdom ³ School of Optometry and Vision Science, Faculty of Medicine and Health, University of New South Wales, Sydney, Australia
37	EXPERT PANEL RECOMMENDS LOTILANER OPHTHALMIC SOLUTION, 0.25% AS THE FIRST-LINE TREATMENT FOR <i>DEMODEX</i> BLEPHARITIS. Paul Karpecki, ¹ Kelly Nichols, ² Ian B. Gaddie, ³ Cecelia Koetting ⁴ , Selina McGee. ⁵ Kentucky Eye Institute Lexington, KY ¹ , University of Alabama Birmingham, Birmingham, AL, ² Gaddie Eye Centers, Louisville, KY, ³ University of Colorado Anschutz Medical Campus, Aurora, CO, ⁴ BeSpoke Vision, Edmond, OK, ⁵
38	OCULAR VASOCONSTRICTORS: DOES MECHANISM OF ACTION MAKE A DIFFERENCE? Serge Doan ¹ , Saskia Aguado ² , Antonio Mateo Orobias ³ , Kelly Nichols ⁴ , Melissa Toyos ⁵ ¹ Fondation A de Rothschild Hôpital, ² Bausch + Lomb, ³ Hospital Universitario Miguel Servet, ⁴ University of Alabama at Birmingham, ⁵ Toyos Clinic
39	COMBINED EFFECT OF REBAMIPIDE 2% AND HYALURONIC ACID 0.15% IN MANAGING DRY EYE FOLLOWING CATARACT SURGERY. Ji Yun Seong, <u>Sung Kun Chung</u> . Saevit Eye Hospital, Goyang, Korea
40	THE EFFECT OF TOPICAL REBAMIPIDE 2% IN MANAGING DRY EYE FOLLOWING CATARACT SURGERY. Ji Hyung Suh, <u>Sung Kun Chung</u> . Saevit Eye Hospital, Goyang, Korea
41	EFFECT OF TOPICAL REBAMIPIDE 2% ON REFRACTORY FILAMENTARY KERATITIS. Hye Won Jun ¹ <u>Sang-Mok Lee</u> . ^{1,2} Department of Ophthalmology, Hangeil Eye Hospital, ¹ Department of Ophthalmology, Catholic Kwandong University College of Medicine, ² Incheon, Korea
42	DIRTY DRY EYE "A WASTE VOLUME ANALYSIS FROM TOPICAL THERAPY IN KERATO-CONJUNCTIVITIS SICCA. <u>A. Schilcher</u> ¹ , M. Roth ¹ , F. Steindor ¹ , R. Helweh ¹ , G. Geerling ¹ ¹ Department of Ophthalmology – Medical Faculty and University Hospital Duesseldorf – Heinrich Heine University Duesseldorf

43	MICROPLASTICS IDENTIFIED IN COMMERCIAL OVER-THE-COUNTER LUBRICANT EYE-DROPS. <u>Chris Lim</u> ^{1,2,3,4,5} , Matthew Burke ⁶ , Duoduo Wu ¹ , Emily Curren ⁷ , Sandric Leong ⁷ , Robert Symons ⁶ , Blanche Lim ^{1,4} , Xinyi Su ^{1,2,4} , Jodhbir Mehta ^{2,8,9} , Andri Riau ^{2,8} , Julia Jaeger ⁶ ¹ Department of Ophthalmology, National University Health System, ² Singapore Eye Research Institute, ³ Center for Sustainable Medicine, National University of Singapore, ⁴ Yong Loo Lin School of Medicine, National University of Singapore, ⁵ School of Optometry and Vision Science, University of New South Wales, Australia, ⁶ Eurofins Environment Testing Australia & New Zealand, ⁷ Tropical Marine Science Institute, National University of Singapore, ⁸ Ophthalmology and Visual Sciences Academic Clinical Programme, Duke-NUS Medical School, Singapore and ⁹ Singapore National Eye Centre
44	COMPARISON OF CHITOSAN ENHANCED SERUM EYE DROPS TO SERUM EYE DROPS AND TWO CONTROL GROUPS Gentile, Ronald ¹ ; Carr, Dan ² ; Blasberg, Sophie ¹ ; Galante, Mia ¹ ; Chamberlain, Dean ¹ ; Weiner, Elan ¹ ¹ ECI Therapeutics; ² University of Oklahoma
45	SAFETY AND EFFICACY OF PROPYLENE GLYCOL-HYDROXYPROPYL-GUAR NANOEMULSION LUBRICANT EYE DROPS IN INDIAN PATIENTS WITH DRY EYE DISEASE. <u>Deborah Awisi-Gyau</u> , ¹ Harsha Nagaraja, ² Parth Rana, ³ Rama Rajagopal. ⁴ Alcon Research, LLC, Fort Worth, USA; ¹ Narayan Nethralaya, Bengaluru, India; ² Netralaya Super Speciality Eye Hospital, Ahmedabad, India; ³ Sankara Netralaya, Chennai, India ⁴
46	INSULIN NANOEMULSION EYE DROPS FOR TREATMENT OF DRY EYES IN SJÖGREN'S DISEASE: A RANDOMIZED CLINICAL TRIAL PHASE I/II. Marzola MM ¹ , Gutierrez DR ¹ , Cintra BC ¹ , Murashima AAB ¹ , Dalmolin LF ² , Garcia DM ¹ , Lopez RFV ² , Oliveira FR ¹ , Rocha EM ¹ . ¹ Ribeirão Preto Medical School, University of São Paulo, Brazil; ² School of Pharmaceutical Sciences of Ribeirão Preto, University of São Paulo, Brazil
47	ANTI-EVAPORATIVE LIPOSOMAL FORMULATIONS FOR DRY EYE TREATMENT. <u>Janika Jäntti</u> ¹ , Tuomo Viitaja ^{2,3} , Julia Sevón ² , Tatu Lajunen ^{1,4} , Katja Pajula ¹ , Jan-Erik Raitanen ² , Mira Viljanen ² , Arto Merivaara ¹ , Jooseppi Puranen ¹ , Eveliina Tuomikoski ¹ , Anusha Balla ¹ , Elisa Toropainen ¹ , Kai Kaarniranta ⁵ , Jussi Paterno ⁵ , Jukka Moilanen ³ , Filip. S. Ekholm ² , and Marika Ruponen ¹ .
48	COMPARISON OF A NOVEL LIPID NANO-EMULSION EYE DROP WITH AN EXISTING LUBRICATING EYE DROP. <u>Bridgitte Shen Lee</u> ¹ , Jade Coats ² , Heather Morrow ³ , Laura M Periman ⁴ ¹ Vision Optique, ² McDonald Eye Associates, ³ Bausch + Lomb, ⁴ Dry Eye Master
49	EARLY ADOPTION AND UTILIZATION OF PERFLUOROHEXYLOCTANE FOR DRY EYE DISEASE. <u>Bridgitte Shen Lee</u> ¹ ; Adam Alexander ² ; Abhishek A. Nair ² ; Lia Pizzicato ³ ; Shangzhi Gao ³ ; Victoria Divino ³ ; David J. Harrison ² ¹ Vision Optique, Houston, TX, USA; ² Bausch + Lomb, Bridgewater, NJ, USA; ³ IQVIA, Falls Church, VA, USA

50	PERFLUOROHEXYLOCTANE OPHTHALMIC SOLUTION INSTILLATION COMFORT AND EYEDROP ACCEPTABILITY: PATIENT-REPORTED OUTCOMES IN PHASE 3 CLINICAL STUDIES. <u>Preeya K. Gupta</u> ¹ ; John D. Sheppard ² ; Darrell E. White, ³ ; Alice Epitropoulos ⁴ ; Marguerite McDonald ^{6,7} ; Megan Cavet ⁸ ; Jason L. Vittitow ⁹ ¹ Triangle Eye Consultants, Raleigh, NC, USA; ² Virginia Eye Consultants, Norfolk, VA, USA; ³ Skyvision Centers, Westlake, OH; ⁴ The Eye Center of Columbus, Columbus, OH; ⁵ NYU Langone Medical Center, New York, NY; ⁶ Tulane University Health Sciences Center, New Orleans, LA; ⁷ OCLI Vision, Oceanside, NY; ⁸ Medical Affairs, Bausch + Lomb, Rochester, NY; ⁹ Medical Affairs, Bausch + Lomb, Bridgewater, NJ
51	PERFLUOROHEXYLOCTANE OPHTHALMIC SOLUTION FOR DRY EYE DISEASE: A COMPARISON OF SAFETY AND EFFICACY ACROSS PHASE 2 AND 3 CLINICAL TRIALS. <u>Preeya K Gupta</u> ¹ ; John D. Sheppard ² ; Eugene E. Protzko ³ ; Jason L. Vittitow, ⁴ ¹ Triangle Eye Consultants, Raleigh, NC, USA; ² Virginia Eye Consultants, Norfolk, VA, USA; ³ Seidenberg Protzko Eye Associates, Havre de Grace, MD, USA; ⁴ Medical Affairs, Bausch + Lomb, Bridgewater, NJ, USA
52	EARLY SYMPTOM RELIEF AND SATISFACTION WITH PERFLUOROHEXYLOCTANE OPHTHALMIC SOLUTION IN PATIENTS WITH DRY EYE DISEASE: RESULTS FROM A PROSPECTIVE, MULTICENTER STUDY. <u>Preeya K Gupta</u> ¹ ;Shane R Kannarr ² ; Anthony Verachtert ³ ; Moataz Razeen ⁴ ; Jason L Vittitow ⁴ ; Jason Bacharach ⁵ ¹ Triangle Eye Consultants, Raleigh, NC, USA; ² Kannarr Eye Care, Pittsburg, KS, USA; ³ Moyes Eye Center, Kansas City, MO, USA; ⁴ Bausch + Lomb, Bridgewater, NJ, USA; ⁵ North Bay Eye Associates, Inc., Petaluma, CA, USA
53	EFFECT OF PERFLUOROHEXYLOCTANE OPHTHALMIC SOLUTION ON CORNEAL STAINING IN PATIENTS WITH DRY EYE DISEASE. <u>Jessilin M. Quint</u> ¹ ; Ahmad Fahmy ² ; Megan Cavet ³ ; Jason L. Vittitow ³ ; David G. Evans ⁴ ¹ Smart Eye Care, Augusta, ME, USA; ² Minnesota Eye Consultants, Minneapolis, MN, USA; ³ Bausch + Lomb, Bridgewater, NJ, USA; ⁴ Total Eye Care, PA, Memphis, TN, USA
54	PHARMACOKINETICS AND DISTRIBUTION OF PERFLUOROPUTYLPENTANE, A NOVEL EYE DROP VEHICLE, IN RABBITS AFTER TOPICAL ADMINISTRATION. Sonja Krösser ¹ , Johannes Korward ¹ , Joseph Tauber, ² ¹ Novaliq GmbH; ² Tauber Eye Center
55	ADVANCED EYE DROPS OFFERING SUPERIOR CORNEAL PROTECTION AND EXTENDED REMANENCE. G. Lalevée, A. Adamczewski, <u>S. Belkheiri</u> , NOXELIS SAS, Annecy, France

56	CHANGES IN MAXIMUM BLINK INTERVAL AFTER TREATMENT WITH DIQUAFOSOL SODIUM EYE DROPS. Ken Nagino, ^{1,2,3} Takenori Inomata, ^{1,2,3,4} Akie-Midorikawa-Inomata, ² Atsuko Eguchi, ² Shintaro Nakao, ¹ Juntendo University Graduate School of Medicine, Department of Ophthalmology, ¹ Department of Hospital Administration, ² Department of Telemedicine and Mobile Health, ³ Data Science, Tokyo, Japan.
57	COMPARISON OF PLATELET-RICH PLASMA AND AUTOLOGOUS-SERUM EYE DROPS IN TREATMENT OF SEVERE DRY EYE. Ji-Yun Song, ¹ Min Ji Kang, ² Jee Hye Lee, ² Jehyung Hwang, ² So Hyang Chung. ¹ Department of Ophthalmology, College of Medicine, Seoul St. Mary's Hospital, The Catholic University of Korea, ¹ Department of Ophthalmology, College of Medicine, Sanggye Paik Hospital, Inje University, Seoul, Republic of Korea ²
58	THE EFFECT OF A NOVEL HIGH MOLECULAR WEIGHT HYALURONIC ACID AND KETO-TIFEN EYE DROP ON THE OCULAR SURFACE STATUS IN AN ALLERGIC CONJUNCTIVITIS MOUSE MODEL. Dogru, Murat ^{1,2} ; Nagata, Taeko ³ ; Kojima, Takashi ^{4,5} ; Higa, Kazunari ⁶ ; Okada, Naoko ⁷ ; Muller-Lierheim, Wolfgang ³ ; Fukagawa, Kazumi ³ ; Fujishima, Hiroshi ¹ ; Negishi, Kazuno ³ 1. Ophthalmology, Tsurumi Daigaku Shigakubu Daigakuin Shigaku Kenkyuka, Yokohama, Kanagawa, Japan. 2. University of New South Wales, Sydney, NSW, Australia. 3. Ophthalmology, Keio Gijuku Daigaku Igakubu Daigakuin Igaku Kenkyuka, Shinjuku-ku, Tokyo, Japan. 4. Ophthalmology, Tokyo Shika Daigaku Ichikawa Sogo Byoin, Ichikawa, Chiba, Japan. 5. Ophthalmology, Chiiki Iryo Kino Suishin Kiko Chukyo Byoin, Nagoya, Aichi, Japan. 6. Cornea Center Eye Bank, Tokyo Shika Daigaku Ichikawa Sogo Byoin, Ichikawa, Chiba, Japan. 7. Nihon Yakka Daigaku, Fukiage-gun, Saitama, Japan.
59	OCULAR SURFACE DISEASE SIGNS AND SYMPTOMS IN OPEN-ANGLE GLAUCOMA AND OCULAR HYPERTENSION PATIENTS TREATED WITH PRESERVATIVE-FREE LATANOPROST EYE DROP CATIONIC EMULSION OR PRESERVED LATANOPROST: A 12-WEEK RANDOMIZED STUDY. Christophe Baudouin ^{1,2} ; Ingeborg Stalmans ^{3,4} ; Francesco Oddone ⁵ ¹ CHNO des Quinze-Vingts, IHU FOReSIGHT, INSERM-DGOS CIC 1423, Paris, France ² Sorbonne Universités, INSERM, CNRS, Institut de la Vision, Paris, France ³ Department of Ophthalmology, University Hospitals UZ Leuven, Belgium ⁴ Research Group Ophthalmology, Department of Neurosciences, Catholic University KU Leuven, Belgium ⁵ Glaucoma Unit, IRCSS-Fondazione Bietti, Roma, Italy
60	THE THERAPEUTIC EFFICACY OF JIN ZHEN EYE DROPS IN TREATING DRY EYE IN A CHINESE POPULATION: A RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED CLINICAL TRIAL. Clinical Trial. Lei Tian. Beijing Institute of Ophthalmology, Beijing Tongren Eye Center, Beijing Tongren Hospital, Capital Medical University, Beijing Ophthalmology & Visual Sciences Key Laboratory, Beijing, China

61	TREATING DRY EYE DISEASE TO IMPROVE MIGRAINE: A RANDOMIZED CROSSOVER TRIAL. Nur Amalina Md Isa, ¹ Shyam S. Tummanapalli, ¹ Arun V. Krishnan, ² Alessandro S. Zagami, ² Katherine Spira, ² Eric Papas, ¹ Maria Markoulli, ¹ UNSW School of Optometry & Vision Science, ¹ Department of Neurology, Prince of Wales Hospital, ² Australia
62	TEAR LUBRICANT PRESCRIBING PATTERNS AMONGST OPTOMETRISTS IN INDIA. <u>Anitha Arvind</u> ^{1,2} , Monica Chaudhry ^{1,2} , Krishna Kumar Gupta ¹ , K N Rakesh ¹ , Roshni Sengupta ¹ , Jyoti Gangta ¹ ¹ Department of Optometry, School of Healthcare and Allied Sciences, G D Goenka University, India, ² Monica Chaudhry Vision Institute, Gurgaon, India
63	EVALUATION OF THE EFFICACY OF A NOVEL PRESERVATIVE-FREE FORMULATION OF BRIMONIDINE TARTRATE OPHTHALMIC SOLUTION. <u>José M Benitez Del Castillo</u> ¹ , Saskia Aguado ² , Melinda DiVito ² , Anne Argullos ² , Elisabeth Messmer ³ , Melissa Toyos ⁴ ¹ Hospital Clinico San Carlos, ² Bausch+Lomb, ³ Ludwig-Maximilians-University, ⁴ Toyos Clinic
64	EVALUATION OF THE SAFETY OF A NOVEL PRESERVATIVE-FREE FORMULATION OF BRIMONIDINE TARTRATE OPHTHALMIC SOLUTION. <u>José M Benitez Del Castillo</u> ¹ , Saskia Aguado ² , Melinda DiVito ² , Anne Argullos ² , Elisabeth Messmer ³ , Melissa Toyos ⁴ ¹ Hospital Clinico San Carlos, ² Bausch+Lomb, ³ Ludwig-Maximilians-University, ⁴ Toyos Clinic
65	COMPARISON OF TWO PRESERVATIVE-FREE ARTIFICIAL TEARS WITH SODIUM HYALURONATE FOR RELIEF OF DRY EYE: MULTICENTRE TRIAL FINDINGS. <u>Marc Labetoulle</u> ¹ , Robert Ryan ² , on behalf of the study investigators, ¹ Hôpital Bicêtre, ² Bausch + Lomb
66	TOXICITY OF POVIDONE IODINE ON THE RABBIT OCULAR SURFACE. Sun Young Kim, Yongsun Ahn, <u>Hyun Seung Kim</u> . Department of Ophthalmology, Seoul St. Mary's Hospital, College of Medicine, The Catholic University of KOREA, Seoul, KOREA

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