Program
Monday Feb. 16

9:00 AM - 10:30 AM Main Hall (1F)/Room 1
Symposium 1
New Strategies for Glaucoma Diagnosis and Treatment

Organizers
Calvin CP Pang
The Chinese University of Hong Kong, Kowloon, Hong Kong
Hidenobu Tanihara
Faculty of Life Sciences, Kumamoto University, Kumamoto, Kumamoto, Japan
Takeshi Yoshitomi
Akita University Graduate School of Medicine and Faculty of Medicine, Akita, Akita, Japan

1: SY1-1
Molecular mechanism of axonal damage in glaucoma
Speaker: Masaru Inatani
1. Department of Ophthalmology, University of Fukui, Yoshida, Fukui, Japan.

2: SY1-2
Recovery of retinal ganglion cell function after IOP lowering
Speaker: Jonathan Crowston 1,2
1. Department of Ophthalmology, University of Melbourne, East Melbourne, VIC, Australia. 2. Centre for Eye Research Australia, Melbourne, VIC, Australia.

3: SY1-3
The role of aquaporin 9 in retinal ganglion cell death in glaucoma
Speaker: Makoto Nakamura
1. Division of Ophthalmology Department of Surgery, Kobe University Graduate School of Medicine, Kobe, Hyogo, Japan.

4: SY1-4
Oxidative stresses in glaucoma
Speaker: Masaki Tanito
1. Division of Ophthalmology, Matsue Red Cross Hospital, Matsue, Shimane, Japan.

5: SY1-5
A New Drug Delivery System for Glaucoma Medication
Speaker: Tina Wong 1,2
1. Department of Glaucoma Singapore National Eye Centre, Singapore Eye Research Institute, Singapore, Singapore. 2. Duke NUS Graduate Medical School, Singapore, Singapore.

6: SY1-6
The Brain and Vision Restoration in Glaucoma: Back to the Future
Speaker: Neeru Gupta 1,2 Yeni Yucel 1,2
1. Ophthalmology and Vision Sciences, University of Toronto, Toronto, ON, Canada. 2. Li Ka Shing Knowledge Institute, St. Michael’s Hospital, Toronto, ON, Canada.

10:40 AM - 12:10 PM Main Hall (1F)/Room 1
Symposium 2
Ocular Surface and Stromal Biology

Organizers
Shigeru Kinoshita
Kyoto Prefectural University of Medicine, Kyoto, Kyoto, Japan
Friedrich E. Kruse
University of Erlangen-Nuremberg, Erlangen, Germany

31: SY2-1
Mechanisms of Umbilical Mesenchymal Stem Cells in Suppressing Inflammation and Host Immune Rejection
Speaker: Winston W-Y Kao
1. Department of Ophthalmology, University of Cincinnati College of Medicine, Cincinnati, OH, United States.

32: SY2-2
Direct conversion of fibroblasts to human corneal epithelial-like cells by defined factors
Speaker: Koji Kitazawa 1,2 Takafusa Hikichi 2 Takashi Ikeda 2 Takahiro Nakamura 1,3 Morio Ueno 1 Satoshi Kawasaki 1,2 Shinji Masui 1 Shigeru Kinoshita
1. Department of Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan. 2. Center for iPS Research & Application, Osaka University, Osaka, Japan. 3. Department of Ophthalmology, Osaka University, Osaka, Japan. 4. Doshisha University, Kyoto, Japan.

33: SY2-3
Ocular surface reconstruction: Focus on the stem cell niche
Speaker: Friedrich E. Kruse 1 Ursula Schloetzer-Schrehardt 1 Johannes Menzel-Severing
1. Department of Ophthalmology, University of Erlangen-Nuremberg, Erlangen, Germany.

34: SY2-4
Bioengineering functional lacrimal gland in vitro
Speaker: Tetsuya Kawakita
1. Department of Ophthalmology, Keio University School of Medicine, Shinjuku, Tokyo, Japan.

35: SY2-5
Squamous Metaplasia of the Ocular Surface Epithelium
Speaker: Zuguo Liu 1,2
1. Xiamen Eye Centre of Xiamen University, Xiamen, Fujian, China. 2. Fujian Provincial Key Laboratory of Ophthalmology and Visual Science, Xiamen, China.

36: SY2-6
Holoclone-type stem cells control corneal homeostasis
Speaker: Takahiro Nakamura
1. Research Center for Inflammation and Regenerative Medicine, Doshisha University, Kyoto, Kyoto, Japan.
Luncheon Seminar 1
Recent Advance of Corneal Biology and its Clinical Use

Sponsored by Senju Pharmaceutical Co., Ltd.
Organizer
Shigeru Kinoshita
Kyoto Prefectural University of Medicine, Kyoto, Kyoto, Japan

64: LS1-1
Advanced surgical therapy of corneal endothelial disease: A revolution in evolution
Speaker: Friedrich E. Kruse
1. Department of Ophthalmology, University of Erlangen-Nuremberg, Erlangen, Germany.

65: LS1-2
Matricellular Functions of Lumican on Corneal Homeostasis
Speaker: Winston Kao
1. Department of Ophthalmology, University of Cincinnati College of Medicine, Cincinnati, OH, United States.

66: LS1-3
New therapeutic modality for corneal endothelial disease using Rho-associated kinase inhibitor eye drops
Speaker: Noriko Koizumi
1. Department of Biomedical Engineering, Faculty of Life and Medical Sciences, Doshisha University, Kyotanabe, Kyoto, Japan.
2. Department of Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan.

Symposium 3
Molecular Mechanisms in Diabetic Retinopathy

Organizers
Jeong Hun Kim
Seoul National University College of Medicine, Jongno, Seoul, Korea (the Republic of)
Susumu Ishida
Hokkaido University Graduate School of Medicine, Sapporo, Hokkaido, Japan

75: SY3-1
Fight Against Angiogenesis-related Blindness: Beyond Anti-VEGF Antibody Treatment
Speaker: Jeong Hun Kim, Jin Hyoung Kim
1. Department of Biomedical Sciences & Ophthalmology, Seoul National University College of Medicine, Jongno, Seoul, Korea (the Republic of).
2. FARB Laboratory, Seoul National University Hospital, Seoul, Korea (the Republic of).

76: SY3-2
Inflammation and Oxidative Stress in Diabetic Retinopathy
Speaker: Kousuke Noda
1. Department of Ophthalmology, Hokkaido University Graduate School of Medicine, Sapporo, Hokkaido, Japan.

77: SY3-3
Alterations in the vitreous proinflammatory cytokine levels after vitrectomy in patients with proliferative diabetic retinopathy
Speaker: Shigeo Yoshida
1. Department of Ophthalmology, Kyushu University Graduate School of Medical Sciences, Fukuoka, Fukuoka, Japan.

78: SY3-4
ROCK as a therapeutic target in diabetic retinopathy
Speaker: Shintaro Nakao
1. Department of Ophthalmology, Graduate School of Medical Sciences, Kyushu University, Fukuoka, Fukuoka, Japan.

79: SY3-5
Pathophysiology of pericyte-free retinal vessels
Speaker: Akiyoshi Uemura
1. Department of Retinal Vascular Biology, Nagoya City University Graduate School of Medical Sciences, Nagoya, Japan.

80: SY3-6
Human retinal mitoscriptome Gene Expression Signature for Diabetic Retinopathy using Human Cadaver Eyes
Speaker: Periasamy Sundaresan, Gowthaman Govindarajan, Kim Ramasamy, Karthick Srinivasan
1. Department of Genetics, Aravind Medical Research Foundation, Aravind Eye Hospital, Madurai, Tamilnadu, India.
2. Department of Retina & vitreous, Aravind Eye Hospital, Madurai, Tamilnadu, India.
9:00 AM - 10:30 AM 501 (5F)/Room 2

Symposium 4
Science in Corneal and Refractive Surgery

Organizers
Donald Tan
Singapore National Eye Centre, Singapore, Singapore
Shiro Amano
Inoue Eye Hospital/Miyata Eye Hospital, Chiyoda, Tokyo, Japan

7: SY4-1
Update on Deep Anterior Lamellar Keratoplasty
Speaker: Shiro Amano 1
1. Inouye Eye Hospital, Tokyo, Japan.

8: SY4-2
Update on DSAEK / DMEK surgery
Speaker: Donald Tan 1, 2
2. Duke-NUS Graduate Medical School, Singapore, Singapore.

9: SY4-3
The safety issues of phakic IOL
Speaker: Tae-im Kim 1
1. Department of Ophthalmology, Yonsei University School of Medicine, Seodaemun-gu, Seoul, Korea (the Republic of).

10: SY4-4
Corneal crosslinking (m Science m Corneal and Refractive Surgery)
Speaker: Naoko Kato 1
1. Department of Ophthalmology, Saitama Medical University, Iruma, Saitama, Japan.

11: SY4-5
Posterior corneal elevation after refractive surgery
Speaker: Vishal Jhanji 1
1. The Chinese University of Hong Kong, Kowloon, Hong Kong.

10:40 AM - 12:10 PM 501 (5F)/Room 2

Symposium 5
Recent Topics of Neuro-ophthalmology

Organizers
Hitoshi Ishikawa
School of Allied Health Sciences, Kitasato University, Sagamihara, Kanagawa, Japan
Lin-Chung Woung
Taipei City Hospital, Taipei, Taiwan

37: SY5-1
The origin, pathway and center of pupillary light reflex
Speaker: Ken Asakawa 1
1. Department of Orthoptics and Visual Science, School of Allied Health Sciences, Kitasato University, Sagamihara, Kanagawa, Japan.

38: SY5-2
Enhanced Depth Imaging (EDI) - OCT in Optic Neuropathies
Speaker: Suntaree Thitiwichienlert 1 Hitoshi Ishikawa 2 Totsuya Ikeda 3 Ken Asakawa 2 Kimiya Shimizu 3
1. Department of Ophthalmology, Thammasat University Hospital, Pathum Thani, Thailand.
2. Department of Orthoptics and Visual Science, Kitasato University, Sagamihara, Japan.
3. Department of Ophthalmology, Kitasato University, Sagamihara, Japan.

39: SY5-3
Clinical feature of Leber hereditary optic neuropathy - an update review
Speaker: An-Guor Wang 1, 2
1. Department of Ophthalmology, Taipei Veterans General Hospital, National Yang-Ming University, Taipei, Taiwan.
2. School of Medicine, National Yang-Ming University, Taipei, Taiwan.

40: SY5-4
Current Updates in Ethambutol Toxic Optic Neuropathy
Speaker: Erwin D. Palisoc 1, 2
1. Department of Ophthalmology, Manila Central University College of Medicine, Caloocan city, Philippines.
2. Department of Ophthalmology, Jose R. Reyes Memorial Medical Center, Manila, Philippines.

41: SY5-5
Recent development of high-resolution MR imaging for Neuro-ophthalmology
Speaker: Masato Hashimoto 1
1. Department of Ophthalmology, Sapporo Medical University, Sapporo, Hokkaido, Japan.
Luncheon Seminar 2
Postoperative Care for Ophthalmic Surgery

Sponsored by Otsuka Pharmaceutical Co., Ltd.

Organizer
Jun Shimazaki
Tokyo Dental College Ichikawa General Hospital, Ichikawa, Chiba, Japan

67: LS2-1
Endophthalmitis Prophylaxis for Cataract Surgery
Speaker: Takashi Suzuki
1. Department of Ophthalmology, Ehime University, Graduate School of Medicine, Toon, Ehime, Japan.

68: LS2-2
Postoperative Care of Ocular Surface after Ophthalmic Surgery
Speaker: Tetsuya Kawakita
1. Department of Ophthalmology, Keio University School of Medicine, Shinjuku, Tokyo, Japan.

69: LS2-3
Postoperative Care for Refractive Surgery
Speaker: Kazutaka Kamiya
1. Dept of Ophthalmology, Kitasato University, Sagamihara, Kanagawa, Japan.

Symposium 6
What's New in IgG4 Related Ophthalmic Disease

Organizers
Masayuki Takahira
Kanazawa University School of Medicine, Kanazawa, Ishikawa, Japan
Hiroshi Goto
Tokyo Medical University, Shinjuku, Tokyo, Japan

81: SY6-1
Historical overview of IgG4 related disease
Speaker: Mitsuhiro Kawano
1. Division of Rheumatology Department of Internal Medicine, Kanazawa University Hospital, Kanazawa, Ishikawa, Japan.

82: SY6-2
Epidemiology and current diagnostic criteria of IgG4 related ophthalmic disease
Speaker: Masayuki Takahira
1. Department of Ophthalmology, Kanazawa University School of Medicine, Kanazawa, Ishikawa, Japan.

83: SY6-3
Clinical features of IgG4 related ocular diseases
Speaker: David Ta-Li Liu
1. Dennis Lam & Partners Eye Center, Central, Hong Kong.

84: SY6-4
Differential diagnosis of IgG4 related ophthalmic disease
Speaker: Sunny Shen, Anita Chan

85: SY6-5
IgG4-related ophthalmic disease and systemic evaluations
Speaker: Toshinobu Kubota
1. Department of Ophthalmology, National Hospital Organization Nagoya Medical Center, Nagoya, Aichi, Japan.

86: SY6-6
Therapeutic strategy for IgG4-related ophthalmic disease
Speaker: Atsushi Azumi
1. Department of Ophthalmology, Kobe Kaisei Hospital, Kobe, Hyogo, Japan.
4:50 PM - 5:50 PM 501 (5F)/Room 2

Afternoon Seminar 1
Evolving Femtosecond Laser Technology in Cataract and Refractive Surgery

Sponsored by Alcon Japan Ltd.

Organizer
Shigeru Kinoshita
Kyoto Prefectural University of Medicine, Kyoto, Kyoto, Japan

180: AS1-1
Evolving Femtosecond Laser Technology in Cataract and Refractive Surgery
Speaker: Shigeru Kinoshita ¹
1. Kyoto Prefectural University of Medicine, Kyoto, Kyoto, Japan.

181: AS1-2
Introducing Femtosecond-laser to Cataract Surgery
Speaker: Hiroko Bissen-Miyajima ¹
1. Department of Ophthalmology, Tokyo Dental College Suidobashi Hospital, Chiyoda-ku, Tokyo, Japan.
9:00 AM - 10:30 AM  502 (5F)/Room 3

Symposium 7
Functional Testing of Vision

Organizers
Takashi Fujikado
Osaka University School of Medicine, Suita, Osaka, Japan
Atsushi Mizota
Teikyo University, School of Medicine, Itabashi, Tokyo, Japan

12: SY7-1
Objective evaluation of the ocular functions - strabismus, visual acuity, and others: by using computer-based technologies
Speaker: Jong-Mo Seo 1,2  Woonhee Lee 1  Minwon Seo 1  Jeong-Min Hwang 1
1. Electrical Engineering and Computer Sciences, Seoul National University, Seoul, Korea (the Republic of).
2. Ophthalmology, Seoul National University Hospital, Seoul, Korea (the Republic of).

13: SY7-2
Evaluation of ganglion cell layer function by pattern ERG and PhNR
Speaker: Souichi Matsumoto 1
1. Department of Ophthalmology, Teikyo University, School of Medicine, Itabashi, Tokyo, Japan.

14: SY7-3
Evaluation of inner retinal layers by phosphene and OCT in patients with advanced retinitis pigmentosa
Speaker: Takeshi Morimoto 1
1. Department of Applied Visual Science, Osaka University Graduate School of Medicine, Suita, Osaka, Japan.

15: SY7-4
The Electrically Evoked Visual Responses and their Usefulness in Retinitis Pigmentosa
Speaker: Marten Erik Brelén 1  Chi Wai Tsang 2  Alvin Young 3  Jean Delbeke 4  Chi Pui C. Pang 1
1. Department of Ophthalmology and Visual Sciences, Chinese University of Hong Kong, Kowloon, Hong Kong.
2. Hong Kong Eye Hospital, Hong Kong, Hong Kong.
3. Prince of Wales Hospital, Hong Kong, Hong Kong.
4. University of Gent, Gent, Belgium.

10:40 AM - 12:10 PM  502 (5F)/Room 3

Symposium 8
OCT, Clinical Use and Future

Organizers
Yoshiaki Yasuno
University of Tsukuba, Tsukuba, Ibaraki, Japan
Christopher K. Leung
The Chinese University of Hong Kong, Kowloon, Hong Kong

42: SY8-1
Anterior Segment OCT
Speaker: Donald Tan 1,2
2. Duke-NUS Graduate Medical School, Singapore, Singapore.

43: SY8-2
Latest advances in retinal nerve fiber layer imaging with optical coherence tomography
Speaker: Christopher K. Leung 1
1. Department of Ophthalmology and Visual Sciences, The Chinese University of Hong Kong, Kowloon, Hong Kong.

44: SY8-3
Deep choroidal imaging using optical coherence tomography
Speaker: Yasushi Ikuno 1
1. Department of Ophthalmology, Osaka University Graduate School of Medicine, Suita, Osaka, Japan.

45: SY8-4
Polarization and Dopper ocular imaging
Speaker: Yoshiaki Yasuno 1,2
1. Computational Optics Group, University of Tsukuba, Tsukuba, Ibaraki, Japan.
2. Computational Optics and Ophthalmology Group, Tsukuba, Japan.

46: SY8-5
Measurement of Retinal Blood-Flow by Doppler-OCT
Speaker: Taiji Nagaoka 1
1. Department of Ophthalmology, Asahikawa Medical Univeristy, Asahikawa, Hokkaido, Japan.

47: SY8-6
Retinal oximetry using visible-light OCT
Speaker: Hao Zhang 1,2
1. Department of Ophthalmology, Northwestern University, Chicago, IL, United States.
2. Department of Biomedical Engineering, Northwestern University, Evanston, IL, United States.
**12:20 PM - 1:20 PM**  
**502 (5F)/Room 3**  
**Luncheon Seminar 3**  
Clinical and Basic Updates on Angiogenesis and Vascular Biology in the Eye  
Sponsored by Novartis Pharma K.K.  
Organizer  
Susumu Ishida  
Hokkaido University Graduate School of Medicine, Sapporo, Hokkaido, Japan

**70: LS3-1**  
Clinical updates: neovascularization related to retinal/choroidal disease  
**Speaker**: Atsushi Otani ¹  
1. Department of Ophthalmology, Japanese Red Cross Society, Wakayama Medical Center, Wakayama, Japan.

**71: LS3-2**  
Stemming Vision Loss with Stem Cells (and a little help from VEGF, HIFs and VHL)  
**Speaker**: Martin Friedlander ¹,²  
1. Department of Cell and Molecular Biology, The Scripps Research Institute, La Jolla, CA, United States. 2. The Lowy Medical Research Institute, La Jolla, CA, United States.

**2:10 PM - 3:40 PM**  
**502 (5F)/Room 3**  
**Symposium 9**  
Friendship Makes it Possible! - Vision Van Project  
In conjunction with Japan Ophthalmologists Association / Cataract Foundation Japan  
Organizers  
Shigeru Takano  
Japan Ophthalmologists Association, Minato, Tokyo, Japan  
Keiichi Kato  
Miyagi Ophthalmologists Association, Kurokawa, Miyagi, Japan  
Kazuo Tsubota  
Keio University School of Medicine, Shinjuku, Tokyo, Japan

**87: SY9-1**  
Vision Van Project Overview  
**Speaker**: Kazuo Tsubota ¹  
1. Department of Ophthalmology, Keio University School of Medicine, Shinjuku, Tokyo, Japan.

**88: SY9-2**  
Concept and History of Vision Van  
**Speaker**: Eduardo Alfonso ¹  
1. Bascom Palmer Eye Institute, Miami, FL, United States.

**89: SY9-3**  
The Bascom Palmer Eye Institute Vision Van Experience  
**Speaker**: Richard K. Lee ¹  
1. Bascom Palmer Eye Institute/University of Miami Miller School of Medicine, Miami, FL, United States.

**90: SY9-4**  
Stories from the U.S. and Japan to the Philippines  
**Speaker**: Toru Nakazawa ¹  
1. Department of Ophthalmology, Tohoku University Graduate School of Medicine, Sendai, Miyagi, Japan.

**91: SY9-5**  
The Japan Vision Van and the Aftermath of “Typhoon Yolanda”  
**Speaker**: Amelia C. Reyes ¹  

**92: SY9-6**  
Eye Get By with a Little Help from My Friends: A Story of International Cooperation for Disaster Relief and Rehabilitation  
**Speaker**: Harvey Uy ¹,²  
Afternoon Seminar 2
Current Management of Choroidal Neovascularization due to Pathologic Myopia

Sponsored by Bayer Yakuhin, Ltd.

Organizer
Kyoko Ohno-Matsui
Tokyo Medical and Dental University, Bunkyo, Tokyo, Japan

182: AS2-1
Epidemiology and Diagnosis of mCNV in Asia
Speaker: Gemmy Cheung 1
1. Singapore Eye Research Institute, Singapore, Singapore.

183: AS2-2
Treatment of myopic CNV
Speaker: Yasushi Ikuno 1
1. Department of Ophthalmology, Osaka University Graduate School of Medicine, Suita, Osaka, Japan.
9:00 AM - 10:30 AM  503 (5F)/Room 4

**Symposium 10**

**Advances in Drug Delivery**

*In conjunction with ARVO*

**Organizers**

William Mieler  
University of Illinois at Chicago, Chicago, IL, United States

Jennifer J. Kang Mieler  
Illinois Institute of Technology, Chicago, IL, United States


16: SY10-1  
**Overview of Methods of Drug Delivery**  
**Speaker:** William Mieler  
1. University of Illinois at Chicago, Chicago, IL, United States.

16b: SY10-2  
**Topical NSAIDs in the Treatment of Posterior Segment Diseases**  
**Speaker:** Taiji Sakamoto  
1. Department of Ophthalmology, Kagoshima University Graduate School of Medicine and Dental Sciences, Kagoshima, Kagoshima, Japan.

16c: SY10-3  
**Present and Future Devices for Intraocular Sustained Drug Delivery**  
**Speaker:** Tsutomu Yasukawa  
1. Department of Ophthalmology and Visual Science, Nagoya City University Graduate School of Medical Sciences, Nagoya, Aichi, Japan.

18: SY10-4  
**A 3-D Intravitreal Injection Device**  
**Speaker:** Marten Brelen  
1. Department of Ophthalmology and Visual Sciences, Chinese University of Hong Kong, Kowloon, Hong Kong.

17: SY10-5  
**Sustained Delivery of anti-VEGF agents via microsphere-thermo-responsive hydrogels**  
**Speaker:** Jennifer J. Kang Mieler  
1. Department of Biomedical Engineering Pritzker Institute of Biomedical Science and Engineering, Illinois Institute of Technology, Chicago, IL, United States.

17b: SY10-6  
**Polymeric Device for Transscleral Drug Delivery to the Posterior Segment**  
**Speaker:** Nobuhiro Nagai  
1. Tohoku University, Sendai, Japan.

17c: SY10-7  
**Neuromodulation Therapy with Microcurrent Stimulation of the Retina**  
**Speaker:** Madhavan Jagadeesan  
1. Hospital for Sick Children, Toronto, QC, Canada.

10:40 AM - 12:10 PM  503 (5F)/Room 4

**Symposium 11**

**The Contribution of the Retinal Circadian System to the Aging of the Retina**

**Organizer**

Gianluca Tosini  
Morehouse School of Medicine, Atlanta, GA, United States

48: SY11-1  
**The retinal circadian clock and melatonin protect photoreceptors from aging**  
**Speaker:** Gianluca Tosini  
1. Neuroscience Institute and Department of Pharmacology, Morehouse School of Medicine, Atlanta, GA, United States.

49: SY11-2  
**Dopamine, Retinal Circadian Clocks, and Visual Function**  
**Speaker:** P. Michael Iuvone  
1. Department of Ophthalmology, Emory University School of Medicine, Atlanta, GA, United States.  
2. Pharmacology, Emory University School of Medicine, Atlanta, GA, United States.

50: SY11-3  
**Light-dark condition regulates Sirtuins in the retina**  
**Speaker:** Yoko Ozawa  
1. Department of Ophthalmology, Keio University School of Medicine, Shinjuku, Tokyo, Japan.

51: SY11-4  
**The circadian clock and melanopsin: a blue light-sensitive photopigment in mammalian retinal ganglion cells**  
**Speaker:** Megumi Hatori  
1. Salk Institute for Biological Studies/Department of Ophthalmology, Keio University School of Medicine, Shinjuku, Tokyo, Japan.
Luncheon Seminar 4
Focus on Risk Factors of Dry Eye Disease: What Factors Lead to Dry Eye?

Sponsored by Santen Pharmaceutical Co., Ltd.

Organizers
Kazuo Tsubota
Keio University School of Medicine, Shinjuku, Tokyo, Japan
Kohji Nishida
Osaka University Graduate School of Medicine, Suita, Osaka, Japan

72: LS4-1
Dry eye after cataract surgery
Speaker: Yuan Jin
1. Zhongshan Ophthalmic Center, Sun Yat-Sen University, Guangzhou, China.

72b: LS4-2
Medication-related dry eye
Speaker: Taiichiro Chikama
1. Hiroshima University, Hiroshima, Japan.

73: LS4-3
Contact lens-related dry eye
Speaker: Shizuka Koh
1. Department of Ophthalmology, Osaka University Graduate School of Medicine, Suita, Osaka, Japan.

74: LS4-4
Dry eye with MGD
Speaker: Jong Suk Song
1. Korea University, Seoul, Korea (the Republic of).
**Afternoon Seminar 3**  
**The Consensus of the Asia Dry Eye Society on the Concept of Dry Eye**

**Sponsored by Santen Pharmaceutical Co., Ltd.**

**Organizers**  
Kazuo Tsubota  
Keio University School of Medicine, Shinjuku, Tokyo, Japan  
Zuguo Liu  
Xiamen Eye Cernter of Xiamen University, Xiamen, Fujian, China  
Hyo-Myung Kim  
Korea University, Seoul, Korea (the Republic of)

1. **184: AS3-1**  
Diagnostic Methodology of Dry eye syndrome  
**Speaker:** Hung-Won Tchah

**Study Group:** none

2. **185: AS3-2**  
Pathophysiology and classification of the dry eye  
**Speaker:** Xuguang Sun

1. Ocular Microbiology, Tongren Eye Center, Beijing, China.

3. **186: AS3-3**  
Short Breakup Time (BUT)-Type Dry Eye  
**Speaker:** Norihiko Yokoi

1. Department of Ophthalmology, Kyoto Prefectural University of Medicine, Kamigyo, Kyoto, Japan.
Retinal Cell Biology 1

Modestors
Akihiro Ohira
Shimane University School of Medicine, Izumo, Shimane, Japan
Yoko Ozawa
Keio University School of Medicine, Shinjuku, Tokyo, Japan

19-1 Withdrawn
Activation of TLR3 promotes the degeneration of retinal ganglion cells by up-regulating the expression of JNK3
Shravan Chintala 1 Nahrain Putris 1 Mason Geno 1
1. Eye Research Institute, Oakland University, Rochester, MI, United States.

20-2 Heterotrimeric Kinesin-2 Mediates Transition Zone and Axoneme Formation of Mouse Photoreceptors
Li Jiang 1 Yuxiao Wei 1 Cecinio C. Ronquillo 1 Sen Wu 2 Robert E. Marc 1 Jeanne M. Frederick 1 Wolfgang Baehr 1,3
1. Department of Ophthalmology and Visual Sciences, University of Utah Health Science Center, Salt Lake City, UT, United States. 2. State Key Laboratory of Agrobiotechnology, College of Biological Sciences, China Agricultural University, Beijing, China. 3. Department of Biology, University of Utah Health Science Center, Salt Lake City, UT, United States.

21-3 Molecular Basis for Retinitis Pigmentosa Associated with the Defect of SNRNP200-Pre-mRNA Splicing
Yuan Liu 1 Xue Chen 1
1. Department of Ophthalmology, The First Affiliated Hospital of Nanjing Medical, NanJing, China.

22-4 Amelioration of age-related eye diseases in a spontaneous obese rat model by dietary intervention
Yadagiri Reddy Paduru 1 Shivalingam Pothula 1 Harishankar N 2 Uday Kumar Chekkilla 1 S. Sreenivasa Reddy 1 Shruthi Karanam 1 G Bhanuprakash Reddy 1
1. Biochemistry, National Institute of Nutrition, Hyderabad, Telangana, India. 2. National Centre for Laboratory Animal Sciences, Hyderabad, India.

23-5 Reprogramming human newborn RPE cells toward retinal progenitor cells by SOX2
Razie Ezati 1 Zahra-soheila Soheili 1 Shahram Samei 2 Azadeh Etemadzadeh 1 Ehsan Ranaei pimardan 4,1 Hamid Ahmadieh 3 Alireza Zomorodipour 1
Retinal Cell Biology 2

Moderators
Peizeng Yang
The First Affiliated Hospital Chongqing Medical University/Chongqing Eye Institute, Chongqing, China
Nahoko Ogata
Nara Medical University, Kashihara, Nara, Japan

25-1
Pericyte-deficient retinopathy models, Novel animal models for progressive diabetic retinopathy
Junyep Lee 1 Akiyoshi Uemura 3 Gou Young Koh 2 Young Hee Yoon 1
1. Department of Ophthalmology, Asan Medical Center, University of Ulsan, College of Medicine, Seoul, Korea (the Republic of). 2. Graduate School of Medical Science and Engineering, Korea Advanced Institute of Science and Technology, Daejeon, Korea (the Republic of). 3. Department of Retinal Vascular Biology, Nagoya City University, Graduate School of Medical Sciences, Nagoya, Japan.

26-2
Ursodeoxycholic acid attenuates endoplasmic reticulum stress-related pericyte loss in diabetic retinopathy of streptozotocin-treated mice
Yoo-Ri Chung 1 Jeong A Choi 2 Min Ji Kang 3 Jae-Young Koh 2, 4 Young Hee Yoon 1

27-3
Enriched CD146+ adipose stromal cells display increased migration and adhesion, Ameliorate retinal ischemia-reperfusion injury
Yogesh Jonna 3 Ahmed Ramadan 1, 1 Josy Augustine 3 Gangaraju Rajashekar 2, 1
1. Ophthalmology, Eugene and Marilyn Glick Eye Institute, Indianapolis, IN, United States. 2. Ophthalmology, Cellular and Integrative Physiology, Indiana University School of Medicine, Indianapolis, IN, United States. 3. Ophthalmology, Indiana University School of Medicine, Indianapolis, IN, United States.

28-4
Altered ER-stress and ubiquitin-proteasome system leads to photoreceptor death in obese rat model
G Bhanuprakash Reddy 1 S. Sreenivasa Reddy 1 Karanam Shruthi 1 Yadagiri Reddy Paduru 1 Radha Ayyagari 2

29-5
Transplantation of rod progenitors after ex vivo gene correction improves vision in a model of autologous cell replacement for retinitis pigmentosa
Alona O. Cramer Barnea 1 Mandeep S. Singh 1 M. Dominik Fischer 1 Samantha De Silva 1 Michelle E. McClements 1 Alun R. Barnard 1 Robert E. MacLaren 1
Study Group: Nuffield Laboratory of Ophthalmology

30-6
Investigating the role of bone marrow derived CD34+ve cells in NMDA injured mouse retina upon transplantation
Akshay Anand 1 Neeru Jindal 1
1. Neuroscience Research Lab, Department of Neurology, Postgraduate Institute of Medical Education and Research, Chandigarh, India.
52-1  
Enhanced proliferation of retinal pigment epithelial cells by low-level laser irradiation  
Yalong Dang 1,2  Chun Zhang 2  
1. Department of Ophthalmology, the First Affiliated Hospital of Zhengzhou University, Zhengzhou, China. 2. Department of Ophthalmology, Peking University Third Hospital, Beijing, China.

53-2  
PEDF Improves Mitochondrial Function in RPE cells During Oxidative Stress  
Yuan He 1  
1. Ophthalmology, The Second Affiliated Hospital of Xi’an College of Medicine, Xi’an, China, Xi’an, Shaanxi, China.

54-3  
Cell Death in Age-Related Macular Degeneration, an Immunopathological and Ultrastructural Model  
Chi-Chao Chan 1 Nicholas A. Popp 1 Christopher Ardeljan 2 Shida Chen 1,3  Mones Abu-Asab 2  
1. Laboratory of Immunology, Immunopathology Section, National Eye Institute, National Institutes of Health, Bethesda, MD, United States. 2. Histology Core, National Eye Institute, National Institutes of Health, Bethesda, MD, United States. 3. Zhongshan Ophthalmic Center, Guangzhou, Guangdong, China.

55-4  
MicroRNA-150 regulates pathologic ocular neovascularization by modulating endothelial cell function  
Chi-Hsiu Liu 1 Ye Sun 1 Jie Li 1 Lucy P. Evans 1 Katherine T. Tian 1 Jing Chen 1  
1. Department of Ophthalmology, Boston Children’s Hospital/Harvard Medical School, Boston, MA, United States.

56-5  
Conditional knockout of Wnt co-receptors, Lrp5 and Lrp6, manifests persistent hyaloid vasculatures  
Yoshinobu Odaka 1 Gowri Nayak-Sarangdhar 1 Maya Dassanayake 2 Shruti Vemaruju 1 Richard A. Lang 1  
1. Ophthalmology, Vision Systems Group, Cincinnati Children’s Hospital Medical Center, Cincinnati, OH, United States. 2. Wayne State University School of Medicine, Detroit, MI, United States.
Retina 1

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Yoshinori Mitamura  
Institute of Health Biosciences, The University of Tokushima
Graduate School, Tokushima, Tokushima, Japan

98-1
Unilateral Peripapillary Intrachoroidal Cavitation and Optic Disc Rotation
Yi Dai  
Jost B. Jonas  
Xinghuai Sun  
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99-2
Retinal Vessels Analysis, In Vivo Visualization of Systemic Microvasculature in Pre eclampsia and Hypertension in Pregnancy
Mohammadreza Peyman  
Azam Bakhtiar  
Mimiwati Zahari  
Siti Zawiah Omar  
1. Ophthalmology, University of Malaya, Kuala Lumpur, Malaysia. 2. University Malaya, Kuala Lumpur, Malaysia.

100-3
Slit-lamp adapter for smartphone
Sumihiro Kawano  
Hiroki Kawano  
Hiroto Terasaki  
Toyoko Yanagita  
Taiji Sakamoto  
1. Ophthalmology, Kagoshima Univ Faculty of Med, Kagoshima, Kagoshima, Japan. 2. Ophthalmology, Tarumizu Chuo Hospital , Tarumizu, Kagoshima, Japan.

101-4
Intraoperative OCT (ioCT) utilizing a microscope integrated system with heads-up surgeon display, The DISCOVER Study
Sunil Srivastava  
Peter Kaiser  
Rishi Singh  
Justis Ehlers  
1. Cole Eye Institute, Cleveland Clinic, Cleveland, OH, United States.

102-5
Quantitative Analysis of Diabetic Choroidopathy using En Face Swept Source Optical Coherence Tomography
Tarek Alasil  
Daniela Ferrara  
Caroline R. Bauman  
James G. Fujimoto  
Jay S. Duker  
Nadia K. Waheed  

103-6
First Result of the Hamburg Eye Vessel Study, Novel technique for SD-OCT based analysis of arteries and veins
Robert Kromer  
Shafin Rahman  
Maren Klemm  
1. University Eye Clinic Hamburg-Eppendorf, Hamburg, Germany. 2. University of Manitoba, Manitoba, MB, Canada.
**Lens - Paper**

**Moderators**
Wei Han  
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Daijiro Kurosaka  
Iwate Medical University School of Medicine, Morioka, Iwate, Japan

**58-1**
A new histological evaluation to detect residual OVDs in cataract surgery  
Hidetsugu Mori 1  
Haruhiko Yamada 1  
Kanji Takahashi 1  
1. Ophthalmology, Kansai Medical University, Hirakata Hospital, Hirakata, Japan.

**59-2**
Intraoperative floppy-iris syndrome associated with antipsychotic  
Masato Matsuo 1  
Ichiya Sano 1  
Yoshifumi Ikeda 1  
Etsuko Fujihara 1  
Masaki Tanito 1  
1. Matsue Red Cross Hospital, Matsue, Japan.

**60-3**
Spectral-Domain Optical Coherence Tomography Analysis of Corneal Epithelial Thickness Changes after Cataract Surgery  
Tianyu Zheng 1  
Yi Lu 1  
Wenwen He 1  
1. Ophthalmology, Shanghai EENT Hospital, Shanghai, China.

**61-4**
A lens model for the in vivo expression and self assembly of human proteins  
John I. Clark 1  
1. Biological Structure, Univ of Washington, Seattle, WA, United States.

**62-5**
Normal Expression of AQP0 Protein is Required for Maintaining the Integrity of Interlocking Domains and Transparency of the Lens  
Woo-Kuen Lo 1  
Sondip K. Biswas 1  
Lawrence Brako 1  
Mary Gadalla 1  
1. Neurobiology, Morehouse School of Medicine, Atlanta, GA, United States.

**63-6**
Non-essential role for cilia in coordinating precise alignment of lens fibre  
Yuki Sugiyama 1  
Elizabeth Shelley 1  
Li Wen 1  
Frank J. Lovicu 1  
John McAvoy 1  
1. Save Sight Institute, University of Sydney, Sydney, NSW, Australia.

**Cornea 1**

**Moderators**
Friedrich E. Kruse  
University of Erlangen-Nuremberg, Erlangen, Germany  
Noriko Koizumi  
Faculty of Life and Medical Sciences, Doshisha University, Kyoto, Kyoto, Japan

**104-1**
Changes in corneal haze five years after endothelial keratoplasty for Fuchs endothelial dystrophy  
Sanjay V. Patel 1  
Keith H. Baratz 1  
Jay W. McLaren 1  

**105-2**
Factors Associated with the Endothelial Cell Loss after Descemet's Stripping Automated Endothelial Keratoplasty  
Takefumi Yamaguchi 1,2  
Nobuhiyo Ishii 1  
Seika Shimazaki-Den 1  
Yoshiyuki Satake 1  
Jun Shimazaki 1,2  
1. Department of Ophthalmology, Ichikawa General Hospital, Tokyo Dental College, Chiba, Japan.  
2. Department of Ophthalmology, Keio University School of Medicine, Tokyo, Japan.

**106-3**
Investigation of the efficacy of Descemet’s membrane removal during cultivated corneal endothelial cell injection in a rabbit model  
Shinichiro Nakano 1  
Naoki Okumura 1,2  
Junji Kitano 1  
Shigeru Kinoshita 1  
Noriko Koizumi 1  
1. Department of Biomedical Engineering, Doshisha University, Kyoto, Japan.  
2. Department of Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Kyoto, Japan.

**107-4**
Intraoperative Optical Coherence Tomography for Anterior Segment Surgeries  
Hirotu Mitamura 1,2  
Takefumi Yamaguchi 1,2  
Daisuke Tomida 1  
Nobuhiyo Ishii 1  
Seika Den Shimazaki 1  
Yoshiyuki Satake 1  
Jun Shimazaki 1,2  
1. Department of Ophthalmology, Ichikawa General Hospital, Tokyo Dental College, Ichikawa, Chiba, Japan.  
2. Department of Ophthalmology, Keio University School of Medicine, Shinjuku, Tokyo, Japan.

**108-5**
Hyaluronan protects corneal endothelial cells against the noxious effect of extracellular histones after phacoemulsification  
Hirotu Kawano 1  
Tajii Sakamoto 1  
1. Department of Ophthalmology, Kagoshima University Graduate School of Medical and Dental Sciences, Kagoshima, Kagoshima, Japan.
Mutation in Collagen, type XVII, alpha 1 (COL17A) causes Epithelial Recurrent Erosion Dystrophy (ERED) in northern Sweden

Frida Jonsson 1 Berit Byström 2 Ludvig Backman 3 Therese Kellgren 4 Patrik Ryden 4 Patrik Danielson 1 Ola Sandgren 2 Irina Golovleva 1

1. Medical Biosciences, Umeå University, Umeå, Sweden. 2. Clinical Sciences, Umeå University, Umeå, Sweden. 3. Integrative Medical Biology, Umeå University, Umeå, Sweden. 4. Mathematics and Mathematical Statistics, Umeå University, Umeå, Sweden.
111 - P02-2
Diabetic Retinal and Choroidal Edema in SDT Rats
Fumihiro Toyoda 1 Akihiro Kakehashi 1 Hiroko Takano 1 Nozomi Kinoshita 1 Machiko Shimamura 1 Ayumi Ota 1 Yoshiaki Tanaka 1 Shiho Uehara 1
1. Department of Ophthalmology, Jichi Medical University, Saitama Medical Center, Saitama, Japan.

112 - P03-3
Age related changes in the Korean pediatric human orbit on CT
Hee-Bae Ahn 1 Woo seok Choi 1 Hyun wook Shin 1 Woo Jin Jeong 1 Yoon Hyung Kwon 1 Won Yeol Ryu 1
1. Department of Ophthalmology, College of Medicine, Dong-A University, Busan, Korea (the Republic of).

113 - P04-4
Correlation Between Serum Level of Vascular Endothelial Growth Factor And Subfoveal Choroidal Thickness In Patients With POEMS Syndrome
Hirotaka Yokouchi 1 Takayuki Baba 1 Masayasu Kitahashi 1 Toshiyuki Oshitari 1 Shuichi Yamamoto 1
1. Ophthalmology, Chiba University, Chiba, Japan.

114 - P05-5
Ocular Morphology and Retinal Optics Technology for the Mechanism of Accommodation Improvement in Myope with Orthokeratology
Fan Lu 1 Meixiao Shen 1 Yilei Shao 1 Yimin Yuan 1 Weigen Zhu 1
1. Wenzhou Medical University, Wenzhou, China.

115 - P06-6
Evaluation of 12 myopia-associated genes in Chinese patients with high myopia
Qingjiong Zhang 1 Jiali Li 1 Dan Jiang 1 Xueshan Xiao 1 Shiqiang Li 1 Xiaoyun Jia 1 Wenmin Sun 1 Xiangming Guo 1
1. State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China.

116 - P07-7
Investigation of the association between LAMA2 and EGR-1 polymorphisms and high myopia in Chinese
Wei Han 1 Hui Fang 1 Fang-yu Lin 1
1. Department of Ophthalmology, The First Affiliated Hospital, Zhejiang University, Hangzhou, Zhejiang, China.

117 - P08-8
Form deprivation myopia in wistar rats
Kosei Shinhara 1 Takeshi Yoshida 1 Tomoka Ishida 1 Liu Hongding 1 Ikuo Morita 1 Kyoko Ohno-Matsui 1
1. ophthalmology, Tokyo Medical and Dental University, Bunkyo-ku, Japan. 2. Section of Cellular Physiological Chemistry, Tokyo Medical and Dental University, Bunkyo-ku, Japan.

118 - P09-9
A case of myopia progression restrained by a corneal foreign body during childhood
Keisuke Kanda 1 Naoyuki Maeda 1 Takashi Fujikado 1 Kohji Nishida 1
1. Osaka University Graduate School of Medicine, Osaka, Japan.

119 - P10-10
Macular Thickness Profiles of Intra-retinal Layers in Myopia Evaluated by Ultra-High Resolution Optical Coherence Tomography
Xinting Liu 1 Yimin Yuan 1 Shenghai Huang 1 Dexi Zhu 1 Qingkai Ma 1 XinjieYe 1 Fan Lu 1 Meixiao Shen 1
1. Wenzhou Medical University, Wenzhou, China.

120 - P11-11
Improvement of accommodation dynamics in myopic overnight orthokeratology
Meixiao Shen 1 Yilei Shao 1 Yimin Yuan 1 Weigen Zhu 1 Fan Lu 1
1. Wenzhou Medical University, Wenzhou, China.

121 - P12-12
Use of atropine for prevention of childhood myopia progression in clinical practice, efficacy and safety during treatment and when tapering off medication
Kendrick Shih 1 Dorothy S. Fan 2 1
1. Department of Ophthalmology, Li Ka Shing Faculty of Medicine, The University of Hong Kong, Hong Kong, Hong Kong. 2. Department of Ophthalmology, Hong Kong Sanatorium and Hospital, Hong Kong, Hong Kong.

122 - P13-13
Detection of mutations in LRPAP1, CTS1, ZNF644, and SC02 in 298 families with early-onset high myopia by exome sequencing
Xueshan Xiao 1 Dan Jiang 1 Shiqiang Li 1 Xiaojun Jia 1 Jiali Li 1 Wenmin Sun 1 Xiangming Guo 1 Qingjiong Zhang 1
1. State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China.

123 - P14-14
Bcl-2 associated athanogene 3 protects against hyperthermic stress by modulating nuclear factor-kappa B and extracellular signal-regulated kinase activities in human retinoblastoma Y79 cells
Tatsuya Yunoki 1 Yoshiaki Tabuchi 1 Atsushi Hayashi 1 Takashi Kondo 1
1. University of Toyama, Toyama, Japan.
A case of ciliary body leiomyoma with prominent accumulation of fluorodeoxyglucose (FDG) in FDG-PET/CT

Kan Ishijima 1 Satoru Kase 1 Hiroshi Yoshikawa 2 Shigenobu Suzuki 2 Yasuhiro Shinmei 1 Kenichi Namba 1 Mayo Nozaki 1 Mika Noda 1 Susumu Ishida 1

1. Department of Ophthalmology Hokkaido University School of Medicine, Sapporo, Japan. 2. Department of Ophthalmology, Faculty of Medicine, Kyushu University, Fukuoka, Japan. 3. Department of Ophthalmic Oncology, National Cancer Center Hospital, Tokyo, Japan.

Protective effect of Etanercept, an inhibitor of tumor necrosis factor-α (TNF-α), in a rat model of retinal ischemia

Hyoun Won Bae 1 Yun Ha Lee 1 Sang Jin Seo 1 Sang Yeop Lee 1 Yoo Kyung Song 1 Samin Hong 1 Gong Je Seong 1 Chan Yun Kim 1

1. Ophthalmology, Yonsei University College of Medicine, Seoul, Korea (the Republic of).

Induction of Heat Shock Protein 70 (HSP70) by Geranylgeranylacetone is Critical for Retinal Ganglion Cell Protection

Yasuhiro Shinmei 1 Zhenyu Dong 2 Kousuke Noda 1 Nobuyoshi Kitaichi 2 Atsuo Kanda 1 Takeshi Ohguchi 1 Takayuki Harada 3 Shinki Chin 1 Susumu Ishida 1

1. Department of Ophthalmology, Hokkaido University Graduate School of Medicine, Sapporo, Japan. 2. Department of Ophthalmology, Health Sciences University of Hokkaido, Sapporo, Japan. 3. Department of Molecular Neurobiology, Tokyo Metropolitan Institute for Neuroscience, Fuchu, Japan.

An in vitro analysis of the induction mechanism of the autophagy by a component chemical of citrus peel and its application to whole animal system

Masafumi Ohtsubo 1 Yasushi Ohizumi 2,3 Yoshihiro Hotta 4 Shinsei Minoshima 1

1. Department of Photomedical Genomics, Medical Photonics Research Center, Hamamatsu University School of Medicine, Hamamatsu, Japan. 2. Department of Medical Biochemistry, School of Pharmaceutical Sciences, University of Shizuoka, Shizuoka, Japan. 3. Kansei Research Institute, Tohoku Fukushi University, Sendai, Japan. 4. Department of Ophthalmology, Hamamatsu University School of Medicine, Hamamatsu, Japan.

Correlation of corneal, scleral and optic nerve elasticity, and intraocular pressure on optic nerve damages

Match W. Ko 1

1. Department of Mechanical Engineering, Nazarbayev University, Astana, Kazakhstan.

Corneal biomechanical parameters in subjects with glaucoma

Yoshiaki Kiuchi 1 Ulfah Rimayanti 3 Yoshitaka Nakao 1 Makoto Kanako 2

130 - P21-6
Genetic associations of primary open angle glaucoma – a systematic review and meta-analysis
Shi Song Rong 1 Li Ma 1 Shumin Tang 1 Chi Pui C. Pang 1,2 Li Jia Chen 1,3
1. The Department of Ophthalmology & Visual Sciences, The Chinese University of Hong Kong, Hong Kong, -, Hong Kong. 2. The Joint Shantou International Eye Center, Shantou University and the Chinese University of Hong Kong, Shantou, China. 3. Department of Ophthalmology, Prince of Wales Hospital, Hong Kong, China.

131 - P22-7
Clinical characteristics and autonomic function in juvenile ocular hypertension
Xin Wang 1 Xinghuai Sun 1 Liangcheng Wu 2 Gang Yang 2 Shaolin Wang 2
1. Ophthalmology, Eye & ENT hospital of Fudan University, Shanghai, China. 2. Ophthalmology, Jining Central Hospital of Shanghai, Shanghai, China.

132 - P23-8
Comparison of intraocular pressure measurements between goldmann applanation tonometry, icare tonometry and non-contact tonometry in a normal population
Fathimath N. Ahmed 1 Mimiwati Zahari 1 Norlina Ramli 1
1. Ophthalmology, University of Malaya, Kuala lumpur, Selangor, Malaysia. 2. Ophthalmology, University of Malaya, Kuala lumpur, Selangor, Malaysia.

133 - P24-9
Fluctuations of intraocular pressure during the day in angle closure glaucoma patients
Ya-Chuan Hsiao 1,3 Tsung-Lin Yang 2
1. Ophthalmology, Taipei City Hospital, Taipei, Taiwan. 2. Head and Neck surgery, National Taiwan University Hospital, Taipei, Taiwan. 3. College of Medicine, National Yang-Ming university, Taipei, Taiwan.

134 - P25-10
In vivo confocal microscopy in glaucoma patients after laser peripheral iridotomy
Sabina Sapeta 1 Ewa Mrukwa-Kominek 1
1. Department of Ophthalmology, University Centre of Ophthalmology and Oncology Medical University of Silesia, Katowice, Poland.

135 - P26-11
Relationship between Bruch’s membrane opening-minimum rim width and circumpapillary retinal nerve fiber layer thickness and cutoff point of structural marker
Natsuyo Yoshida-Hata 1 Yumi Matsushita 2 Naomichi Katai 1 Shigeko Yashiro 1 Aya O’hira 1 Yumi Sekine 1
1. Ophthalmology, National Center for Global Health and Medicine, Shinjuku, Japan. 2. Clinical research, National Center for Global Health and Medicine, Shinjuku, Japan.
141 - P32-1
Multifunctional PEG Retinylamine Conjugate Provides Prolonged Protection against Retinal Degeneration in Mice
Guoping Yu 1 Xueming Wu 1 Akiko Maeda 2,3 Song-Qi Gao 2 Marcin Golczak 1 Krzysztof Palczewski 1 Zheng-Rong Lu 1
1. Department of Biomedical Engineering, Case Western Reserve University, Cleveland, OH, United States. 2. Department of Pharmacology, Case Western Reserve University, Cleveland, OH, United States. 3. Department of Ophthalmology, Case Western Reserve University, Cleveland, OH, United States.

142 - P33-2
Protective role of ZnS nanoparticles on ER stress mediated macular degeneration in Mouse Retinal Pigment Epithelial Cells
Karthikeyan Bose 1 Harini Lakshminarasimhan 1 Kathiresan Thandavarayan 1
1. Biotechnology, Kalasalingam University, Madurai, India.

143 - P34-3
Initial Experience and Early Outcome of Using Intravitreal Afiblercept in Non-AMD Cases in Hong Kong
Lap Ki Alex Ng 1 Wai Man Chan 2
1. Ophthalmology, The University of Hong Kong, Hong Kong, Hong Kong. 2. Ophthalmology, Hong Kong Sanatorium and Hospital, Hong Kong, Hong Kong.

144 - P35-4
Albumin-binding of diclofenac in aqueous humor of cataract patients and development of an administration method utilizing inhibition of protein-binding
Saya Ishii 1,2 Mineo Ozaki 3,1 Takashi Osaki 3 Norito Takamura 4 Kenji Ogata 1 Jin Tokunaga 1 Nao Setoguchi 1 Kazuhiro Arimori 1
1. Ozaki Eye Hospital, Hyuga, Japan. 2. Ophthalmology, Faculty of Medicine, University of Miyazaki, Miyazaki, Miyazaki, Japan. 3. Tsudanuma Eye Hospital, Narashino, Chiba, Japan. 4. Second Department of Clinical Pharmacy, School of Pharmaceutical Sciences, Kyushu University of Health and Welfare, Nobeoka, Japan. 5. Department of Pharmacy, University of Miyazaki Hospital, Miyazaki, Japan.

145 - P36-5
Relationship of Ocular Micrcirculation, measured by Laser Speckle Flowgraphy, and Silent Brain Infarction in Primary Aldosteronism
Naoko Aizawa 1 Hiroshi Kunikata 1 Masataka Kudo 1 Shinji Mugikura 1 Fumihiko Nitta 1 Hitoshi Takahashi 1 Toru Nakazawa 1
1. Tohoku University, Sendai, Japan.

146 - P37-6
Role of the carrier frequency in Doppler OCT
Tatiana Avsievich 1 Anton Potlov 1 Sergey Proskurin 1
1. Biomedical Engineering, Tambov State Technical University, Tambov, Russian Federation.

147 - P38-7
Effects of alpha-1-antitrypsin administration in a murine model of diabetic retinopathy
Gustavo Ortiz 1 Juan P. Salica 1 Lopez Emiliano 1 Jorge Mancini 1 Juan Gallo 1
1. Facultad de Ciencias Biomédicas, Universidad Austral, Pilar, Argentina.

148 - P39-8
Oxidative Stress in Patients with Diabetic Retinopathy using A Specific Biomarker, 8-Hydroxydeoxyguanosine (8OH-dG)
Ching-Ju Hsieh 1 Chug-Jun Lai 2,1 Wei-Chung Lu 2,1 Lin-Chung Woung 2,1
1. Ophthalmology, Taipei City Hospital, Taipei, Taiwan. 2. Nurse, Taipei City Hospital, Taipei, Taiwan. 3. Administration, Taipei City Hospital, Taipei, Taiwan.

149 - P40-9
Cyclosporin A modified intraocular lens prevent posterior capsular opacification in rabbit eyes
Teng He 1 Tian Fang 1 Zhang Hong 1
1. Tianjin Medical University Eye Center, Tianjin, China.

150 - P41-10
Controlled Release of Antiglaucoma Drugs from Injectable Hydrogel Depots
Jui-Yang Lai 1
1. Chang Gung University, Taoyuan, Taiwan.

151 - P42-11
Fabrication and evaluation of voriconazole solid lipid nanoparticles for effective ocular delivery
Rakesh Kumar 1 Vivek R. Sinha 1
1. University Institute of Pharmaceutical Sciences, Panjab University, Chandigarh, India.

152 - P43-12
Evaluation of Safety and Tolerability of Conjuктивal Ring
Satoshi Kinoshita 1,2 Kousuke Noda 1,2 Ityou Atsumi 3 Haruka Obata 4 Toru Matsunaga 4 Takeshi Ohguchi 1,2 Atsushi Kanda 1,3 Susumu Ishida 1,2
1. Laboratory of Ocular Cell Biology and Visual Science, Hokkaido University Graduate School of Medicine, Sapporo, Japan. 2. Department of Ophthalmology, Hokkaido University Graduate School of Medicine, Sapporo, Japan. 3. Research Laboratories, Senju Pharmaceutical Co., Ltd., Kobe, Japan. 4. Research Laboratories, SEED Co., Ltd., Konosu, Japan.

153 - P44-13
Ocular Tissue Distribution of Unoprostone and Retinal Toxicity after Transscleral Administration using a Sustained Drug Delivery Device
Nobuhiro Nagai 1 Hirokazu Kaji 1 Matsuhiko Nishizawa 2 Takahito Imagawa 3 Akiko Morikawa 7 Toru Nakazawa 1 Yukihiko Mashima 3 Toshiaki Abe 1
1. Tohoku University Graduate School of Medicine, Sendai, Japan. 2. Graduate School of Engineering, Tohoku University, Sendai, Japan. 3. R-tech Ueno Ltd., Tokyo, Japan.
154 - P45-14  
Specific Delivery of Systemically Injected Compounds to the Retina Using Artificially Expressed Retinal Receptors  
Junsung Lee 1  Ji-Ho Park 1  
1. Korea Advanced Institute of Science and Technology, Daejeon, Korea (the Republic of).  

155 - P46-15  
Tyrosine-mutated AAV2 mediated BDNF rescued inner retina in rat retinal ischemic injury mode  
Tsutomu Igarashi 1  Koichi Miyake 2  Maika Kobayashi 1,2  Noriko Miyake 2  Osamu Iijima 2  Kenji Nakamoto 1  Yukihiko Hirai 2  Takashi Shimada 2  Takashi Okada 1  Hiroshi Takahashi 1  
1. Ophthalmology, Nippon Medical School, Tokyo, Japan. 2. Department of Biochemistry and Molecular Biology, Division of Gene Therapy, Research Center for Advanced Medical Technology, Nippon Medical School, Tokyo, Japan.  

156 - P47-16  
Lineage negative stem cell transplantation in a mouse model of transient retinal ischemia-reperfusion injury  
Gillipsie Minhas 1  Akshay Anand 1  
1. Neuroscience Research Lab, Department of Neurology, Postgraduate Institute of Medical Education and Research, Chandigarh, India.  

157 - P48-17  
Protective Effect of Genistein on Glucose Induced Toxicity in Cultured Human RPE cells  
Shirish Dongare 1  Rajani Mathur 1  S Senthilkumari 1  R Sharmila 3  S K Gupta 1  Sushma Srivastava 1  Dr. Rohit Saxena 2  
1. Ocular Pharmacology, Delhi Institute of Pharmaceutical Sciences and Research, New Delhi, Delhi, India. 2. Dr. Rajendra Prasad Centre for Ophthalmic Sciences, All India Institute of Medical Sciences, New Delhi, Delhi, India. 3. Arvind Medical Research Foundation (AMRF) Arvind Eye Hospital, Dr.G.Venkataswamy Eye Research Institute, Madurai, India.  

158 - P49-18  
Green tea extract reduces inflammation and restores retinal pigment epithelial cell dysfunction in a sodium iodate rat model  
Tsz Kin Ng 1  Jian Xiong Wang 1  Yaping Yang 1  Kai On Chu 1  Sun On Chan 2  Chi Pui C. Pang 1  
1. Department of Ophthalmology and Visual Sciences, The Chinese University of Hong Kong, Hong Kong, Hong Kong. 2. School of Biomedical Sciences, The Chinese University of Hong Kong, Hong Kong, Hong Kong.  

3:45 PM - 4:45 PM 301-304 (3F) / Exhibition Hall  
Visual Neuroscience - Poster  

159 - P66-1  
Multifocal electoretinogram in Diabetic Retinopathy  
Satyen Deka 1  
1. Vitreoretina, Sri Sankaradeva Nethralaya, Guwahati, Assam, India.  

160 - P67-2  
Systematic and local responses of modified volvox Channelrhodopsin-1 gene therapy  
Eriko Sugano 1  Kitako Tabata 1  Maki Takahashi 1  Namie Murayama 1  Hiroya Shimizu 1  Masatoshi Sato 1  Fumiaki Nishiyama 1  Makoto Tamai 1  Hiroshi Tomita 1,2  
1. Dep. of Chemistry and Bioengineering, Iwate Univ, Morioka, Iwate, Japan. 2. Hospital, Tohoku Univ, Sendai, Miyagi, Japan.  

161 - P68-3  
Visual properties of photoreceptor degenerated rat with dual channelrhodopsin genes  
Hiroshi Tomita 1,2  Eriko Sugano 1  Kitako Tabata 1  Masatoshi Sato 1  Maki Takahashi 1  Kei Sannohe 1  Namie Murayama 1  Fumiaki Nishiyama 1  Takehiko Saito 1  Makoto Tamai 1  Hiroshi Tomita 1,2  
1. Dep. of Chemistry and Bioengineering, Visual Neuroscience, Iwate Univ, Morioka, Iwate, Japan. 2. Hospital, Tohoku Univ, Sendai, Miyagi, Japan.  

162 - P69-4  
Isolated cilioretinal artery occlusion treated with prostaglandin E1  
Ichiya Sano 1,2  Masaki Tanito 1,2  Yoshifumi Ikeda 1  Yasuyuki Takai 2  Kazunobu Sugihara 2  Akihiro Ohira 2  
1. Division of Ophthalmology, Matsue Red Cross Hospital, Matsue, Shimane, Japan. 2. Department of Ophthalmology, Shimane University Faculty of Medicine, Izumo, Shimane, Japan.  

163 - P70-5  
Case of binasal hemianopia determined to be psychogenic by multifocal visual evoked potentials  
Mariko Yamashita 1  Eiichi Yukawa 1  Tomo Nishi 1  Nahoko Ogata 1  
1. Ophthalmology, Nara Medical University, Kashiwara, Japan.  

3:45 PM - 4:45 PM 301-304 (3F) / Exhibition Hall  
Visual Neuroscience - Poster  

159 - P66-1  
Multifocal electoretinogram in Diabetic Retinopathy  
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1. Vitreoretina, Sri Sankaradeva Nethralaya, Guwahati, Assam, India.  

160 - P67-2  
Systematic and local responses of modified volvox Channelrhodopsin-1 gene therapy  
Eriko Sugano 1  Kitako Tabata 1  Maki Takahashi 1  Namie Murayama 1  Hiroya Shimizu 1  Masatoshi Sato 1  Fumiaki Nishiyama 1  Makoto Tamai 1  Hiroshi Tomita 1,2  
1. Dep. of Chemistry and Bioengineering, Iwate Univ, Morioka, Iwate, Japan. 2. Hospital, Tohoku Univ, Sendai, Miyagi, Japan.  

161 - P68-3  
Visual properties of photoreceptor degenerated rat with dual channelrhodopsin genes  
Hiroshi Tomita 1,2  Eriko Sugano 1  Kitako Tabata 1  Masatoshi Sato 1  Maki Takahashi 1  Kei Sannohe 1  Namie Murayama 1  Fumiaki Nishiyama 1  Takehiko Saito 1  Makoto Tamai 1  Hiroshi Tomita 1,2  
1. Dep. of Chemistry and Bioengineering, Visual Neuroscience, Iwate Univ, Morioka, Iwate, Japan. 2. Hospital, Tohoku Univ, Sendai, Miyagi, Japan.  

162 - P69-4  
Isolated cilioretinal artery occlusion treated with prostaglandin E1  
Ichiya Sano 1,2  Masaki Tanito 1,2  Yoshifumi Ikeda 1  Yasuyuki Takai 2  Kazunobu Sugihara 2  Akihiro Ohira 2  
1. Division of Ophthalmology, Matsue Red Cross Hospital, Matsue, Shimane, Japan. 2. Department of Ophthalmology, Shimane University Faculty of Medicine, Izumo, Shimane, Japan.  

163 - P70-5  
Case of binasal hemianopia determined to be psychogenic by multifocal visual evoked potentials  
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1. Ophthalmology, Nara Medical University, Kashiwara, Japan.  

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159 - P66-1  
Multifocal electoretinogram in Diabetic Retinopathy  
Satyen Deka 1  
1. Vitreoretina, Sri Sankaradeva Nethralaya, Guwahati, Assam, India.  

160 - P67-2  
Systematic and local responses of modified volvox Channelrhodopsin-1 gene therapy  
Eriko Sugano 1  Kitako Tabata 1  Maki Takahashi 1  Namie Murayama 1  Hiroya Shimizu 1  Masatoshi Sato 1  Fumiaki Nishiyama 1  Makoto Tamai 1  Hiroshi Tomita 1,2  
1. Dep. of Chemistry and Bioengineering, Iwate Univ, Morioka, Iwate, Japan. 2. Hospital, Tohoku Univ, Sendai, Miyagi, Japan.  

161 - P68-3  
Visual properties of photoreceptor degenerated rat with dual channelrhodopsin genes  
Hiroshi Tomita 1,2  Eriko Sugano 1  Kitako Tabata 1  Masatoshi Sato 1  Maki Takahashi 1  Kei Sannohe 1  Namie Murayama 1  Fumiaki Nishiyama 1  Takehiko Saito 1  Makoto Tamai 1  Hiroshi Tomita 1,2  
1. Dep. of Chemistry and Bioengineering, Visual Neuroscience, Iwate Univ, Morioka, Iwate, Japan. 2. Hospital, Tohoku Univ, Sendai, Miyagi, Japan.  

162 - P69-4  
Isolated cilioretinal artery occlusion treated with prostaglandin E1  
Ichiya Sano 1,2  Masaki Tanito 1,2  Yoshifumi Ikeda 1  Yasuyuki Takai 2  Kazunobu Sugihara 2  Akihiro Ohira 2  
1. Division of Ophthalmology, Matsue Red Cross Hospital, Matsue, Shimane, Japan. 2. Department of Ophthalmology, Shimane University Faculty of Medicine, Izumo, Shimane, Japan.  

163 - P70-5  
Case of binasal hemianopia determined to be psychogenic by multifocal visual evoked potentials  
Mariko Yamashita 1  Eiichi Yukawa 1  Tomo Nishi 1  Nahoko Ogata 1  
1. Ophthalmology, Nara Medical University, Kashiwara, Japan.
Visual Psychophysics/Physiological Optics - Poster

164 - P50-1  Withdrawn
The effects of a near tasking on ocular dominance in different viewing conditions
Ruiqing Wang 1  Tomoya Handa 2  Hitoshi Ishikawa 2  Kimiya Shimizu 1  Guanfang Su 1
1. ophthalmology, the second hospital of Jilin University, Changchun, Jilin, China. 2. Rehabilitation, Orthoptics and Visual Science Course, Kitasato University, Sagamihara, Japan. 3. ophthalmology, Kitasato University, Sagamihara, Japan.

165 - P51-2  Implantation of Hydrogel Corneal Shape Changing Inlay in Pseudophakic Subjects
Hai Yen Tran 1, 2  Arturo Chayet 4  Enrique Barragan Garza 5  Dan Tran 3
1. Ho Chi Minh City Eye Hospital, Ho Chi Minh, Viet Nam. 2. Haiyen Eye Clinic, Ho Chi Minh, Viet Nam. 3. Coastal Vision, Orange County, CA, United States. 4. Codet Vision Institute, Tijuana, Mexico. 5. Laser Ocular Hidalgo, Monterrey, Mexico.

166 - P52-3  The improvement of spoke-wheel pattern foveoschisis in a patient with X-linked retinoschisis treated with topical dorzolamide observed by high-resolution adaptive optics retinal camera
Kiyoko Gocho 1  Keiichiro Akeo 1  Shuhei Kameya 1  Kunihiko Yamaki 1  Atsushi Mizota 6  Hiroshi Takahashi 3
1. Ophthalmology, Nippon Medical School Chiba Hokusoh, Inzai, Chiba, Japan. 2. Ophthalmology, Teikyo University, Itabashi, Tokyo, Japan. 3. Ophthalmology, Nippon Medical School, Bunkyo, Tokyo, Japan.

167 - P53-4  Sensor-less Correction of Defocus and Astigmatism in an Optical Coherence Tomography System with a 3.0 mm Beam Diameter
Reddikumar Maddipatla 1, 2  Kingshuk Bose 1  Raju Poddar 1  Ayano Tanabe 3  Noboyuki Hashimoto 3  Barry Cense 2
1. Department of Applied Physics, Birla Institute of Technology, Mesra, India. 2. Center for Optical Research and Education, Utsunomiya University, Utsunomiya, Japan. 3. Development Devision, Citizen Holding Co., LTD., Tokorozawa, Japan.

168 - P54-5  Clinical benefits in color vision after phacoemulsification surgery combined with intraocular lens implantation
Mingxin Ao 1  Wei Wang 1
1. Ophthalmology, Peking University, Beijing, China.

169 - P55-6  The Effect of the Longitudinal Chromatic Aberration on Color Visual Acuity
Yoshihiko Tanaka 1  Sho Yokoyama 3  Hideki Nakamura 3  Kazuo Ichikawa 1  Shoko Tanabe 1  Yukihito kato 2  Rie Horai 2  Kiyoshi Tanaka 4
1. Vision Laboratory, Chukyo Eye Clinic, Nagoya, Japan. 2. Chukyo Eye Clinic, Nagoya, Japan. 3. Ophthalmology, JCHO Chukyo Hospital, Nagoya, Japan. 4. Faculty of Engineering, Shinshu University, Nagano, Japan.

170 - P56-7  Functional MRI Visualization of the Murine Visual Cortex Activity Evoked by Light Stimulation
Kinya Tsubota 1  Yuji Komaki 4  Norio Takata 2  Tetsu Yoshida 5  Kenji F. Tanaka 2  Hideyuki Okano 4  Hiroshi Goto 1  Kazuo Tsubota 1  Toshihide Kurihara 3
1. Ophthalmology, Tokyo Medical University, Tokyo, Japan. 2. Psychopathology, Keio University School of Medicine, Tokyo, Japan. 3. Ophthalmology, Keio University School of Medicine, Tokyo, Japan. 4. Physioloogy, Keio University School of Medicine, Tokyo, Japan. 5. Division of Gene Therapy, Research Center for Genomic Medicine, Saitama Medical University, Saitama, Japan.

Study Group: Ophthalmology

171 - P57-8  Intraocular lens position, refractive status, and visual acuity during the cataract postoperative period
Kohei Utsuki 1  Naoko Tachi 1  Yoshihiko Ueta 2  Yasuhiro Okamoto 1  Takao Fukutome 1  Koji Nagae 1  Kayoko Yoshimura 1  Yoshihiro Hashimoto 1
1. Shinseikai Toyama Hospital Eye Center, Toyama, Japan.

172 - P58-9  Higher-order aberrations in different types of posterior capsular opacification
Wenjie Wu 1
1. Ophthalmology, Fujian Provincial Hospital, Fuzhou, China.

173 - P59-10  Comparison of SRK/T and Haigis formulae for Predicting Corneal Astigmatism Correction by Toric Intraocular Lens Youngsub Eom 1  Jong Suk Song 1  Yong Yeon Kim 1  Hyo Myung Kim 1
1. Ophthalmology, Korea University College of Medicine, Seoul, Korea (the Republic of).

174 - P60-11  Understanding Causes of Ring-Shaped Dysphotopsia Associated with Posterior Chamber Phakic Implantable Collamer Lenses with a Central Hole
Hyo Myung Kim 1  Youngsub Eom 1  Dae Wook Kim 2  Dongok Ryu 2  Seul Ki Yang 2  Jong Suk Song 1  Sung-Whan Kim 2
1. Korea University College of Medicine, Seoul, Korea (the Republic of). 2. College of Optical Sciences, University of Arizona, Tucson, AZ, United States. 3. Space Optics Laboratory, Department of Astronomy, Yonsei University, Seoul, Korea (the Republic of).
175 - P61-12
Effects of sustained accommodation on the optics of human eye
Jason Shen 1 Frank Spors 1 Don Egan 1
1. Optometry, Western University of Health Sciences, Pomona, CA, United States.

176 - P62-13
Comparison of Subjective Refraction under Binocular and Monocular Conditions
Hidenaga Kobashi 1 Kazutaka Kamiya 1 Akihito Igarashi 1 Kimiya Shimizu 1 Wakako Ando 1 Tomoya Handa 2
1. Department of Ophthalmology, University of Kitasato School of Medicine, Sagamihara, Kanagawa, Japan. 2. Department of Orthoptics and Visual Science, School of Allied Health Sciences, University of Kitasato, Sagamihara, Japan.

177 - P63-14
Inter-Rater Agreement of Computerized Visual Acuity (COMPlog) and Refractive Error Measurements (Plusoptix Photorefractor) Among School Children
Avinash Prabhu 1 Marita Pinto 1 Juthika Taludkar 2 Jyothi Thomas 1 Ramesh Venkatasubbu 1
1. Department of Optometry, School of Allied Health Sciences, Manipal University, Manipal, Karnataka, India. 2. Department of Public Health, Manipal University, Manipal, Karnataka, India.

178 - P64-15
Astigmatism in Chinese primary school children, prevalence, change, and effect on refractive development
Shao-en Chan 1 Hsi-Kung Kou 1 Pei-Chang Wu 1
1. Ophthalmology, Kaohsiung Chang Gung Memorial Hospital and Chang Gung University College of Medicine, Kaohsiung, Taiwan.

179 - P65-16
Individual difference between static and dynamic motion in depth discrimination training tasks
Di Zhang 1 Yulia Fattakhova 1 Jean Louis de Bougrenet de la Toecnye 1
1. Optics Department, Telecom Bretagne, Brest, France.
**Tuesday Feb. 17**

### 9:00 AM - 11:00 AM  Main Hall (1F)/Room 1

**Plenary Session 1**  
**AMD in Asians**

**Organizers**  
**Tien Yin Wong**  
Singapore Eye Research Institute/ Duke-NUS Graduate Medical School, Singapore, Singapore  
**Calvin CP Pang**  
The Chinese University of Hong Kong, Kowloon, Hong Kong

**189: PS1-1**  
**AMD in Asians and polypoidal choroidal vasculopathy**  
**Keynote Speaker:** Tomohiro Iida

1. Department of Ophthalmology, Tokyo Women's Medical University, Shinjuku, Tokyo, Japan.

**190: PS1-2**  
**Update on Imaging in Polypoidal Choroidal Vasculopathy**  
**Speaker:** Gemmy Cheung Chui Ming

1. Singapore Eye Research Institute, Singapore, Singapore.  
2. Singapore National Eye Center, Singapore, Singapore.

**191: PS1-3**  
**Personalized medicine for age-related macular degeneration**  
**Speaker:** Kenji Yamashiro

1. Department of Ophthalmology and Visual Sciences, Kyoto University Graduate School of Medicine, Kyoto, Kyoto, Japan.

**192: PS1-4**  
**Risk factors of AMD in Koreans**  
**Speaker:** Kyu Hyung Park

1. Department of Ophthalmology, Seoul National University, College of Medicine, Jongno-gu, Seoul, Korea (the Republic of).  
2. Department of Ophthalmology, Seoul National University Bundang Hospital, Seongnam, Korea (the Republic of).

**193: PS1-5**  
**Treatment options in AMD non-responders**  
**Speaker:** Marten Erik Brelén, Chi Wai Tsang, Alvin Young, Chi Pui C. Pang

1. Department of Ophthalmology and Visual Sciences, Chinese University of Hong Kong, Kowloon, Hong Kong.  
2. Hong Kong Eye Hospital, Hong Kong, Hong Kong.  
3. Prince of Wales Hospital, Hong Kong, Hong Kong.

### 11:10 AM - 12:10 PM  Main Hall (1F)/Room 1

**Plenary Lecture 1**

**Chair**  
Tatsuro Ishibashi  
Graduate School of Medical Sciences, Kyushu University, Fukuoka, Fukuoka, Japan

**230: PL1**  
**Application of iPS Cells to Retinal Disease**  
**Speaker:** Masayo Takahashi

1. Laboratory for Retinal Regeneration, Center for Developmental Biology, RIKEN, Kobe, Hyogo, Japan.
**Symposium 13**  
**Molecular Mechanisms in Age-related Macular Degeneration**

**Organizers**  
**Kyu Hyung Park**  
Seoul National University, College of Medicine, Jongno, Seoul, Korea (the Republic of)  
**Yoko Ozawa**  
Keio University School of Medicine, Shinjuku, Tokyo, Japan

**256: SY13-1**  
**Proteomic approaches to gain insight into the molecular pathogenesis of AMD**  
**Speaker:** Jeeyun Ahn  
1, 2 Se Joon Woo  
3 Kyu Hyung Park  
1. Department of Ophthalmology, Seoul Metropolitan Government Seoul National University Boramae Medical Center, Jongno, Seoul, Korea (the Republic of).  
2. Department of Ophthalmology, Seoul National University, College of Medicine, Seoul, Korea (the Republic of).  
3. Department of Ophthalmology, Seoul National University Bundang Hospital, Seongnam, Korea (the Republic of).

**257: SY13-2**  
**Lipofuscin-related RPE damage in age-related macular degeneration**  
**Speaker:** Yasuo Yanagi  
1. Department of Ophthalmology, Graduate School of Medicine, The University of Tokyo, Bunkyo, Tokyo, Japan.

**258: SY13-3**  
**A role of lipid accumulated in Bruch's membrane in the pathogenesis of age-related macular degeneration**  
**Speaker:** Tsutomu Yasukawa  
1. Department of Ophthalmology and Visual Science, Nagoya City University Graduate School of Medical Sciences, Nagoya, Aichi, Japan.

**259: SY13-4**  
**New findings about age-related macular degeneration using polarized RPE cells**  
**Speaker:** Hiroto Terasaki  
1. Department of Ophthalmology, Kagoshima University Graduate School of Medicine and Dental Sciences, Kagoshima, Kagoshima, Japan.

**260: SY13-5**  
**The role of SIRT1 in the pathogenesis of age-related macular degeneration**  
**Speaker:** Takeshi Yoshida  
1. Department of Ophthalmology, Tokyo Medical and Dental University, Bunkyo, Tokyo, Japan.

**261: SY13-6**  
**A new therapeutic target in age-related macular degeneration**  
**Speaker:** Hiroki Kaneko  
1. Department of Ophthalmology, Nagoya University Graduate School of Medicine, Nagoya, Aichi, Japan.
Morning Seminar 1
New Technology for DRY EYE Diagnosis

Sponsored by Kowa Company, Ltd.

Organizers
Kazuo Tsubota
Keio University School of Medicine, Shinjuku, Tokyo, Japan
Shigeru Kinoshita
Kyoto Prefectural University of Medicine, Kyoto, Kyoto, Japan

187: MS1-1
Functional visual acuity technology for dry eye
Speaker: Minako Kaido
1. Department of Ophthalmology, Keio University School of Medicine, Tokyo, Japan.

365: MS1-2
Tear Film Oriented Diagnosis (TFOD) for Dry Eye
Speaker: Norihiko Yokoi
1. Department of Ophthalmology, Kyoto Prefectural University of Medicine, Kamigyo, Kyoto, Japan.

9:00 AM - 11:00 AM 501 (5F)/Room 2
Plenary Session 2
Genome-wide Association Study for Complex Eye Diseases

Organizers
Nobuhisa Mizuki
Yokohama City University School of Medicine, Yokohama, Kanagawa, Japan
Chiea Chuen Khor
Genome Institute of Singapore, Singapore, Singapore

194: PS2-1
Genome-wide association study for Behcet’s disease
Speaker: Nobuhisa Mizuki
1. Department of Ophthalmology, Yokohama City University School of Medicine, Yokohama, Kanagawa, Japan.

195: PS2-2
The genetic basis of Exfoliation syndrome
Speaker: Khor Chiea Chuen
1. Division of Human Genetics, Genome Institute of Singapore, Singapore, Singapore.

196: PS2-3
GWAS in myopia: understanding mechanisms of myopia development
Speaker: Christopher Hammond
1. Departments of Ophthalmology and Twin Research & Genetic Epidemiology, King’s College London, St Thomas’ Hospital, London, United Kingdom.

Study Group: Consortium on Refractive Error and Myopia

197: PS2-4
Genome-wide association study in Asian patients with glaucoma
Speaker: Tin Aung

198: PS2-5
GWAS Success in Ophthalmology
Speaker: David A. Mackey
1. Lions Eye Institute, University of Western Australia, Crawley, WA, Australia. 2. Centre for Eye Research Australia, Melbourne, VIC, Australia.
11:10 AM - 12:10 PM 501 (5F)/Room 2

Special Interest Groups 1
New Approaches to Infectious Keratitis

Organizers
Yoshitsugu Inoue
Faculty of Medicine Tottori University, Yonago, Tottori, Japan
Yu-Feng Yao
Zhejiang University, School of Medicine, Hangzhou, Zhejiang, China

231: SIG1-1
Immune Privileged Role of Indoleamine 2,3-dioxygenase 1 in Corneal Endothelial Cells Exploited by Herpes Simplex Virus Type 1
Speaker: Dai Miyazaki
1. Division of Ophthalmology and Visual Science, Tottori University Faculty of Medicine, Yonago, Tottori, Japan.

232: SIG1-2
Novel method to diagnose and treat Acanthamoeba keratitis
Speaker: Takashi Suzuki
1. Department of Ophthalmology, Ehime University, Graduate School of Medicine, Toon, Ehime, Japan.

233: SIG1-3
New Insights in the Diagnosis of Fungal and Parasitic Keratitis
Speaker: Savitri Sharma
1. Jhaveri Microbiology Centre, L V Prasad Eye Institute, Hyderabad, Telangana, India.

234: SIG1-4
Clinical Efficacy of Systemic Vitamin C supplementation on Reducing Corneal Opacity Resulting from Infectious Keratitis
Speaker: Seong-Jae Kim, Yongwun Cho
1. Department of Ophthalmology, Gyeongsang National University, School of Medicine, Jinju, Gyeongsangnam, Korea (the Republic of).

235: SIG1-5
Novel Deep Anterior Lamellar Keratoplasty for the recovery from infectious keratitis
Speaker: Yu-Feng Yao
1. Department of Ophthalmology, Sir Run Shaw Hospital, Zhejiang University School of Medicine, Hangzhou, Zhejiang, China.

12:20 PM - 1:20 PM 501 (5F)/Room 2

Luncheon Seminar 5
Adding Up the Benefits-FloraGLO® Lutein and OPTISHARP™ Natural Zeaxanthin

Sponsored by Kemin Human Nutrition & Health Asia/DSM Nutrition Japan K.K.
Organizer
Yoko Ozawa
Keio University School of Medicine, Shinjuku, Tokyo, Japan

245: LS5-1
Adding Up the Benefits-FloraGLO® Lutein and OPTISHARP™ Natural Zeaxanthin
Speaker: Richard L. Roberts
1. Scientific Affairs and Technical Services, Kemin Human Nutrition and Health, Des Moines, IA, United States.
Symposium 14
Updates on Genetic Epidemiology in Ophthalmology: What's the Next Hope?

Organizers
Tien Yin Wong
Singapore Eye Research Institute, Singapore National Eye Center/Duke-NUS Graduate Medical School, Singapore, Singapore
Ryo Kawasaki
Yamagata University Faculty of Medicine, Yamagata, Yamagata, Japan

262: SY14-1
The role of common and rare genetic variants in age-related macular degeneration
Speaker: Ching-Yu Cheng 1, 2
1. Singapore Eye Research Institute, Singapore, Singapore. 2. Duke-NUS Graduate Medical School, Singapore, Singapore.

263: SY14-2
Gene-environment interaction
Speaker: Terri Young 2 1, Xiaoyan Luo 1, Pedro Gonzalez 1, Andrei Tkatchenko 3

264: SY14-3
Epigenetics of Eye Disease: The missing link between genes and environment
Speaker: Alex Hewitt 1
1. Centre for Eye Research Australia, University of Melbourne, East Melbourne, VIC, Australia.

265: SY14-4
Copy number variations
Speaker: Paul N. Baird 1
1. Centre for Eye Research Australia, University of Melbourne, East Melbourne, VIC, Australia.

266: SY14-5
Genome-Cohort studies
Speaker: Nobuo Fuse 1
1. Tohoku Medical Megabank Organization, Tohoku University, Sendai, Japan.
Study Group: Tohoku Medical Megabank Organization
Plenary Session 3
Recent Advances in Retinal Basic Research

Organizers
Shibo Tang
Central South University, Changsha, Hunan, China
Yuichiro Ogura
Nagoya City University, Nagoya, Aichi, Japan

199: PS3-1
Recent Advances in Ocular Neovascular Diseases
Speaker: Xuri Li 1
1. State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-Sen University, Guangzhou, Guangdong, China.

200: PS3-2
The mechanism of diabetic retinal edema moderated by cell membrane K + channels in retinal Müller cells in diabetic animals
Speaker: Shibo Tang 1, Wei Sun 2, Tao Li 2
1. Aier School of Ophthalmology, Central South University, Changsha, Hunan, China. 2. Zhongshan Ophthalmic Center, Sun Yat-Sen University, Guangzhou, China.

201: PS3-3
Molecular control of photoreceptor synapse development
Speaker: Takahisa Furukawa 1,2, Rikako Sanuki 1,2
1. Laboratory for Molecular and Developmental Biology, Institute for Protein Research, Osaka University, Suita, Osaka, Japan. 2. JST, CREST, Suita, Japan.

202: PS3-4
Blue light stress and retinal responses
Speaker: Motohiro Kamei 1
1. Department of Ophthalmology, Osaka University School of Medicine, Suita, Osaka, Japan.

203: PS3-5
Receptor-associated prorenin system in the pathogenesis of diabetic retinopathy
Speaker: Susumu Ishida 1
1. Department of Ophthalmology, Hokkaido University Graduate School of Medicine, Sapporo, Hokkaido, Japan.

204: PS3-6
Neuroprotection against oxidative stress in the retina
Speaker: Yoko Ozawa 1,2
1. Department of Ophthalmology, Keio University School of Medicine, Shinjuku, Tokyo, Japan. 2. Laboratory of Retinal Cell Biology, Keio University School of Medicine, Tokyo, Japan.
**Luncheon Seminar 6**

**Clinical Effects of Astaxanthin on the Eye**

Sponsored by AstaReal Co., Ltd.

Organizer
Nobuyo Yawata
Duke-NUS Graduate Medical School, Singapore, Singapore

246: LS6-1

Clinical Effects of Astaxanthin on the Eye

Speaker: Nobuyoshi Kitaichi

1. Ophthalmology, Health Sciences University of Hokkaido, Sapporo, Japan.

**Symposium 15**

**Metamorphopsia**

Organizers
Chota Matsumoto
Kinki University Faculty of Medicine, Osakasayama, Osaka, Japan

Se Woong Kang
Sungkyunkwan University School of Medicine, Jongno, Seoul, Korea (the Republic of)

267: SY15-1

Quantification of metamorphopsia

Speaker: Eiko A. Koike

1. Kinki University Sakai Hospital, Sakai, Osaka, Japan.

268: SY15-2

Metamorphopsia in epiretinal membrane

Speaker: Fumiki Okamoto

1. Department of Ophthalmology, University of Tsukuba, Tsukuba, Ibaraki, Japan.

269: SY15-3

Metamorphopsia of central serous chorioretinopathy

Speaker: Kyoko Fujita

1. Department of Ophthalmology, Nihon University School of Medicine, Chiyoda, Tokyo, Japan.

270: SY15-4

Metamorphopsia in maular hole

Speaker: Jae Hui Kim

1. Kim’s Eye Hospital, Konyang University College of Medicine, Metropolitan, Daejon, Korea (the Republic of).

271: SY15-5

Measurement of metamorphopsia: Using 3D display

Speaker: Yun Taek Kim

1. Ewha Womens University, Seoul, Korea (the Republic of).

272: SY15-6

Preferential hyperacuity perimeter as a useful tool for monitoring metamorphopsia

Speaker: So-Hyun Bae

1. Department of Ophthalmology, Kangnam Sacred Heart Hospital, Hallym University School of Medicine, Yeongdeungpo, Seoul, Korea (the Republic of).
### Afternoon Seminar 5
**Recent Topics for Better Understanding the Etiology of Early AMD**

Sponsored by WAKASA SEIKATSU CO., Ltd.

**Organizer**

Susumu Ishida  
Hokkaido University Graduate School of Medicine, Sapporo, Hokkaido, Japan

<table>
<thead>
<tr>
<th>362: AS5-1</th>
<th>Serum calcium level and large drusen</th>
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</thead>
<tbody>
<tr>
<td><strong>Speaker:</strong> Kenji Yamashiro ¹</td>
<td></td>
</tr>
<tr>
<td>1. Department of Ophthalmology and Visual Sciences, Kyoto University Graduate School of Medicine, Kyoto, Kyoto, Japan.</td>
<td></td>
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<thead>
<tr>
<th>363: AS5-2</th>
<th>Lutein’s effect to protect the retina</th>
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</thead>
<tbody>
<tr>
<td><strong>Speaker:</strong> Yoko Ozawa ¹ ²</td>
<td></td>
</tr>
<tr>
<td>1. Department of Ophthalmology, Keio University School of Medicine, Tokyo, Japan.  ². Laboratory of Retinal Cell Biology, Keio University School of Medicine, Tokyo, Japan.</td>
<td></td>
</tr>
</tbody>
</table>
Plenary Session 4
Normal Tension Glaucoma Update

Organizers
Kazuhisa Sugiyama
Kanazawa University Graduate School of Medical Science, Kanazawa, Ishikawa, Japan
Jost B. Jonas
Medical Faculty Mannheim, University Heidelberg, Heidelberg, Germany
Goji Tomita
Toho University Ohashi Medical Center, Meguro, Tokyo, Japan

205: PS4-1
Disc Hemorrhage and NTG
Keynote Speaker: Ki Ho Park 1
1. Department of Ophthalmology, Seoul National University, Jongno-gu, Seoul, Korea (the Republic of).

206: PS4-2
Clinical feature of primary open-angle glaucoma with myopia
Speaker: Kazuhisa Sugiyama 1
1. Department of Ophthalmology & Visual Science, Kanazawa University Graduate School of Medical Science, Kanazawa-shi, Ishikawa, Japan.

207: PS4-3
Application of optical coherence tomography in glaucoma management
Speaker: Christopher K. Leung 1
1. Department of Ophthalmology and Visual Sciences, The Chinese University of Hong Kong, Kowloon, Hong Kong.

208: PS4-4
Genetics in normal tension glaucoma
Speaker: Kazuhiko Mori 1
1. Department of Ophthalmology, Kyoto Prefectural University of Medicine, Kamigyo-ku, Kyoto, Japan.

209: PS4-5
Lamina cribrosa in normal tension glaucoma
Speaker: Tae-Woo Kim 1,2
1. Department of Ophthalmology, Seoul National University College of Medicine, Jongno-gu, Seoul, Korea (the Republic of). 2. Seoul National University Bundang Hospital, Seongnam, Korea (the Republic of).

210: PS4-6
Blood flow abnormality of optic nerve head in NTG
Speaker: Toru Nakazawa 1
1. Department of Ophthalmology, Tohoku University Graduate School of Medicine, Sendai, Miyagi, Japan.

211: PS4-7
Comparison of visual field defects between HTG and NTG
Speaker: Takeo Fukuchi 1
1. Division of Ophthalmology and Visual Science, Graduated School of Medical and Dental Sciences, Niigata University, Niigata, Niigata, Japan.

212: PS4-8
Pressure relationships in glaucomatous optic neuropathy
Speaker: Jost B. Jonas 1 Ningli Wang 2 Diya Yang 3
1. Department of Ophthalmology, Medical Faculty Mannheim, University Heidelberg, Heidelberg, Germany. 2. Capital Medical University, Beijing Ophthalmology & Visual Sciences Key Laboratory, China, Beijing Institute of Ophthalmology, Beijing Tongren Eye Center, Beijing Tongren Hospital, Beijing, China. 3. Capital Medical University, Beijing Ophthalmology and Visual Sciences Key Laboratory, Beijing, China, Beijing Tongren Eye Center, Beijing Tongren Hospital, Beijing, China.
Special Interest Groups 3  
Asian Eye Genetics Consortium (AEGC) and eyeGENE International

In conjunction with NEI-NIH

Organizers
Gyan "John" Prakash  
National Eye Institute, National Institutes of Health, Bethesda, MD, United States
Takeshi Iwata  
Tokyo Medical Center, National Hospital Organization, Meguro, Tokyo, Japan
Calvin CP Pang  
The Chinese University of Hong Kong, Kowloon, Hong Kong

240: SIG3-1
Asian Eye Genetics Consortium: Building Bridges between Developed and Developing Worlds
Speaker: Gyan "John" Prakash
1. National Eye Institute, National Institutes of Health, Bethesda, MD, United States.
Study Group: Genetics

241: SIG3-2
Asian Eye Genetics Consortium, Genetic research programs covering the entire Asia
Speaker: Takeshi Iwata
1. National Institute of Sensory Organs, Tokyo Medical Center, National Hospital Organization, Meguro-ku, Tokyo, Japan.
Study Group: Asian Eye Genetics Consortium

242: SIG3-3
Ophthalmic Genetic Studies in India and Pakistan
Speaker: Fielding (James F) J. Hejtmancik
1. Molecular Ophthalmic Genetics Section Ophthalmic Genetics and Visual Function Branch, National Eye Institute, National Institutes of Health, Rockville, MD, United States.
Study Group: Asia Eye Genetics Consortium (AEGC)

243: SIG3-4
Ethnicities and Allelic Frequencies in Eye Diseases
Speaker: Calvin CP Pang
1. Department of Ophthalmology & Visual Sciences, The Chinese University of Hong Kong, Kowloon, Hong Kong.

244: SIG3-5
eyeGENE®: A history and a look at its achievements. How can Asian countries participate in eyeGENE® International?
Speaker: Santa Tumminia
1. National Eye Institute, National Institutes of Health, Bethesda, MD, United States.

Luncheon Seminar 7
Let's Master the Pathogenesis and Treatment of Short BUT-type Dry Eye!

Sponsored by Santen Pharmaceutical Co., Ltd.

Organizers
Kazuo Tsubota
Keio University School of Medicine, Shinjuku, Tokyo, Japan
Shigeru Kinoshita
Kyoto Prefectural University of Medicine, Kyoto, Kyoto, Japan

247: LS7-1
Epidemiology of Dry Eye: The Osaka Study
Speaker: Debra A. Schaumberg
1. Ophthalmology & Visual Sciences, University of Utah School of Medicine, Salt Lake City, UT, United States. 2. Epidemiology, Harvard School of Public Health, Boston, MA, United States.

248: LS7-2
Pathophysiology of and therapy for short BUT type dry eye in Korea
Speaker: Kyoungyul Seo
1. Department of Ophthalmology, Yonsei University College of Medicine, Seodaemun-gu, Seoul, Korea (the Republic of).

249: LS7-3
Pathophysiology of and Therapy for Short BUT-Type Dry Eye in Japan
Speaker: Kazuo Tsubota
1. Department of Ophthalmology, Keio University School of Medicine, Shinjuku-ku, Tokyo, Japan.

250: LS7-4
Pathophysiology of and therapy for short BUT type dry eye in France
Speaker: Christophe Baudouin
Symposium 16
Advances in Eye Research and NEI
International Partnerships

In conjunction with NEI-NIH

Organizers
Gyan “John” Prakash
National Eye Institute, National Institutes of Health, Bethesda, MD, United States
Jonathan Crowston
University of Melbourne, East Melbourne, VIC, Australia
Govindasamy Kumaramanickavel
Aditya Jyot Foundation for Twinkling Little Eyes, Mumbai, Maharashtra, India

273: SY16-1
Global Vision Research: NEI’s International Agenda
Speaker: Gyan “John” Prakash
1. National Eye Institute, National Institutes of Health, Bethesda, MD, United States.
Study Group: Genetics

274: SY16-2
Ophthalmology research in the Asia-Pacific region, where we are and where we are going
Speaker: Jonathan Crowston
1. Department of Ophthalmology, University of Melbourne, East Melbourne, VIC, Australia.

275: SY16-3
NISO-NEI collaborative research programs, past and future
Speaker: Takeshi Iwata
1. National Institute of Sensory Organs, Tokyo Medical Center, National Hospital Organization, Megro-ku, Tokyo, Japan.

276: SY16-4
Vision Research Programs in India: past, present and future
Speaker: Radhika Tandon
1. Dr. Rajendra Prasad Centre for Ophthalmic Sciences, All India Institute of Medical Sciences, New Delhi, Delhi, India.

277: SY16-5
Advances in Eye Research and NEI International Partnerships
Speaker: John McAvoy
1. Save Sight Institute, University of Sydney, Sydney, NSW, Australia.

278: SY16-6
Age-related Eye Diseases: Age-related Macular Degeneration, Glaucoma and Diabetic Retinopathy – The Epidemiology and Genetics
Speaker: Govindasamy Kumaramanickavel, Sunita Mohan, Radhika Krishnan, Sundaram Natarajan, Catherine McCarty
1. Aditya Jyot Foundation for Twinkling Little Eyes, Mumbai, Maharashtra, India. 2. Aditya Jyot Eye Hospital, Mumbai, Maharashtra, India. 3. Essentia Institute of Rural Health, Duluth, MN, United States.
Plenary Session 5
Updates on Standardized Classifications/Severity Scales of Ocular Diseases: a Key for Successful Clinical Research

Organizers
Mingguang He
Sun Yat-sen University, Guangzhou, Guangdong, China
Shih-Jen Chen
Taipei Veterans General Hospital, Taipei, Taiwan

213: PS5-1
Standardized classifications and severity scales of dry eye
Speaker: Kyoung Yul Seo ¹ Ji Won Jung ¹
1. Department of Ophthalmology, Yonsei University College of Medicine, Seodaemun-gu, Seoul, Korea (the Republic of).

214: PS5-2
Standardized classifications and severity scales of myopia and myopic retinopathy
Speaker: Seang-Mei Saw ¹
1. National University of Singapore, Singapore, Singapore.

215: PS5-3
Standardized classifications and severity scales of cataract
Speaker: Hiroshi Sasaki ¹
1. Department of Ophthalmology, Kanazawa Medical University, Kahoku, Ishikawa, Japan.

216: PS5-4
Standardized classifications and severity scales of glaucoma
Speaker: Mingguang He ¹,² Xin Xing Guo ¹
1. Department of Preventive Ophthalmology Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, Guangdong, China. 2. Centre for Eye Research Australia, University of Melbourne, Melbourne, VIC, Australia.

217: PS5-5
Standardized classifications and severity scales of diabetic retinopathy and age-related macular degeneration
Speaker: Shih-Jen Chen ¹,²
1. Department of Ophthalmology, Taipei Veterans General Hospital, Taipei, Taiwan. 2. School of Medicine, National Yang-Ming University, Taipei, Taiwan.

Luncheon Seminar 8
A Trend in Prescription Use of NSAIDs in Asian Countries and the Further Possibility of its Use

Sponsored by Senju Pharmaceutical Co., Ltd.
Organizer
Hiroshi Fujishima
Tsurumi University Dental Hospital, Yokohama, Kanagawa, Japan

251: LS8-1
Comparison of anti-inflammatory effects between prednisolone acetate 1% monotherapy and bromfenac 0.1% added with prednisolone acetate 1% after cataract surgery
Speaker: Uyen T. Nguyen ¹
1. Ho Chi Minh City Eye Hospital, Ho Chi Minh, Viet Nam.

252: LS8-2
Paradigm shift in topical NSAID use in South Korea
Speaker: Jong Suk Song ¹
1. Ophthalmology, Korea University, Seoul, Korea (the Republic of).

253: LS8-3
Use of NSAIDs in Japan and future possibilities
Speaker: Hiroshi Fujishima ¹
1. Department of Ophthalmology, Tsurumi University Dental Hospital, Yokohama, Kanagawa, Japan.
Study Group: allergy
<table>
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<tr>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
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<td>1:30 PM</td>
<td>Retina 2</td>
<td><strong>Moderators</strong>&lt;br&gt;Gislin Dagnelie&lt;br&gt;Johns Hopkins University School of Medicine, Baltimore, MD, United States&lt;br&gt;Akihiro Kakehashi&lt;br&gt;Jichi Medical University, Saitama Medical Center, Saitama, Saitama, Japan</td>
<td><strong>279-1</strong>&lt;br&gt;Efficacy of ranibizumab in branch and central retinal vein occlusion, Outcomes from the BRIGHTER and CRYSTAL studies&lt;br&gt;Sanjeeva Wickremasinghe 1&lt;br&gt;1. University of Melbourne, The Royal Victorian Eye and Ear Hospital, Melbourne, East Melbourne, VIC, Australia.</td>
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<td><strong>280-2</strong>&lt;br&gt;Effects of Ranibizumab in Zone I and Zone II Retinopathy of Prematurity patients&lt;br&gt;Yi Chen 1 Jing Feng 1 Xiaoxin Li 1 Jianhong Liang 1 Hong Yin 1&lt;br&gt;1. Eye Department, Peking University People’s Hospital, Beijing, China.</td>
<td><strong>281-3</strong>&lt;br&gt;Predictors for the Development of Referral-Warranted Retinopathy of Prematurity in the Telemedicine Approaches to Evaluating of Acute-Phase ROP (e-ROP) Study&lt;br&gt;Graham Quinn 1&lt;br&gt;1. The Children’s Hospital of Philadelphia, philadelphia, PA, United States. Study Group: e-ROP Cooperative Group</td>
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Cornea 2

Moderators
Roger W. Bauerman
Singapore Eye Research Institute, Duke-NUS, Singapore, Singapore
Yuichi Hori
Toho University Omori Medical Center, Ota, Tokyo, Japan

218-1
A Significant Role of Endoplasmic Reticulum Stress in Ocular Chronic Graft-Versus-Host Disease
Shin Mukai 1 Yoko Ogawa 1 Kazuo Tsubota 1
1. Department of Ophthalmology, Keio University School of Medicine, Tokyo, Japan.

219-2
Oxidative stress and heavy metal ions in severe dry eye syndrome patients in comparison with non-dry eye syndrome individuals
Ying Liu 1 Masatoshi Hirayama 1 Tetsuya Kawakita 1 Shigeto Shimmura 1 Kazuo Tsubota 1
1. Ophthalmology, School of Medicine, Keio University, Tokyo, Japan.
Study Group: Dry eye

220-3
Efficacy and Safety of Topical Diquafosol Tetrasodium Treatment for Chronic Graft-versus-Host Disease-Related Dry Eye Disease, A Randomized Comparative Clinical Study
Yoko Ogawa 1 Naoyuki Kozuki 1 Mio Yamane 1 Mizuka Kamoi 1
Yumiko Saijo-Ban 1 Tetsuya Kawakita 1 Dogru Murat 1 Kazuno Negishi 1 Shigeto Shimmura 1 Kazuo Tsubota 1
1. Department of Ophthalmology, Keio University School of Medicine, 35 Shinanomachi Shinjuku-ku, Japan.

221-4
Withdrawn

222-5
Prospective Placebo-Controlled Trial of Intense Pulsed Light (IPL) Therapy for Meibomian Gland Dysfunction (MGD)
Jennifer P. Craig 1 Yen-Heng Chen 1 Philip Turnbull 1
Study Group: Ocular Surface Laboratory
**224-1**

**Patient experience of cultured limbal epithelial transplantation - development of a Quality of Life (QOL) based outcome assessment questionnaire**

Derek Ho 1 Carol Porteous 2,3 Richard Cable 2,3 Catey Bunce 2,3 
Alex Shortt 2,3  
1. Ophthalmology Department, William Harvey Hospital, Ashford, United Kingdom. 2. Moorfields Eye Hospital, NIHR Biomedical Research Centre, London, United Kingdom. 3. UCL Institute of Ophthalmology, London, United Kingdom.

**225-2**

**Localization of label retaining cells and rapidly proliferating cells in 6-month cultured primary human limbal epithelial cell sheets**

Hideyuki Miyashita 1 Kazuo Tsubota 1 Shigeto Shimmura 1  
1. Ophthalmology, Keio University School of Medicine, Tokyo, Japan.

**226-3**

**Development of an Autologous Treatment Protocol for Limbal Epithelial Stem Cell Deficiency using Optimally Transparent, Mechanically Suitable RAFT Tissue Equivalents**

Isobel Massie 1 Alvena K. Kureshi 1 Julie T. Daniels 1  

**227-4**

**Limbal reconstruction using bio-engineered limbal plate in rabbit eye of limbal deficiency experimental model**

Hong Kyun Kim 1  
1. Department of Ophthalmology, Kyungpook Nat'l University School of Medicine, Daegu, Korea (the Republic of).

**228-5**

**Low oxygen increases CD44 expression in lacrimal gland derived mesenchymal stem cells**

Mathias Roth 1 Kristina Spaniol 1 Claus Kordes 2 Dieter Häussinger 2 Silke Schwarz 3 Nicole Rotter 3 Gerd Geerling 1 Stefan Schrader 1  
1. Department of Ophthalmology, University Düsseldorf, Düsseldorf, Germany. 2. Department of Gastroenterology, Hepatology and Infectious Diseases, University Düsseldorf, Düsseldorf, Germany. 3. Department of Otorhinolaryngology, University Ulm, Ulm, Germany.
Luncheon Seminar 9
Clinical Cases Using the Latest Microperimeter and OCT

Sponsored by NIDEK CO., LTD.

Organizer
Shuichi Yamamoto
Chiba University, Graduate School of Medicine, Chiba, Chiba, Japan

254: LS9-1
Clinical Evaluation of “Long Axial length Normative Database”
Speaker: Da-Wen Lu
1. Ophthalmology, Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan.
Study Group: NDMC

255: LS9-2
Diagnosis and Evaluation of Macular Diseases using MP-3
Speaker: Ichiro Maruko
1. Ophthalmology, Tokyo Women’s Medical University, Tokyo, Japan.

Cornea 4

Moderators
Shizuya Saika
Wakayama Medical University School of Medicine, Wakayama, Wakayama, Japan
Naoyuki Maeda
Osaka University Graduate School of Medicine, Suita, Osaka, Japan

285-1
Can Biomarkers predict the treatment outcomes of Crosslinking in Keratoconus?
Natasha Pahuja 1 Dr Rohit Shetty 1 Arkasubhra Ghosh 2 Vishal Arora 4 Abhijit Roy 2 Harsha Rao 2
1. CORNEA REFRACTIVE, NARAYANA NETHRALAYA, bangalore, India. 2. Grow lab, NARAYANA NETHRALAYA, Bangalore, India. 3. LV Prasad eye institute, Hyderabad, India. 4. NARAYANA NETHRALAYA, Bangalore, India.

286-2
Quantitative Analysis of Collagen Lamellae in the Normal and Keratoconic Human Cornea by Second Harmonic Generation Imaging Microscopy
Naoyuki Morishige 1 Ryu-taro Shin-gyou-uchi 1 Hiroya Azumi 1 Hiroaki Ohta 1 Koh-hei Sonoda 1
1. Ophthalmology, Yamaguchi University, Ube, Japan.

287-3
Predicting post Photorefractive Keratectomy Corneal Haze through Analysis of Corneal Gene Expression Patterns
Vishal Vohra 1 Dr Rohit Shetty 1 Arkasubhra Ghosh 2 Natasha Pahuja 1
1. Cornea and External eye disease, Narayana Nethralaya, Bangalore, India. 2. GROW Research Laboratory, Narayana Nethralaya Foundation, Bangalore, India.
Study Group: Narayana Nethralaya Study group

288-4
The evaluation of functional visual acuity after nasolacrimal duct recanalization
Tomoyuki Kamao 1 Atsushi Shiraishi 1 Naomi Takahashi 2 Yuichi Ohashi 1
1. Ophthalmology, Ehime University Graduate School of Medicine, Toon, Ehime, Japan. 2. Ophthalmology, Uwajima City Hospital, Uwajima, Ehime, Japan.

289-5
Engineering a Light Attenuating Contact Lens
Farah Shareef 1 David Szlachta 1 Genesis Contreras 1 Andrew Chen 1 Dmitri Azar 2 1 Michael Cho 1
1. Bioengineering, University of Illinois at Chicago, Chicago, IL, United States. 2. Ophthalmology and Visual Sciences, University of Illinois at Chicago, Chicago, IL, United States.
Compare Pigment Location, Surface Roughness and the Dynamic Coefficient of Friction (dCOF) of 5 Different Limbal Ring Hydrogel Contact Lenses

Charis Lau 1 Kathrine Osborn-Lorenz 1 Meredith Jansen 1 Danielle Boree 1 Samuele Tosatti 2 Lenora Copper 1

1. Johnson & Johnson Vision Care, Inc, Jacksonville, FL, United States. 2. SuSoS AG, Dubendorf, Switzerland.
Clinical/Epidemiologic Research - Poster

291 - P01-1
Reticular Drusen in Chinese
Ian Wong 1 Raymond L. Wong 1 Qing Li 1 Wai Yip, Jacky Lee 1 Shiu Ming, Jimmy Lai 1
1. University of Hong Kong, Hong Kong, China.

292 - P02-2
MMP20 and ARMS2/HTRA1 are Associated with Neovascular Lesion Size in Age-Related Macular Degeneration
Yumiko Akagi-Kurashige 1,2 Kenji Yamashiro 1 Masahiro Miyake 1,2 Masaaki Saito 1 Masako Sugawara 4 Ching-Yu Cheng 4,7 Khor Chiea Chuen 4 Wong Tien Yin 5,7 Nagahisa Yoshimura 1
1. Kyoto University Graduate School of Medicine, Kyoto, Japan. 2. Center for Genomic Medicine, Kyoto, Japan. 3. Fukushima Medical University School of Medicine, Fukushima, Japan. 4. Kobe City Medical Center General Hospital, Kobe, Japan. 5. Singapore Eye Research Institute, Singapore, Singapore. 6. Division of Human Genetics, Genome Institute of Singapore, Singapore, Singapore. 7. Department of Ophthalmology, National University of Singapore and National University Health System, Singapore, Singapore.

Study Group: Nagahama Cohort Research Group.

293 - P03-3
Utilization of Eye Care Services Among Those with Unilateral Visual Impairment in Rural South India – Andhra Pradesh Eye Disease Study (APEDS)
Srinivas Mamamula 1,2 Rohit C. Khanna 1 Giridhar Pyda 1 Rao N. Gullapalli 1
1. GPR ICARE, L V Prasad Eye Institute, Hyderabad, India. 2. Brien Holden Eye Research Centre, L V Prasad Eye Institute, Hyderabad, India.

294 - P04-4
Awareness and health-seeking practices about cataract in urban slum population of Delhi in India
Vasundhra Misra 1 Praveen Vashist 1 Tanuj Dada 2 Sumit Malhotra 1 Suraj Singh Senjam 1 S N Dwivedi 3
1. Centre for Community Medicine, AIIMS, New Delhi, Delhi, India. 2. Ophthalmology, AIIMS, New Delhi, India. 3. Department of Biostatistics, AIIMS, New Delhi, India.

295 - P05-5
Magnitude and Determinants of Ophthalmoplagia among Persons with Diabetes in Saudi Arabia
Eman S. Kahtani 1
1. VR, King Khaled Eye Specialist Hospital, Riyadh, Middle, Saudi Arabia.

Study Group: Rajiv Khandekar <rkhandekar@kkesh.med.sa>; Amira Youssef (ph_amira83@hotmail.com)

296 - P06-6
VF-14 score and referral decisions for cataract patients made by optometrists at a triaging ophthalmology clinic in Ampang, Malaysia
Duratul A. Hussin 1 Peter L. Hendicott 1 Andrew Carkeet 1 Philip Baker 2 Ai-Hong Chen 3
1. School of Optometry & Vision Science, Queensland University of Technology, Kelvin Grove, QLD, Australia. 2. School of Public Health and Social Work, Queensland University of Technology, Kelvin Grove, QLD, Australia. 3. Community of Research (DDH), Universiti Teknologi MARA, Shah Alam, Selangor, Malaysia.
**Immunology/Microbiology - Poster**

**297 - P07-1**
Loop-Mediated Isothermal Amplication For The Diagnosis Of Herpes Simplex Virus Keratities
Zhuoshi Wang 1, 2
1. He Eye Hospital, Shenyang, China. 2. He University, Shenyang, LN, China.

**298 - P08-2**
Human corneal endothelial cells are fully permissive for human cytomegalovirus infection
Mayumi Hosogi 1, 2, Hideo Akiyama 1, 2, Teruki Inoue 1, Nobuyuki Shina 1, Yoko Nakatani 1, Hiroshi Yorifuji 1, Hiroki Isomura 1, Shoji Kishi 1
1. Gunma University Graduate School of Medicine, Maebashi, Japan. 2. University of Tokyo, Bunkyo-ku, Japan.

**299 - P09-3**
Long-term observation of murine models of anterior scleritis
Hiroyuki Taniguchi 1, Yuki Kitahara 1, Junko Hori 1
1. Ophthalmology, Nippon Medical School, Tokyo, Japan.

**300 - P10-4**
The V-domain Ig suppressor of T cell activation (VISTA) plays an essential role in the acceptance of corneal allografts
Tomoyuki Kunishige 1, Hiroki Taniguchi 1, Tatsukuri Ohno 2, Miyuki Azuma 2, Junko Hori 1
1. Nippon medical school, Tokyo, Japan. 2. Tokyo Medical and Dental University, Tokyo, Japan.

**301 - P11-5**
Inhibiting effect of wild rice (Zizania latifolia (Griseb Turcz) on endotoxin-induced uveitis in mice
Kouichi Ohta 1, Atsuko Sato 1, Takao Hirano 2, Takanobu Kikuchi 3, Kanji Horibe 1, Nobuyuki Udagawa 5
1. Ophthalmology, Matsumoto Dental University, Shiojiri, Japan. 2. Ophthalmology, Shinshu University School of Medicine, Matsumoto, Japan. 3. Instrumental Analysis, Research Center for Human and Environmental Science, Shinshu University, Matsumoto, Japan. 4. Oral Histology, Matsumoto Dental University, Shiojiri, Japan. 5. Biochemistry, Matsumoto Dental University, Shiojiri, Japan.

**302 - P12-6**
Analysis of PU.1 expression in experimental autoimmune uveoretinitis
Akihiko Umazume 1, 2, Takeshi Kezuka 1, Ryusaku Matuda 1, Naoyuki Yamakawa 1, Takuya Yashiro 2, Chiharu Nishiyama 2, Hiroshi Goto 1
1. Tokyo Medical University, Tokyo, Japan. 2. Tokyo University of Science, Tokyo, Japan.

**303 - P13-7**
Effects of intermittent intraocular pressure elevations on the humoral autoantibody repertoire
Julia Teister 1, Oliver W. Gramlich 1, Theresa Lueckner 1, Maren Kriechbaum 1, Norbert Pfeiffer 1, Franz Grus 1
1. Dept. of Ophthalmology, Experimental Ophthalmology, University Medical Center of the Johannes Gutenberg University, Mainz, Germany.

**304 - P14-8**
Complement synthesis and propagation by monocytes/microglia in AMD
Matt Rutar 1, Riccardo Natoli 1, 2, Krisztina Valter 1, 2, Jan Provis 1, 2
1. The John Curtin School of Medical Research, The Australian National University, Canberra, ACT, Australia. 2. ANU Medical School, The Australian National University, Canberra, ACT, Australia.

**305 - P15-9**
Transcription Factor Expression by Human Retinal Endothelial Cells in Response to Tumor Necrosis Factor (TNF)- α and Interleukin (IL)-1 β
Liam Ashander 1, Binoy Appukuttan 1, Yuefang Ma 1, Dione Gardner-Stephen 1, Justine Smith 1
1. Eye and Vision Health, Flinders University School of Medicine, Bedford Park, SA, Australia.

**306 - P16-10**
HIF-1 α upregulates ANGPTL4 to promote angiogenesis in Uveal Melanoma
Ke Hu 1, 2, Savalan B. Farrokhran 1, Murilo Rodrigues 1, Brooks Puchner 1, Laura Asnaghi 1, James T. Handa 1, Shannath Merbs 1, Charles Eberhart 1, Silvia Montaner 1, Akrit Sodhi 1, 2
1. Wilmer Eye Institute, Johns Hopkins School of Medicine, Baltimore, MD, United States. 2. Ophthalmology, The First Affiliated Hospital of Chongqing Medical University, Chongqing, China. 3. Department of Oncology and Diagnostic Sciences, School of Dentistry, Department of Pathology, School of Medicine, and Greenebaum Cancer Center, University of Maryland, Baltimore, MD, United States.

**307 - P17-11**
Diagnostic evaluation of RTVue-100 Fourier-domain optical coherence tomography in herpetic eye disease
Reiko Kobayashi 1, Noriyasu Hashida 1, Shizuka Koh 1, Takeshi Soma 1, Kohji Nishida 1
1. Ophthalmology, Osaka University School of Medicine, Suita, Japan.

**308 - P18-12**
Virulence factors in Pseudomonas aeruginosa isolates associated with keratitis
Naoko Oka 1, Takashi Suzuki 1, Naoki Hayashi 2, Naomasa Gotoh 2, Yuichi Ohashi 1
1. Department of Ophthalmology, Ehime University School of Medicine, Toon, Japan. 2. Department of Microbiology and Infection Control Sciences, Kyoto Pharmaceutical University, Yamashina, Kyoto, Japan.

**309 - P19-13**
Demodex infestation as a potential cause of keratitis
Lingyi Liang 1, Hongmin Ke 1
1. Cornea, Zhongshan Ophthalmic Center, Guangzhou, China.
310 - P20-14
Long-term Result of Tacrolimus Ointment in Ocular Graft versus Host Diseases
Ji Won Jung 1 Da Ham Cho 2 Youngyul Seo 1

311 - P21-15
Clinical backgrounds and characteristics of the patients with scleritis during the three years from 2011 to 2014
Atsushi Yoshida 1 Akira Ookubo 1 Hidetoshi Kawashima 1
1. Ophthalmology, Jichi Medical University, 3311-1 Yakushiji, Shimotsuke-shi, Tochigi, Japan.

312 - P22-16
Incidence Rate and Risk Factors for Vision Loss among AIDS-related Cytomegalovirus Retinitis Patients in Southern Thailand
Usanee Seepongphun 1 Wantanee Sittivarakul 1
1. Ophthalmology, Prince of Songkla University, Hatyai, Songkhla, Thailand.

313 - P23-17
Analysis of complications in patients with HTLV-1 uveitis
Koju Kamoi 1 Yukiko Terada 1 Kazuorni Miyata 2 Manabu Mochizuki 1 Kyoko Ohno-Matsui 1
1. Department of Ophthalmology & Visual Science, Tokyo Medical and Dental University, Tokyo, Japan. 2. Miyata Eye Hospital, Miyakonojo, Japan.

314 - P24-18
Rapid detection of Staphylococcus aureus and Staphylococcus epidermidis in infectious endophthalmitis by SYBR Green RT PCR
Ratu Puri Sastradiwirja 1 Iwan Sovani 1
1. Ophthalmology, Cicendo National Eye Hospital, Bandung, West Java, Indonesia.

315 - P25-19
Relationship between Choroidal Blood Flow Velocity and Choroidal Thickness during Systemic Corticosteroid Therapy for Vogt-Koyanagi-Harada Disease
Kiriiko Hirooka 1 Wataru Saito 1 Kenichi Namba 1 Yoko Takemoto 1 Kazuorni Mizuuchi 1 Tomoe Uno 1 Yoshiaki Tagawa 1 Michiyuki Saito 1 Yuki Hashimoto 1 Susumu Ishida 1
1. Hokkaido University Graduate School of Medicine, Sapporo, Japan.

316 - P26-20
Application of International Revised Diagnostic criteria for Diagnosis of Vogt-Koyanagi-Harada (VKH) disease
Pankajkumar Roy 1
1. Vitreo Retina Department, National Institute of Ophthalmology, Dhaka, Bangladesh.
Early clinical outcomes after implantation of a fully diffractive trifocal toric intraocular lens for presbyopia correction
Harvey Uy 1,2 Richard Nepomuceno 1,2

Evaluation of Incomplete Corneal Incision in Femtosecond-Laser Assisted Cataract Surgery
Shinichi Oki 1 Manabu Hirasawa 1 Michiru Tanaka 1 Keiichiro Minami 1 Hiroko Bissen-Miyajima 1
1. Ophthalmology, Tokyo Dental College Suidobashi Hospital, Chiyoda-ku, Japan.

Correlation of Cumulative Dissipated Energy and Intraocular Pressure After Routine Phacoemulsification with Posterior Chamber Intraocular Lens Implantation in Patients with Age-related Cataract
Pearl M. Padilla 1
1. Ophthalmology, Makati Medical Center, Makati City, Philippines.

Incidence of Bacterial Contamination of Cataract Day-Packs Used in a Tertiary Hospital
Aileen Q. Viguilla 1 Sherman O. Valero 1
1. Ophthalmology, The Medical City, Ortigas Avenue, Philippines.

A comparison of keratometry measurements taken with the IOL Master 500 the NIDEK AL-Scan Optical Biometer, and the Oculus Pentacam
Tariq Ayoub 1,2 Alex Baneke 1 Mohammed Oomerjee 1 Christopher Hammond 1,2 Omar Mahroo 1,2

Pattern of Visual Outcome After Nd:YAG Laser Capsulotomy In Patients with PCO and it's relationship to intraocular pressure, A Study of 60 Cases
Farhana Hossain 1,2 Ava Hossain 1
1. Green Life Hospital Medical College, Dhaka, Bangladesh. 2. Ispahani Islamia Eye Hospital, Dhaka, Bangladesh.

Optical simulation of water clefts
Yoriko Takahashi 1 Takushi Kawamorita 2 Yusuke Seki 1 Norihiro Mita 1 Eri Kubo 1 Kimiya Shimizu 2 Hiroshi Sasaki 1
1. Department of Ophthalmology, Kanazawa Medical University, Kanazawa, Japan. 2. Department of Allied Health Science, Kitasato University, Kanagawa, Japan.
3:10 PM - 4:10 PM 301-304 (3F) / Exhibition Hall

Retinal Cell Biology - Poster

331 - P41-1

The neoangiogenesis profile of the murine laser-induced CNV mode

Helder Andre 1,2, Selcuk Tunik 1,2, Monica Aronsson 1,2, Anders Kvanta 1,2
1. Vitreo-Retinal Clinic, St. Erik Eye Hospital, Stockholm, Sweden. 2. Clinical Neurosciences, Karolinska Institute, Stockholm, Sweden.

332 - P42-2

The effect of afiblercept on the barrier function of polarized retinal pigment epithelium cells

Naoya Yoshihara 1, Hiroto Terasaki 1, Hiroki Otsuka 1, Shozo Sonoda 1, Taiji Sakamoto 1, Toshio Hisatomi 2, Tatsuro Ishibashi 2
1. Kagoshima University, Kagoshima, Japan. 2. Kyushu University, Fukuoka, Japan.

333 - P43-3

The role of Sirt1 for regulating VEGF in human RPE

Tomoka Ishida 1, Takeshi Yoshida 1, Kosei Shinhara 1, Koutei Ryu 1, Kyoko Ohno-Matsui 1
1. Ophthalmology, Tokyo Medical and Dental University, Bunkyo, Japan.

334 - P44-4

TAK1 inhibition accelerates cellular senescence of retinal pigment epithelial cells, possible new pathway underlies early stages of AMD

Zeev Dvashi 1, Ayala Pollack 1
1. Ophthalmology Research Laboratory, Kaplan Medical Center, Rehovot, affiliated to the Hebrew University, Jerusalem, Rehovot, Israel.

335 - P45-5

Characterization of HTRA1 Promoter in Patients with Exudative Age-Related Macular Degeneration

Daisuke lejima 1, Mao Nakayama 1, Takeshi Itabashi 1, Masakazu Akahori 1, Yuichi Kawamura 1, Takeshi lwata 1
1. National Institute of Sensory Organs, National Hospital Organization Tokyo Medical Center, Tokyo, Japan.

336 - P46-6

Enhanced differentiation of mouse induced pluripotent stem cells towards retinal pigment epithelium cells by using low-level laser irradiation

Wentao Wu 1, Chun Zhang 1
1. Department of Ophthalmology, Peking University Third Hospital, Beijing, China.

337 - P47-7

Suppression of transient receptor potential canonical channel 4 inhibits vascular endothelial growth factor-induced retinal neovascularization

Jin Hyong Kim 1, Hyun Beom Song 1, Marcus Fruttiger 2, Jeong Hun Kim 1

338 - P48-8

Different Distributions of M1 and M2 Macrophages in the Mouse Model of Laser-induced Choroidal Neovascularization

Yedi Zhou 1, Shigeo Yoshida 1, Takeru Yoshimura 1, Yoshiyuki Kobayashi 1, Takahito Nakama 1, Muneo Yamaguchi 1, Keihiro Ishikawa 1, Yuji Oshima 1, Tatsuro Ishibashi 1
1. Department of Ophthalmology, Kyushu University Graduate School of Medical Sciences, Fukuoka, Japan.

339 - P49-9

Alteration of N-glycan Profiles in Diabetic Retinopathy

Saori Inafuku 1,2, Kousuke Noda 1, Hiroto Terasaki 1, Hiroki Otsuka 1, Wataru Saito 1, Tetsu Ohashi 2, Atsushi Kanda 1, Shin-Ichiro Nishimura 1, Susumu Ishida 1
1. Hokkaido University Graduate School of Medicine, Sapporo, Japan. 2. Graduate School of Life Sciences, Hokkaido University, Sapporo, Japan.

340 - P50-10

Toll-like receptor 4 is implicated in high-fat diet induced activation of macrophage/microglial cells and DNA damage of retina

Jong-Jer Lee 1,3, Jiin-Haur Chuang 2, Pei-Wen Wang 1, I-Hui Yang 1, Chia-Shiang Chang 1
1. Ophthalmology, Kaohsiung Chang Gung Memorial Hospital and Chang Gung University College of Medicine, Kaohsiung, Taiwan. 2. The Graduate Institute of Clinical Medical Sciences, Chang Gung University College of Medicine, Taoyuan, Taiwan. 3. Endocrinology and Metabolism, Kaohsiung Chang Gung Memorial Hospital and Chang Gung University College of Medicine, Kaohsiung, Taiwan.

341 - P51-11

SP1 expression in AEGs exposed rat retinas and effects of neurotrophic factors

Guzel Bikbova 1, Toshiyuki Oshitari 1, Shuichi Yamamoto 1

342 - P52-12

Protective effects of systemic treatment with methylprednisolone in a rodent model of non-arteritic anterior ischemic optic neuropathy (rAION)

Tzu Lun Huang 1, Rong Kung Tsai 2
1. Far Eastern Memorial Hospital, New Taipei City, Taiwan. 2. Tzu Chi University, Huaiilen, Taiwan.
In vivo imaging of stress responses in retinal ganglion cells using AAV2-mediated delivery of pathway-specific promoter driven reporters
Koji M. Nishiguchi 1 Kosuke Fujita 2 Satoru Tsuda 1 Yusuke Fujii 2 Kotaro Yamamoto 2 Kota Sato 2 Masayuki Yasuda 2 Toru Nakazawa 1,2
1. Department of Advanced Ophthalmic Medicine, Tohoku University Graduate School of Medicine, Sendai, Japan. 2. Department of Ophthalmology, Tohoku University Graduate School of Medicine, Sendai, Japan.

Effects of Intervention timing with systemic methylprednisolone in a rat model of anterior ischemic optic neuropathy (rAION)
Rong-Kung Tsai 1,2 Chung-Hsing Chang 3
1. Institute of Eye Research, Buddhist Tzu Chi General Hospital, Hualien, Taiwan. 2. Institute of Medical Sciences, Tzu Chi University, Hualien, Taiwan. 3. Department of Dermatology, Kaohsiung Medical University Hospital, Kaohsiung, Taiwan.

ATP6AP2/(pro)renin receptor contributes to glucose metabolism via stabilizing the E1 β subunit of pyruvate dehydrogenase complex
Atsuhiro Kanda 1 Kosuke Noda 1 Susumu Ishida 1
1. Department of Ophthalmology, Hokkaido University Graduate School of Medicine, Sapporo, Hokkaido, Japan.

Lutein’s effect on repairing the tight junction of the retinal pigment epithelium induced by light exposure
Mamoru Kamoshita 1,2 Toshihide Kurihara 1,2 Norihiro Nagai 1,2 Hideto Osada 2 Saori Kobayashi 3 Kazuo Tsubota 1 Yoko Ozawa 1
1. Ophthalmology, Keio University School of Medicine, Shinjuku, Tokyo, Japan. 2. Laboratory of Retinal Cell Biology, Keio University School of Medicine, Shinjuku, Tokyo, Japan. 3. Wakasa Seikatsu Co.Ltd, Kyoto, Japan.

C1q increases ganglion cell survival in adult rat retinal explants in vitro - compliments of the complement system
Linnea Taylor 1 Karin Arnér 1 Fredrik Ghosh 1

Ultrathin silk fibroin membranes as prosthetic Bruch’s membrane
Audra M. Shadforth 1,2 Shuko Suzuki 2 Christina Theodoropoulos 1 Neil A. Richardson 1,2 Traian V. Chirila 2 Damien G. Harkin 1,2
1. Queensland University of Technology, Brisbane, QLD, Australia. 2. Queensland Eye Institute, Brisbane, QLD, Australia.

Neuroprotective effect of Rapamycin in Lipopolysaccharide (LPS) -induced uveitis and retinitis
Tomohiro Okamoto 1,2 Mamoru Kamoshita 1,2 Kazuo Tsubota 1 Yoko Ozawa 1,2
1. Department of Ophthalmology, Keio University, School of Medicine, Shinjuku, Tokyo, Japan. 2. Laboratory of Retinal Cell Biology, Keio University, School of Medicine, Shinjuku, Tokyo, Japan.

Differentiation of human retinal pigment epithelial cells cultured on thin alginate/gelatin layer
Hoda Shams Najafabadi 1 zahasheila sohei 1 shahram samie 2 hamid ahmadi 3

Blue light induces inflammatory marker expression in the retinal pigment epithelium-choroid
Toshio Narimatsu 1,2 Kazuno Negishi 3 Manabu Hirasawa 1,2 Toshihide Kurihara 1,2 Kazuo Tsubota 1 Yoko Ozawa 1,2
1. Laboratory of Retinal Cell Biology, Keio University School of Medicine, Shinjuku, Tokyo, Japan. 2. Ophthalmology, Keio University School of Medicine, Shinjuku, Tokyo, Japan.

Blue Light Exposure-induced Oxidative Stress and Cell Death in the Retinal Pigment Epithelial Cells are Protected with NF-E2-related Factor 2 Pathway
Kei Takayama 1 Hiroki Kaneko 1 Fuxiang Ye 1 Ryo Ijima 1 Shu Kachi 1 Akiko Higuchi 1 Yosuke Nagasaka 1 Hiroko Terasaki 1
1. Department of Ophthalmology, Nagoya University Graduate School of Medicine , Nagoya, Japan.

Neuroprotective effect of bilberry extract on the light-induced retinal degeneration in vivo
Hideto Osada 1 Tomohiro Okamoto 1,3 Seiji Miyake 1 Saori Kobayashi 2 Kazuo Tsubota 1 Yoko Ozawa 1,3
1. Laboratory of Retinal Cell Biology, Keio University, School of Medicine, Tokyo, Japan. 2. Wakasa Seikatsu Co.Ltd, Kyoto, Japan. 3. Ophthalmology, Keio University, School of Medicine, Tokyo, Japan.

Effects of intense visible light on synaptic layers in neonatal chick retina, a morphological and biochemical investigation
Kumar A. Jha 2 Tapas C. Nag 1 Shashi Wadhwa 1 T S. Roy 1 Pankaj Kumar 1
1. Anatomy, All India Institute of Medical Sciences, New delhi, India. 2. Anatomy, All India Institute of Medical Sciences, New delhi, India.
The result of an analysis of fundus photos taken from 1,443 monkeys at Tsukuba Primate Research Center during 2011-2013

Yusuke Fujii 1 Koji M. Nishiguchi 2 Toshinori Furukawa 2 Fumiko Ono 4 Nobuhiro Shimozawa 3 Mutsumi Togo 6 Michihiro Suzuki 8 Toru Nakazawa 1, 2

1. Department of Ophthalmology, Tohoku University Graduate School of Medicine, Sendai, Japan. 2. Department of Advanced Ophthalmic Medicine, Tohoku University Graduate School of Medicine, Sendai, Japan. 3. Department of Life Science, Kurashiki University of Science and the Arts, Kurashiki, Japan. 4. Faculty of Risk and Crisis Management, Chiba Institute of Science, Choushi, Japan. 5. National Institute of Biomedical Innovation, Tsukuba Primate Research Center, Tsukuba, Japan. 6. The Corporation for Production and Research of Laboratory Primates, Tsukuba, Japan.

Retinal Neuro-degeneration and Oxidative Stress, Vascular Endothelial Growth Factor-B (VEGF-B) in action?!

Pachiappan Arjunan 1 Zhongshu Tang 2 Lijin Dong 2 Zhijian Wu 3 Pamela M. Martin 1 Christopher W. Cutler 1 Xuri Li 2

1. Georgia Regents University, Augusta, GA, United States. 2. Sun Yat-Sen University, Guangzhou, China. 3. National Eye Institute/NIH, Bethesda, MD, United States.

Promotion of retinal progenitor-like cells from adult human retinal pigment epithelial cells using AAV-2 viruses harboring hSox2

Azade Etemadzade 2 Zahrasoheila Soheili 2 Shahram Samiei 1 Razie Ezati 3 Ehsan Ranaei Pimardan 3, 2 Bagher Yakhchali 4 Hamid Ahmadieh 5


Intravitreal human neural stem cells are neuroprotective in a rat model of optic nerve transection in part by upregulation and secretion of gremlin-1

Sang Jin Kim 1, 2 Ji Hyun Yun 2

1. Ophthalmology, Samsung Medical Center, Sungkyunkwan University School of Medicine, Seoul, Korea (the Republic of). 2. Samsung Biomedical Research Institute, Seoul, Korea (the Republic of).

Extra Ocular Muscles and Stem Cells

Damaris Magdalene 1 Bithiah Grace Jaganathan 2 Darilang Mawrie 4 Atul Kumar 4 Jina Bhattacharyya 3

1. Pediatric Ophthalmology and Strabismus, Sri Sankaradeva Nethralaya, Guwahati, Assam, India. 2. Department of Bio technology, IIT, Guwahati, India. 3. Department of Hematology, Guwahati Medical College, Guwahati, India.
Wednesday Feb. 18

9:00 AM - 11:00 AM  Main Hall (1F)/Room 1

Plenary Session 6
Recent Trends in Regenerative Medicine

Organizers
Kohji Nishida
Osaka University Graduate School of Medicine, Suita, Osaka, Japan
Scheffer C. Tseng
TissueTech, Inc., Miami, FL, United States

366: PS6-1
Reprogramming by a Novel Matrix Component HC-HA/PTX3 Purified from Amniotic Membrane

Keynote Speaker: Scheffer C. Tseng¹,²
¹. R&D Department, TissueTech, Inc., Miami, FL, United States. ². Ocular Surface Center, Miami, FL, United States.

367: PS6-2
Development of stem cell-based therapy for corneal diseases-from tissue stem cell to iPS cell

Speaker: Kohji Nishida³
¹. Department of Ophthalmology, Osaka University Graduate School of Medicine, Suita, Osaka, Japan.

368: PS6-3
Ocular Surface Transplantation: Yesterday, Today & Tomorrow

Speaker: Kenneth Kenyon¹,²
¹. Harvard Medical School, Boston, MA, United States. ². Tufts Medical School, Boston, MA, United States.

369: PS6-4
Tissue Stem Cells and Pluripotent Stem Cells in Regeneration of the Cornea

Speaker: Shigeto Shimmura¹
¹. Department of Ophthalmology, Keio University School of Medicine, Shinjuku, Tokyo, Japan.

370: PS6-5
Retinal regeneration therapy for retinal degeneration using ES/iPS derived retinal tissue

Speaker: Michiko Mandai¹
¹. Laboratory for Retinal Regeneration, RIKEN Center for Developmental Biology, Kobe, Hyogo, Japan.

371: PS6-6
Transplantation of Autologous induced Pluripotent Stem Cell-Derived Retinal Pigment Epithelium Cell Sheets for Exudative Age Related Macular Degeneration: A Pilot Clinical Study

Speaker: Yasuo Kurimoto²,¹
¹. Kobe City Medical Center General Hospital, Kobe, Hyogo, Japan. ². Institute of Biomedical Research and Innovation, Kobe, Japan.

372: PS6-7
Gene Transfer Driven Regenerative Medicine Approaches For Corneal Endothelial Disorders

Speaker: Rajiv R. Mohan¹,²
¹. Mason Eye Institute and Vet Med Surgery, University of Missouri-Columbia, Columbia, MO, United States. ². Ophthalmic Research, Harry S Truman Veterans Memorial Hospital, Columbia, MO, United States.
**11:10 AM - 12:10 PM**

**Main Hall (1F)/Room 1**

**Plenary Lecture 2**

**Chair**
Kazuo Tsubota  
Keio University School of Medicine, Shinjuku, Tokyo, Japan

418: PL2

**Sirtuins NAD and Aging**

**Speaker:** Leonard P. Guarente 1


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**12:20 PM - 1:20 PM**

**Main Hall (1F)/Room 1**

**Luncheon Seminar 10**

**Ocular Mucosal Barrier Dysfunction**

**Sponsored by Otsuka Pharmaceutical Co., Ltd.**

**Organizer**
Shigeru Kinoshita  
Kyoto Prefectural University of Medicine, Kyoto, Kyoto, Japan

427: LS10-1

**Topical treatments of dry eye in Japan**

**Speaker:** Yuichi Hori 1

1. Department of Ophthalmology, Toho University Omori Medical Center, Ota, Tokyo, Japan.

428: LS10-2

**The molecular basis of ocular surface glycocalyx dysfunction**

**Speaker:** Pablo Argueso 1

1. Schepens Eye Research Institute and Massachusetts Eye and Ear, Dept. of Ophthalmology, Harvard Medical School, Boston, MA, United States.
Symposium 17
Recent Advances in Dry Eye Research

Organizers
Norihiko Yokoi
Kyoto Prefectural University of Medicine, Kamigyo, Kyoto, Japan
Hyo Myung Kim
College of Medicine, Korea University, Seongbuk, Seoul, Korea (the Republic of)

439: SY17-1
Molecular Biomarkers and Personalized Medicine in Ocular Surface Disease
Speaker: Roger Beuerman 1,2

440: SY17-2
Biomarkers in dry eye disease
Speaker: Kyung Chul Yoon 1
1. Department of Ophthalmology, Chonnam National University Medical School and Hospital, Gwangju, Gwangju, Korea (the Republic of).

441: SY17-3
Visual Disturbance in Dry Eye Disease
Speaker: Shizuka Koh 1
1. Department of Ophthalmology, Osaka University Graduate School of Medicine, Suita, Osaka, Japan.

442: SY17-4
Recent advances in meibomian gland dysfunction
Speaker: Reiko Arita 1,2
1. Ophthalmology, Ito Clinic, Saitama, Japan. 2. Ophthalmology, Keio University, Tokyo, Japan.
Study Group: LIME working group

443: SY17-5
Alterations of mucins at the ocular surface in dry eye
Speaker: Yuichi Hori 1
1. Department of Ophthalmology, Toho University Omori Medical Center, Ota, Tokyo, Japan.
Morning Seminar 2
Lessons from Dry Eye Survey

Sponsored by Otsuka Pharmaceutical Co., Ltd.
Organizer
Kazuo Tsubota
Keio University School of Medicine, Shinjuku, Tokyo, Japan

Lessons from Dry Eye Survey The Impact of Dry Eye Disease on Taxi Drivers: The Tokyo Study
Speaker: Motoko Kawashima 1
1. Department of Ophthalmology, Keio University School of Medicine, Shinjuku, Tokyo, Japan.

Tear-Film Breakup Patterns Surveyed among Taxi Drivers: The Tokyo Study
Speaker: Norihiko Yokoi 1
1. Department of Ophthalmology, Kyoto Prefectural University of Medicine, Kamigyo, Kyoto, Japan.

Plenary Session 7
Cell Biology and Pathology of EMT

Organizers
John McAvoy
University of Sydney, Sydney, NSW, Australia
Choun-Ki Joo
College of Medicine, The Catholic University of Korea, Seocho, Seoul, Korea (the Republic of)
Tetsuro Oshika
Faculty of Medicine University of Tsukuba, Tsukuba, Ibaraki, Japan

Understanding normal lens cell differentiation processes – will this help prevent PCO and promote lens regeneration after cataract surgery?
Keynote Speaker: John McAvoy 1 Yuki Sugiyama 1 Lucy Dawes 1
Frank J. Lovicu 1
1. Save Sight Institute, University of Sydney, Sydney, NSW, Australia.

Regulation of RTK signaling in TGF-β-induced EMT leading to cataract
Speaker: Frank J. Lovicu 1 Magdalena Wojciechowski 1 Guan Nan Zhao 1 John McAvoy 2
1. Discipline of Anatomy & Histology Bosch Institute and Save Sight Institute, University of Sydney, Sydney, NSW, Australia. 2. Save Sight Institute, University of Sydney, Sydney, NSW, Australia.

Transforming growth factor-β induced cytoskeletal rearrangement during epithelial-mesenchymal transition
Speaker: Young Sik Yoo 1 Jong Hwa Jun 1 Choun-Ki Joo 1
1. Catholic Institute for Visual Science College of Medicine, The Catholic University of Korea, Seoul, Korea (the Republic of).

Extracellular matrix modulation of TGFβ/Smad signaling in EMT
Speaker: Kumi Shirai 1 Shizuya Saika 1
1. Department of Ophthalmology, Wakayama Medical University, Wakayama, Wakayama, Japan.

Regulation of EMT and its possibility for suppression of PCO
Speaker: Eri Kubo 1
1. Department of Ophthalmology, Kanazawa Medical University, Kahoku, Ishikawa, Japan.

Study Group: LE
**378: PS7-6**

Conclusive remarks: Epithelial-mesenchymal transition in eye  
**Speaker:** Choun-Ki Joo $^{1,2}$  
1. Department of Ophthalmology & Visual Science, College of Medicine, The Catholic University of Korea, Seoul, Korea (the Republic of).  

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**11:10 AM - 12:10 PM**

**Special Interest Groups 4**  
**Mechanism of Retinal Degeneration**

**Organizers**

Bo Lei  
First Affiliated Hospital of Chongqing Medical University, Chongqing, China  
Mineo Kondo  
Mie University Graduate School of Medicine, Tsu, Mie, Japan

**419: SIG4-1**  
**Stargardt Disease with Foveal Sparing Phenotype**  
**Speaker:** Kaoru Fujinami $^{1,2}$  
1. Ophthalmology/Laboratory of Visual Physiology, National Hospital Organization, Tokyo Medical Center/National Institute of Sensory Organs, Meguro, Tokyo, Japan.  
2. Ophthalmology, Keio University, School of Medicine, Shinjuku-ku, Tokyo, Japan.

**420: SIG4-2**  
**Activation of Liver X Receptor Prevents Inner Retinal Degeneration Induced by N-methyl-D-aspartate**  
**Speaker:** Bo Lei $^1$  
1. Ophthalmology, First Affiliated Hospital of Chongqing Medical University, Chongqing Key Laboratory of Ophthalmology, Chongqing Eye Institute, Chongqing, China.

**421: SIG4-3**  
**Mechanism of paraneoplastic retinopathy with retinal ON bipolar cell dysfunction**  
**Speaker:** Shinji Ueno $^1$  
1. Department of Ophthalmology, Nagoya University Graduate School of Medicine, Nagoya, Japan.

**422: SIG4-4**  
**Comprehensive approach to the retinal ganglion cell changes in optic chiasmal compression**  
**Speaker:** Tae Kwann Park $^1$  
1. Department of Ophthalmology, Soonchunhyang University Hospital, Bucheon, Gyeonggi-do, Korea (the Republic of).
Luncheon Seminar 11
Considerations in the Contemporary Glaucoma Treatment

Sponsored by Alcon Japan Ltd.
Organizer
Tetsuya Yamamoto
Gifu University Graduate School of Medicine, Gifu, Gifu, Japan

429: LS11-1
Treatment and Management for Primary Open-angle Glaucoma
Speaker: Takeo Fukuchi
1. Division of Ophthalmology and Visual Science, Graduated School of Medical and Dental Sciences, Niigata University, Niigata, Niigata, Japan.

430: LS11-2
Outcome considerations in glaucoma treatment
Speaker: Ching Lin Ho

431: LS11-3
Contemporary Glaucoma Treatment
Speaker: Yoshiaki Kiuchi

Symposium 18
Comparative Effectiveness Research in Ophthalmology

Organizers
Masakazu Yamada
Kyorin University Eye Center, Mitaka, Tokyo, Japan
Yoshimune Hiratsuka
National Institute of Public Health, Wako, Saitama, Japan

444: SY18-1
Overview: How can we assess cost, utility, and effectiveness?
Speaker: Rei Goto
1. Hakubi Center of Advanced Research, Graduate School of Economics, Kyoto University, Sakyo, Kyoto, Japan.

445: SY18-2
Cost-effectiveness in the Treatment of Glaucoma
Speaker: Poemen Pui-Man Chan
1. Department of Ophthalmology & Visual Sciences, Chinese University of Hong Kong, Hong Kong, Hong Kong. 2. Hong Kong Eye Hospital, Hong Kong, Hong Kong.

446: SY18-3
Cost Effectiveness of Treating Patients with Age-Related Macular Degeneration
Speaker: Joshua D. Stein
1. Department of Ophthalmology and Visual Sciences, University of Michigan, Ann Arbor, MI, United States. 2. Institute for Healthcare Policy and Innovation, Ann Arbor, MI, United States.

447: SY18-4
Diabetic retinopathy
Speaker: Ryo Kawasaki
1. Department of Public Health, Yamagata University Faculty of Medicine, Yamagata, Yamagata, Japan.
Sponsored by Alcon Japan Ltd.

Organizer
Kazuo Tsubota
Keio University School of Medicine, Shinjuku, Tokyo, Japan

540: AS6-1
Overview of multifocal IOL market
Speaker: Kazuno Negishi
1. Department of Ophthalmology, Keio University School of Medicine, Shinjuku, Tokyo, Japan.

541: AS6-2
Clinical outcomes of a diffractive multifocal toric intraocular lens, a diffractive multifocal intraocular lens with low addition power, and combined implantation of multifocal intraocular lens with different addition powers
Speaker: Ken Hayashi
1. Hayashi Eye Hospital, Fukuoka, Japan.
9:00 AM - 10:00 AM  502 (5F) / Room 3

Glaucoma 1

Moderators
Craig Crosson
The Medical University of South Carolina, Charleston, SC, United States

Tomomi Higashide
Kanazawa University, Graduate School of Medical Science, Kanazawa, Ishikawa, Japan

379-1
Evaluation of vision-specific quality of life using binocular visual field in glaucoma patients
Shiho Kunimatsu-sanuki 1 Kazuko Omodaka 1 Ikumi Takatsu 1 Mineko Ono 2 Yoshimi Suzukamo 2 Toru Nakazawa 1
1. Ophthalmology, Tohoku University Graduate School of Medicine, Sendai, Miyagi, Japan. 2. Physical Medicine and Rehabilitation, Tohoku University Graduate School of Medicine, Miyagi, Japan.

380-2
Partial abrasion of inner retinal layers in frequent eye rubbing patients
Ritsuko Yamada 1, 2 Tadayuki Nishide 1 Kazuro Yabuki 3 Atsuya Takayama 1 Nobuhisa Mizuki 1
1. Department of Ophthalmology, Yokohama City University School of Medicine, Yokohama, Japan. 2. Radioisotope Institute St. Marianna University School of Medicine, Kawasaki, Japan. 3. Department of Ophthalmology, Saiseikai Yokohama-shi Nanbu Hospital, Yokohama, Japan.

381-3
Transcorneal electrical stimulation therapy for glaucomatous optic neuropathy
Nga Kwan B. Choy 1 Shiu Ming, Jimmy Lai 1 Wai Yip, Jacky Lee 1
1. Faculty of Medicine, The University of Hong Kong, Hong Kong, Hong Kong.

382-4
Valproic Acid Protects Retinal Neurons from NMDA-Induced Neurotoxicity via Stimulation of Neuronal TrkB Receptors
Atsuko Kimura 1 Kazuhiko Namekata 1 Xiaoli Guo 1 Takahiko Noro 1 Chikako Harada 1 Takayuki Harada 1
1. Visual Research Project, Tokyo Metropolitan Institute of Medical Science, Tokyo, Japan.

383-5
Spermidine stimulates neuroprotection and optic nerve regeneration following optic nerve injury
Takahiko Noro 2, 1 Kazuhiko Namekata 2 Xiaoli Guo 2 Atsuko Kimura 2 Yuriko Azuchi 2 Tadashi Nakano 1 Hiroshi Tsuneoka 1 Takayuki Harada 2
1. Ophthalmology, Jikei University School of Medicine, Tokyo, Japan. 2. Visual Science Project, Tokyo Metropolitan Institute of Medical Science, Tokyo, Japan.

384-6
A common, protein-coding variant in the SIX6 gene confers POAG risk by altering DNA binding properties
Michael Hauser 1, 2 Joshua Schipper 6 Shelby Strickland 1 Megan Carnes 4 Yangfan Liu 3 Edwin Oh 3 Nicholas Katsanis 5 Allison Ashley-Koch 1 Raluca Gordan 1 R. R. Allingham 2
1. Medicine, Duke University, Durham, NC, United States. 2. Ophthalmology, Duke University, Durham, NC, United States. 3. Biostatistics and Bioinformatics, Duke University, Durham, NC, United States. 4. Biology, North Carolina State University, Raleigh, NC, United States. 5. Cell Biology, Duke University, Durham, NC, United States. 6. Center for Genomic and Computational Biology, Duke University, Durham, NC, United States.

Study Group: NEIGHBORHOOD Investigators
10:05 AM - 11:05 AM  
502 (SF) / Room 3  

**Glaucoma 2**

**Moderators**

Paul Kaufman  
University of Wisconsin School of Medicine & Public Health, Madison, WI, United States  
Yoshiaki Kiuchi  
Hiroshima University, Hiroshima, Hiroshima, Japan

**385-1**  
**Role of the Renin-Angiotensin System in Trabecular Meshwork of Glaucoma**

Erdal Tan Ishizuka 1, Atsuhiro Kanda 1, Yasuhiro Shinmei 1, Satoshi Kinoshita 1, Yoko Dong 2, Saori Inafuku 1, Yoshiaki Tagawa 1, Kousuke Noda 1, Susumu Ishida 1

1. Department of Ophthalmology, Hokkaido University Graduate School of Medicine, Sapporo, Japan.

Study Group: Laboratory of Ocular Cell Biology and Visual Science

**386-2**  
**Correlation Between Serial Scleral and Corneal Pneumotonometry**

Debbie S. Kuo 1, Yvonne Ou 1, Bennie Jeng 2, Robert Bhisitkul 1, Jay M. Stewart 1, Jacque Duncan 1, Ying Han 1


**387-3**  
**Outcomes of Combined subconjunctival with subscleral Ologen implant in glaucoma filtering surgery**

Dewang Angmo 1, Talvir Siddhu 1, Meenakshi Wadhwani 1, Shreyas Temkar 1, Tanuj Dada 1

1. Ophthalmology, Dr RP Centre for Ophthal Sciences, AIIMS, New Delhi, India.

**388-4**  
**Effects of ranibizumab on cultured human Tenon’s fibroblast, An in vitro study**

Siti Munirah 1, Sushil Kumar Vasudevan 1, Siti Hamimah S. Abdul Kadir 1, Zakaria Bannur 1, Jonathan Crowston 2

1. Faculty of Medicine, Brain and Neuroscience Communities of Research, Universiti Teknologi MARA, Shah Alam, Selangor, Malaysia. 2. Centre for Eye Research Australia, Melbourne, VIC, Australia.

**389-5**  
**Visual Impairment after Trabeculectomy with Adjunctive Mitomycin C and Its Risk Factors**

Kenji Kashiwagi 1, Satoshi Kogure 1, Fumihiko Mabuchi 1, Tatsuya Chiba 1, Tetsuya Yamamoto 2, Yasuaki Kuwayama 2, Makoto Araie 4

1. Ophthalmology, University of Yamanashi, Chuo, Japan. 2. Ophthalmology, University of Gifu, Gifu, Japan. 3. Ophthalmology, Fukushima Eye Clinic, Osaka, Japan. 4. University of Tokyo, Tokyo, Japan.
11:10 AM - 12:10 PM 502 (5F)/Room 3

Special Interest Groups 5
Corneal Endothelial Health and Disease

Organizer
Shigeru Kinoshita
Kyoto Prefectural University of Medicine, Kyoto, Kyoto, Japan

423: SIG5-1
The scientific foundation of DMEK for treatment of endothelial disorders
Speaker: Friedrich E. Kruse ¹ Ursula Schloetzer-Schrehardt ¹
Theofilos Tourtas ¹ Johannes Menzel-Severing ¹
1. Department of Ophthalmology, University of Erlangen-Nuremberg, Erlangen, Germany.

424: SIG5-2
Effect of Topography on Corneal Endothelial Cell Behaviour
Speaker: Jodhbir S. Mehta ¹, ²

425: SIG5-3
Development of a bioengineered corneal endothelial cell sheet to fit the corneal curvature
Speaker: Nobuyuki Shima ¹ Masahiro Yamaguchi ² Shiro Amano ³, ⁴ Satoru Yamagami ¹
1. Department of Ophthalmology, The University of Tokyo, Bunkyo-ku, Tokyo, Japan. 2. Juntendo University School of Medicine, Tokyo, Japan. 3. Inoue Eye Hospital, Tokyo, Japan. 4. Miyata Eye Hospital, Ehime, Japan.

426: SIG5-4
Cell Therapy for the Treatment of Corneal Endothelial Dysfunction
Speaker: Naoki Okumura ¹, ²
1. Department of Biomedical Engineering, Doshisha University, Kyoto, Kyoto, Japan. 2. Department of Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan.

12:20 PM - 1:20 PM 502 (5F)/Room 3

Luncheon Seminar 12
The History and Prospects of Orthokeratology Contact Lenses; Global and Japanese Development

Sponsored by Universal View Co., Ltd. / TORAY INDUSTRIES, INC.

Organizer
Kenneth Kenyon
Tufts Medical School, Boston, MA, United States

432: LS12-1
Orthokeratology: A Global Perspective
Speaker: Kenneth Kenyon ¹, ²
1. Ophthalmology, Tufts Medical School, Boston, MA, United States. 2. Ophthalmology, Harvard Medical School, Boston, MA, United States.

433: LS12-2
Orthokeratology (Ortho-K) in Japan ~ 6 years after approval ~
Speaker: Kenichi Yoshino ¹
1. Ophthalmology, Yoshino Eye Clinic, Taito-ku, Tokyo, Japan.
Symposium 19
Cataract: Recent Advances in Etiopathogenic Signaling and Potential Therapies

Organizers
Dhirendra P. Singh
University of Nebraska Medical Center, Omaha, NE, United States
Eri Kubo
Kanazawa Medical University, Kahoku, Ishikawa, Japan

448: SY19-1
Thiol-based redox regulation and signaling in lens epithelial cells
Speaker: Hongli Wu 1, 2, Christy Xavier 1, Xiaobin Liu 1
1. Pharmaceutical Sciences, University of North Texas Health Science Center, Fort Worth, TX, United States. 2. North Texas Eye Research Institute, Fort Worth, TX, United States.
Study Group: Lens (LE)

449: SY19-2
Prdx6 Mutated at Sumo1 Sites Protects Lens Epithelial Cells by Escaping And Blocking Oxidative Stress-Induced Aberrant Sumoylation Signaling
Speaker: Dhirendra P. Singh 1
1. Ophthalmology and Visual Sciences, University of Nebraska Medical Center, Omaha, NE, United States.

450: SY19-3
Autophagy is essential for intracellular quality control and suppression of age-related cataract
Speaker: Hideaki Morishita 1, Satoshi Eguchi 2, Hirotaka Kimura 2, Junko Sasaki 2, Michael L. Robinson 1, Takehiko Sasaki 2, Noboru Mizushima 1
1. Biochemistry and Molecular Biology, The University of Tokyo, Tokyo, Japan. 2. Medical Biology, Akita University Graduate School of Medicine, Akita, Japan. 3. Zoology, Miami University, Pearson Hall, OH, United States.

451: SY19-4
How Do Genetic Modifiers Prevent or Assist Cataract Development
Speaker: Xiaohua Gong 1
1. Vision Science and Optometry, University of California Berkeley, Berkeley, CA, United States.

452: SY19-5
Isomerizations of aspartyl residues in lens crystallins from age-related cataracts
Speaker: Noriko Fujii 1, Takumi Takata 1, Norihiko Fujii 2, Hiroshi Sasaki 3
1. Radiation Biochemistry and Biological Function Division of Radiation Life Science, Research Reactor Institute, Kyoto University, Sennangun, Osaka, Japan. 2. Teikyo University, Tokyo, Japan. 3. Kanazawa Medical University, Uchinada, Japan.
9:00 AM - 11:00 AM  503 (5F)/Room 4

**Plenary Session 8**

**Imaging in Uveitis**

**Organizers**

Sunil Srivastava  
Cleveland Clinic, Cleveland, OH, United States

Annabelle A. Okada  
Kyorin University School of Medicine, Mitaka, Tokyo, Japan

**391: PS8-1**

**Overview on Imaging in Uveitis: What's Useful and What's Not**

**Keynote Speaker:** Sunil Srivastava ¹

1. Cole Eye Institute, Cleveland Clinic, Cleveland, OH, United States.

**392: PS8-2**

**Fluorescein angiography in uveitis**

**Speaker:** Hyeong Gon Yu ¹

1. Department of Ophthalmology, Seoul National University College of Medicine, Seoul, South Korea (the Republic of).

**393: PS8-3**

**Indocyanine green angiography in uveitis**

**Speaker:** Kei Nakai ¹

1. Yodogawa Christian Hospital/ Department of Ophthalmology, Osaka University Graduate School of Medicine, Suita, Osaka, Japan.

**394: PS8-4**

**Laser speckle flowgraphy in uveitis**

**Speaker:** Daiju Iwata ¹

1. Department of Ophthalmology, Hokkaido University Graduate School of Medicine, Sapporo, Hokkaido, Japan.

**395: PS8-5**

**EDI-OCT in Behcet’s disease**

**Speaker:** Min Kim ¹ Sung Chul Lee ¹

1. Department of Ophthalmology, Yonsei University College of Medicine, Seodaemun-gu, Seoul, Korea (the Republic of).

**396: PS8-6**

**EDI-OCT in uveitis and scleritis**

**Speaker:** Annabelle A. Okada ¹ Hiroshi Keino ¹ Takayo Watanabe ¹ Makiko Nakayama ¹

1. Department of Ophthalmology, Kyorin University School of Medicine, Mitaka-shi, Tokyo, Japan.

12:20 PM - 1:20 PM  503 (5F)/Room 4

**Luncheon Seminar 13**

**The Efficacy and Biological Significance of Aflibercept as a VEGF Family Blocker**

Sponsored by Bayer Yakuhin, Ltd. / Santen Pharmaceutical Co., Ltd.

**Organizer**

Susumu Ishida  
Hokkaido University Graduate School of Medicine, Sapporo, Hokkaido, Japan

**434: LS13-1**

**The effect of intravitreous aflibercept treatment for Japanese patients with exudative Age-related macular degeneration**

**Speaker:** Yuji Oshima ¹

1. Department of Ophthalmology, Graduate School of Medical Science, Kyushu University, Fukuoka, Japan.

**435: LS13-2**

**Evolving Therapeutic Option for Diabetic Macular Edema -Aflibercept-**

**Speaker:** Kousuke Noda ¹

1. Department of Ophthalmology, Hokkaido University Graduate School of Medicine, Sapporo, Hokkaido, Japan.
Symposium 20
Basic Research in Ocular Infection and Immunology

Organizers
Soon-Phaik Chee
Singapore National Eye Centre, Singapore, Singapore
Kenichi Namba
Hokkaido University Graduate School of Medicine, Sapporo, Hokkaido, Japan

453: SY20-1
Autoimmunity vs autoinflammation in ocular inflammation
Speaker: Yih-Shiou Hwang 1
1. Department of Ophthalmology, Chang Gung Memorial Hospital, Taipei, Taiwan.

454: SY20-2
Immunomodulation in epidemic keratoconjunctivitis
Speaker: Nobuyo Yawata 1, 2
1. Singapore Eye Research Institute, Singapore, Singapore. 2. Duke-NUS Graduate Medical School/Singapore Institute for Clinical Sciences, Singapore, Singapore.

455: SY20-3
The role of IL-27 in the formation of ocular inflammatory disease
Speaker: Koh-hei Sonoda 1
1. Department of Ophthalmology, Graduate School of Medicine, Yamaguchi University, Ube-shi, Yamaguchi, Japan.

456: SY20-4
Mechanisms involved in Vogt-Koyanagi-Harada disease
Speaker: Peizeng Yang 1 Zi Ye 1 Chaokui Wang 1 Shengping Hou 1 Liping Du 1 Jian Qi 1 Aize Kijlstra 2
1. The First Affiliated Hospital of Chongqing Medical University Chongqing Key Lab of Ophthalmology Chongqing Eye Institute, Chongqing Medical University, Shapingba, Chongqing, China. 2. University Eye Clinic Maastricht, Maastricht, Netherlands.

457: SY20-5
Immune regulation of ocular inflammatory disease by Foxp3+ regulatory T cells
Speaker: Hiroshi Keino 1
1. Department of Ophthalmology, Kyorin University School of Medicine, Mitaka, Tokyo, Japan.
Higher Room Luminance Increases Multifocal Electroretinogram Amplitude and Implicit Time
Muhammad Syukri Mohamad Ruffyuddin 1 2, 1. Advanced Electrophysiology Centre for Vision, Optometry, Universiti Teknologi MARA, Puncak Alam, Selangor, Malaysia. 2. iROVIS, Drug Discovery & Health Community of Research, Universiti Teknologi MARA, Shah Alam, Selangor, Malaysia.

Optical coherence tomography (OCT) and electrophysiological assessment in retinal vein occlusion with macular oedema treated with intravitreal triamcinolone acetonide (IVTA)
Dr J L Goyal 1 2, Dr Richa Agarwal 3, Dr Ritu Arora 4 2, Dr B Ghosh 1 2 4. 1. Ophthalmology, Guru Nanak Eye Centre, New Delhi, India. 2. Department of Ophthalmology and Visual Science, Eye and ENT Hospital of Fudan University, Shanghai, China. 3. Ocular Pharmacology & Pharmacy, Dr.R.P.C, AIIMS, New Delhi, New Delhi, India. 4. Dr. R.P.C, AIIMS, New Delhi, New Delhi, India.

Reduced full-field electroretinogram in early post-operative days in eyes with idiopathic epiretinal membrane
Atsuhiro Tanikawa 1 2, Iyo Ueda 2, 1. Department of Ophthalmology and Vision Science, Eye and ENT Hospital of Fudan University, Shanghai, China. 2. Duke University, Durham, CA, United States.

VEGFR2 is required for maintaining tissue homeostasis in adult retina
Masaharu Ohbayashi 1 2, Yuichiro Ogura 2, Akiyoshi Uemura 1. 1. Department of Retinal Vascular Biology, Nagoya City University Graduate School of Medical Sciences, Nagoya, Japan. 2. Department of Ophthalmology and Visual Sciences, Nagoya City University Graduate School of Medical Sciences, Nagoya, Japan.

Application of Flicker ERG with Newly Devised RETevalTM for Prematurely Born Babies
Akio Tabuchi 1, Tsutomu Yamashita 1, Tomoko Yokoyama 3, Nobumasa Takahashi 2, Ikuko Nojima 2, Mizue Takasugi 2, Noriko Kimura 2, Masao Yoshikawa 1 4. 1. Sensory Science, Kawasaki University of Medical Welfare, Kurashiki, Japan. 2. Pediatrics, Fukuyama Medical Center, Fukuyama, Japan. 3. Ophthalmology, University of Hiroshima, Hiroshima, Japan. 4. Mayo Clinic, Inazawa, Japan.
12:20 PM - 1:20 PM
315 (3F)/Room 5

Luncheon Seminar 14
Prevention of AMD – Up to date

Sponsored by B.L.J. Company, Ltd.

Organizer
Taiji Sakamoto
Kagoshima University Graduate School of Medicine and Dental Sciences, Kagoshima, Kagoshima, Japan

436: LS14-1
How has the Prevention Research of AMD progressed?
Speaker: Yasuo Yanagi 1
1. Department of Ophthalmology, Graduate School and Faculty of Medicine, The University of Tokyo, Tokyo, Japan.

437: LS14-2
Nutrient Supplement for early AMD
Speaker: Yoko Ozawa 1, 2
1. Department of Ophthalmology, Keio University School of Medicine, Shinjuku, Tokyo, Japan. 2. Laboratory of Retinal Cell Biology, Keio University School of Medicine, Tokyo, Japan.

1:30 PM - 2:30 PM
315 (3F)/Room 5

Retina 3

Moderators
Sundaram Natarajan
Aditya Jyot Eye Hospital/Maharashtra University of Health Sciences, Mumbai/Nashik, Maharashtra, India
Toshiaki Kubota
Oita University Faculty of Medicine, Oita, Oita, Japan

458-1
Changes in visual acuity and health related quality of life among patients with diabetic macular edema with and without intra-vitreal bevacizumab treatment
Dipesh Bhattarai 1, 3 Jyoti Khadka 1 Anita Shrestha 2 Madan P. Upadhyay 3 Subodh Gnyawali 1 Sagun Narayan Joshi 4

459-2
Whole Exome sequencing reveals two novel mutations in the FAM161A gene causing autosomal recessive retinitis pigmentosa in Indian population
Yu Zhou 1 Zhi-lin Jiang 1 Lu-lin Huang 1 Sundaresan Periasamy 2 Xian-jun Zhu 1
1. Key Laboratory for Human Disease Gene Study and Institute of Laboratory Medicine, Cheng Du, Si Chuan, China. 2. Department of Genetics Aravind Medical Research Foundation, Aravind Eye Hospital, Tamilnadu, India.

Study Group: Sichuan Provincial Key Laboratory for Human Disease Gene Study and Institute of Laboratory Medicine

460-3
Innovative Stem Cell Therapy for the Treatment of Retinitis Pigmentosa
Wei He 1
1. He University Eye Hospital, Shenyang, China.

461-4
Changes of cytokines levels in aqueous humor at the induction phase of aflibercept treatment in age-related macular degeneration
Tomohito Sato 1 Masaru Takeuchi 1 Yoko Karasawa 3 Masataka Ito 1 Toshio Enoki 2

462-5
Mechanisms of action of human iPSC-derived neural progenitor cells on treating retinal degenerative disease
Yuchun Tsai 1 Bin Lu 1 Dhruv Sareen 1 Clive Svendsen 1 Shaomei Wang 1
1. Regenerative Medicine Institute, Cedars-Sinai Medical Center, Los Angeles, CA, United States.
rAAV.sFlt-1 gene therapy human trial for wet age related macular degeneration

Elizabeth P. Rakoczy 1 Choo-May Lai 1 Aaron L. Magno 2 Matthew Wikstrom 1 Martyn A. French 3 Steven D. Schwartz 4 Mark S. Blumenkranz 5 Thomas W. Chalberg 6 Mariapia A. Degli-Espoti 1 Ian J. Constable 1

Moderators
Erwin D. Palisoc
Manila Central University College of Medicine, Caloocan, Philippines
Atsushi Miki
Kawasaki Medical School, Kawasaki, Okayama, Japan

402-1
Orbital Septum-Sparing Dorsal Approach for Transcutaneous Simultaneous Advancement of the Levator Aponeurosis and Müller Muscle
Ari Shinojima 1 Mitsuko Yuzawa 1
1. Ophthalmology, Nihon University Hospital, Tokyo, Japan.

403-2
Automated Pupillograph as a Screening Tool in Ophthalmology Clinic
Chaithra Aroor 1 Dr Rohit Shetty 1 Narendra KP 1 Bhujang Shetty 1
1. Narayana Nethralaya, Bangalore, India.
Study Group: Control and Cases

404-3
Role of Zinc (Zn) in Ethambutol-induced Neuroretinopathies, Functional and Morphologic assessment in rabbit model
Erwin D. Palisoc 1 Hitoshi Ishikawa 2, 3 Ken Asakawa 2, 3 Kimiya Shimizu 3 Kimiyo Mashimo 3
1. Department of Ophthalmology, Manila Central University College of Medicine, Caloocan city, Philippines. 2. Department of Orthoptics and Visual Science, Kitasato University School of Allied Health Sciences, Sagamihara city, Kanagawa, Japan. 3. Department of Ophthalmology, Kitasato University School of Medicine, Sagamihara city, Kanagawa, Japan.

405-4
Incidence and risk factors of inferior rectus injury in pediatric orbital blow-out floor fractures
Yan Tong Koh 2 Shantha Amrith 1 Errol W. Chan 1
1. Ophthalmology, National University Hospital, Singapore, Singapore.
2. Ophthalmology, Tan Tock Seng Hospital, Singapore, Singapore.

406-5
Dose and Time Response of Mn²⁺-enhanced Magnetic Resonance Imaging for Tracing Visual Pathway in Rabbits
Yuntao Hu 1 Weiling Wang 4 Hui Xu 2 Xiaodong Sun 3 Zhizhong Ma 1
1. Ophthalmology, Peking University Third Hospital, Beijing, China.
2. Radiology, Peking University Third Hospital, Beijing, China. 3. Ophthalmology, Affiliated First People’s Hospital of Shanghai Jiao Tong University, Shanghai, China. 4. Ophthalmology, Hospital of Ningxia Medical University, Yinchuan, China.

407-6
The 10-year Effectiveness of Botulinum (A Toxin Therapy) on Esotropia in Children
Patcharapan Bhaktikamala 1 Supaporn Theingtrisorn 1
1. Ophthalmology, Prince of Songkhla University, Hatyai, Songkhla, Thailand.
Teacher led screening for early identification of vision problems among children

Subodh Gnyawali 1 Dipesh Bhattacharai 2

Diabetic retinopathy in newly diagnosed type 2 diabetes mellitus patients in urban slums of Mumbai, India is 6.32%

Sunita Mohan 2 Radhika Krishnan 2 Arvind K. Singh 2 Uthra Satagopan 2 Ashwini Rogye 1 Manish Sonawane 2 Ravina Gaonkar 2 Sundaram Natarajan 1 Govindasamy Kumaramanickavel 1 Catherine McCarty 3
1. Aditya Jyot Eye Hospital, Mumbai, India. 2. Aditya Jyot Foundation for Twinkling Little Eyes, Mumbai, India. 3. Essentia Institute of Rural Health, Duluth, MN, United States.

Study Group: Aditya Jyot Diabetic Retinopathy in Urban Mumbai Slums Study (AJDRUMSS)

Association of Early Microvascular Damage in the Eye and Kidney with Risk of Cardiovascular Events in a Multi Ethnic Asian Population

Carol Cheung 1 Wanfen Yip 1 Charumathi Sabanayagam 1 Tien Yin Wong 1
1. Singapore Eye Research Institute, Singapore, Singapore.

Knowledge Attitudes and Practice of common Eye Diseases and Presenting Vision in Rural Bangladesh, The Bangladesh Population-based Diabetes and Eye Study (BPDES)

Fakir M Amirul Islam 1,2 Rahul Chakrabarti 1 Christine Critchley 1
1. Statistics, Data Science and Epidemiology, Swinburne University of Technology, Melbourne, VIC, Australia. 2. Organisation for Rural Community Development, Narail, Bangladesh.

Dietary Nutrients and Age-Related Cataract in the Age-Related Eye Disease Study I, A study of Prevalence, Incidence, and Progression to Cataract Extraction

Lauren Doss 1 Tanya Glaser 1 John Paul SanGiovanni 1 Elvira Agron 1 Emily Chew 1
1. Clinical Trials Branch, Division of Epidemiology and Clinical Applications, National Eye Institute, National Institutes of Health, Bethesda, MD, United States.
464-1
Human vertical disparity tolerance differences between 3D stereoscopic and autostereoscopic displays
Xinzhu Sang, Di Zhang, Peng Wang, Jean Louis de Bougrenet de la Tocnaye
1. State Key Laboratory of Information Photonics and Optical Communications, Beijing University of Posts and Telecommunications, Beijing, China. 2. Optics Department, Telecom Bretagne, Brest, France.

465-2
Attempts to measure longitudinal chromatic aberration with polychromatic eccentric photorefraction
Yun Chen, Arne Ohlendorf, Frank Schaeffel
1. Institute for Ophthalmic Research, University of Tuebingen, Tuebingen, Germany. 2. ZEISS Vision Science Lab, Institute for Ophthalmic Research, University of Tuebingen, Tuebingen, Germany.

466-3
Ultra-High Resolution Spectral-Domain Polarization-Sensitive Optical Coherence Tomography for Retinal Imaging
Barry Cense, Bas Biezemans, Ernesto Garcia Ruiz

467-4
Label-free Imaging of the Retina
Cong Ye, Sicong He, Qiqi Sun, Jianan Y. Qu, Christopher K. Leung
1. Department of Ophthalmology and Visual Sciences, The Chinese University of Hong Kong, Kowloon, Hong Kong. 2. Department of Electronic and Computer Engineering, Hong Kong University of Science and Technology, Kowloon, Hong Kong. 3. Center for System Biology and Human Health, Hong Kong University of Science and Technology, Kowloon, Hong Kong.

468-5
Functional visual acuity of early presbyopia
Yusaku Katada, Kazuno Negishi, Kazuhiro Watanabe, Yuta Shigeno, Megumi Saiki, Hidemasa Torii, Minako Kaido, Kazuo Tsubota
1. Department of Ophthalmology, Keio University School of Medicine, Tokyo, Japan.
470 - P01-1
Polyphenolic Compounds Fisetin and Luteolin decrease Inflammation and Oxidative Stress-induced Cytotoxicity in ARPE-19 Cells
Maria Hytti 1 Niina Piippo 1 Eeviina Korhonen 1 Kai Kaarniranta 1, 2 Anu Kauppinen 1, 2
1. Department of Ophthalmology, University of Eastern Finland, Kuopio, Finland. 2. Kuopio University Hospital, Kuopio, Finland.

471 - P02-2
Suppression of high fat diet-induced inflammation in the RPE by angiotensin II type 1 receptor blockade
Norihiro Nagai 1, 2 Kazuo Tsubota 2 Yoko Ozawa 1, 2
1. Laboratory of Retinal Cell Biology, Keio University, School of Medicine, Tokyo, Japan. 2. Department of Ophthalmology, Keio University, School of Medicine, Tokyo, Japan.

472 - P03-3
Preliminary study on expression of uncoupling protein 2 in human retinal pigment epithelial cells
Zhang Chuntao 1
1. The Second Affiliated Hospital of Xi'an Medical University, Xi'an, China.

473 - P04-4
Studying GRP78 over-expression in cultured adult human RPE cells and its effects on the expression of the inflammatory factor
Amirhossein Mansoori 1
1. Department of Basic Sciences Biotechnology, National institute of genetic engineering and biotechnology, Tehran, Iran (the Islamic Republic of).

474 - P05-5
Aqueous level of angiopoietin-like 4 correlates with phenotypes of diabetic retinopathy, Nonperfusion area and macular volume
Dong Ho Park 1 Soo Hyun Kwon 1 Jae Pil Shin 1 In Taek Kim 1
1. Department of Ophthalmology, Kyungpook National University, Daegu, Korea (the Republic of).

475 - P06-6
Does endothelin 2 have a role in diabetic retinopathy?
Chooi-May Lai 1, 2 Nicolette Binz 2 Ireni S. Ali Rahman 1 Elizabeth P. Rakoczy 1, 2

476 - P07-7
Increased vitreous concentrations of MCP-1 and IL-6 after vitrectomy in patients with PDR, Possible relation to postoperative macular edema
Yoshiyuki Kobayashi 1 Shigeo Yoshida 1 Yedi Zhou 1 Takahito Nakama 1 Keiijiro Ishikawa 1 Shintaro Nakao 1 Yukio Sassa 2 Yuji Oshima 1 Toshihiro Kono 2 Tatsuro Ishibashi 1
1. Department of Ophthalmology, Kyushu University Graduate School of Medical Sciences, Fukuoka, Japan. 2. Department of Ophthalmology, Fukuoka University Chikushi Hospital, Fukuoka, Japan.

477 - P08-8
Functional analysis of semaphorin 3F in rat retinal ganglion cells after optic nerve crush
Ji-Ae Ko 1 Chihiro Ohki 1 Akira Minamoto 1 Yousuke Sugimoto 1 Junko Hirata 1 Yoshiaki Kiuchi 1

478 - P09-9
Genetic analysis of hereditary retinal dystrophies in consanguineous Pakistani families
Zeinab Ravesh 1, 2 Nicole Weisschuh 2 Bernd Wissinger 2 Muhammed Ansar 1
1. Biochemistry Department, Quaid-i-Azam University, Islamabad, Pakistan. 2. Molecular Genetics Laboratory, Institute of Ophthalmic Research, Tübingen, Germany.

479 - P10-10
Autosomal recessive bestrophinopathy, a novel mutation in a Korean family
Christopher Lee 1 Ikhyun Jun 1 Ji Lee 1 Hye Kim 1 Sung Lee 1 Eung Kim 1
1. Ophthalmology, Yonsei University College of Medicine, Seoul, Korea (the Republic of).

480 - P11-11
Modulation of Glutathione S-Transferase Pi Isoform (GSTP1) Expression by Lethal and Non-Lethal Oxidative Stress in Human Retinal Pigment Epithelial Cells
Wen-Hsiang Lee 1 Matthew B. Donovan 2 Ali M. Saeed 2
1. Ophthalmology, Bascom Palmer Eye Institute - University of Miami, Miami, FL, United States. 2. Medical Education, University of Miami Miller School of Medicine, Miami, FL, United States.
Cornea - Poster

481 - P12-1
Severe Intraepithelial Neoplasia Association with Conjunctival Squamous Papilloma
Murat Dogru 1 Jun Miyauchi 2 Yoichi Tanaka 2 Takefumi Yamaguchi 1 Seika Den Shimazaki 1 Yoshiyuki Satake 1 Jun Shimazaki 1
1. Ophthalmology, Tokyo Dental College, Ichiawa, Japan. 2. Pathology and Laboratory Medicine, Tokyo Dental College, Ichikawa, Japan.

482 - P13-2
Laser Therapy for Ocular Lesions of Nevus of Ota in a child
Sachi Amaki 1 Masahiro Kobayashi 2,3 Masaru Tanaka 4
1. Ophthalmology, Amaki Clinic, 2-19-10-3F Shinbashii, Minato-ku, Tokyo, Japan. 2. Plastic surgery, Amaki Clinic, 2-19-10-3F Shinbashii, Minato-ku, Tokyo, Japan. 3. Faculty of Nursing and Medical Care, Keio University, 35 Shihanomachi, Shinjuku-ku, Japan. 4. Dermatology, Tokyo Women’s Medical University Medical Center East, 2-1-10 Nishi-Ogu, Arakawa-ku, Tokyo, Japan.

483 - P14-3
The Effect of Rebamipide to the Human Conjunctival Epithelium
Yoshiyuki Satake 1 Kazunari Higa 1 Jun Shimazaki 1

484 - P15-4
NEW TECHNIQUE FOR PRIMARY PTERIGIUM EXCISION-WITHOUT CONJUNCTIVAL GRAFT
Alexandra Mieth 1 Eduardo Arenas 1
1. Ophthalmology-Eye Pathology, Fundación Santa Fe de Bogota, Bogota, Colombia.

485 - P16-5
Comparison of the Coefficient of Friction of New and Worn Daily Disposable Silicone Hydrogel Contact Lenses to Human Corneal Tissue
Tawnya Wilson 1 Kristy Canavan 1 Rudolf Aeschlimann 2 Samuele Tosatti 2 Ryan Butterfield 2 Kathrine Osborn-Lorenz 1
1. Research and Development, Johnson and Johnson Vision Care, Inc, Jacksonville, FL, United States. 2. SuSoS, Dubendorf, Switzerland. 3. MaxisIT, Jacksonville, FL, United States.
Study Group: Johnson and Johnson Vision Care, Inc

486 - P17-6
Cosmetic and mechanical lens fit acceptance of 1-DAY ACUVUE® DEFINE™ Brand Contact Lenses with LACREON® Technology
Meredith Jansen 1 Charis Lau 1 Michael Mayers 1 Danielle Boree 1 Lenora Copper 1

487 - P18-7
Effect of Mini Scleral Lenses on Higher Order Aberration in Irregular Cornea
Mukesh Kumar 1 Dr Rohit Shetty 1
1. Refractive Surgery, Narayana Nethralaya, Bangalore, India.

488 - P19-8
Comparative Evaluation of Microbial Adhesion on Cosmetic and Clear Hydrogel Lenses
Carol Lakkis 1 Scott Piper 2 Danielle Boree 1

489 - P20-9
Analysis of first 100 refractive surgeries with a 500-Hz scanning spot excimer laser
Rupali Jain 2,1
1. cornea, shri sadguru sewa sangh trust, Chitrakoot, India. 2. cornea, SSSST, Chitrakoot, Madhya Pradesh, India.
Study Group: Jankikund

490 - P21-10
Wavefront-optimised Vs. topography guided ablation, a contralateral eye study
Anand Pasari 1 Arun Jain 1 Chintan Singh 1 Partha Chakma 1
1. Department of Ophthalmology, Advanced Eye Centre, Chandigarh, India.

491 - P22-11
Corneal biomechanical measurement of patients with congenital glaucoma using Scheimpflug noncontact tonometry
Takanori Matsuoka 1 Kenji Matsushita 1 Rumi Kawashima 1 Kohji Nishida 1
1. Osaka University Graduate School of Medicine, Osaka, Japan.

492 - P23-12
Rabbit model of corneal ectasia with excimer laser
Aristides Konstantopoulos 1,2 Yua Chi Liu 1 Andi Riau 1 Jinesh Shah 1 Nyein Chan Lwin 1 Erica Pei Wen Teo 1 Gary Hin Fai Yam 1 Jodhbir S. Mehta 1

493 - P24-13
Association of Sex Hormone Levels and Corneal Hysteresis During Menstrual Cycle
Azam Bakhtiar 1 Mohammadreza Peyman 1
1. University of Malaya, Kuala Lumpur, Malaysia.

494 - P25-14
Niche function of amniotic membrane stromal cells in corneal epithelial stem cell expansion
Wei Li 1,2 Jie Yang 1,2 Jing Jie 1,2 Tingting Liu 1,2 Yangluowa Qu 1,2 Hui He 1,2 Zuguo Liu 1,2
1. Eye Institute of Xiamen University, Xiamen, China. 2. Fujian Provincial Key Laboratory of Ophthalmology and Visual Science, Xiamen, Fujian, China.
495 - P26-15
N-cadherin expression in hypoxic spheroidal cultivation of human limbal epithelial cells
Kazunari Higa 1,2 Hideyuki Miyashita 2 Jun Shimazaki 1,2 Kazuo Tsubota 2,3 Shigeto Shimmura 1,1
1. Ophthalmology / Cornea Center, Tokyo Dental College, Ichikawa general hospital, Ichikawa, Chiba, Japan. 2. Ophthalmology, Keio University School of Medicine, Shinjuku-ku, Japan.

496 - P27-16
Galectin Expression Signature in Murine Corneal Allograft
Satoshi Sugaya 1,2 Zhiyi Cao 1 Wei-sheng Chen 2 Kenneth Kenyon 1 Takefumi Ymaguchi 4 Masahiro Omoto 4 Pedram Hamrah 4 Noorjahan Panjwani 1,3
1. Ophthalmology, Tufts University, New England Eye Center , Boston, MA, United States. 2. Ophthalmology, Nihon University school of Medicine, Tokyo, Japan. 3. Sackler School of Graduate Biomedical science, Tufts University, Boston, MA, United States. 4. Schepens Eye Research Institute/Massachusetts Eye and Ear, Boston, MA, United States.

497 - P28-17
Derivation of mesenchymal stromal cells from pluripotent stem cells through a neural crest lineage using small molecule compounds with defined media
Yoshinori Nakai 1 Morio Ueno 1 Makoto Fukuta 2 Mokoto Ikeya 2 Naoki Okumura 3 Noriko Koizumi 3 Junya Toguchida 3 Shigeru Kinoshita 1
1. Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Kyoto, Japan. 2. Department of Cell Growth and Differentiation, Center for iPSC Cell Research and Application, Kyoto, Kyoto, Japan. 3. Department of Biomedical Engineering, Doshisha University, Kyotanabe, Kyoto, Japan.

498 - P29-18
Genetic association of TCF4 intronic polymorphisms, CTG18.1 and rs17089887 with Fuchs’ endothelial corneal dystrophy in Indian population
Debasmita P. Alone 1 Gargi G. Nanda 1 Biswajit Padhy 1 Sujata Samal 1 Vinay Malloji 1 Sujata Das 2
1. School of Biological Sciences, National Institute of Science Education and Research, Bhubaneswar, Odisha, India. 2. Cornea and Anterior Segment, L.V. Prasad Eye Institute, Bhubaneswar, India.

499 - P30-19
A COL4A3 locus (rs7606754) has an additive effect on the corneal curvature of 20-year olds
Seyhan Yazar 1 Alex W. Hewitt 1 Jenny A. Mountain 2 David A. Mackey 1
1. Centre for Ophthalmology and Visual Science/Lions Eye Institute, University of Western Australia , Nedlands, Perth, WA, Australia. 2. Telethon Kids Institute, University of Western Australia, Perth, WA, Australia.

500 - P31-20
Association of ZEB1 variations and TCF4 SNP rs613872 with late onset Fuchs endothelial corneal dystrophy in Indian Patients
Ranjan Gupta 1 Arundhati Sharma 1 Babu Lal Kumawat 2 Radhika Tandon 2 Namrata Sharma 3 Preeti Paliwal 1 Rasik.B Vajpayee 3
1. Department of Anatomy, AIIMS, DELHI, NEW DELHI, India. 2. Dr.Rajendra Prasad Centre for Ophthalmic Sciences, AIIMS , DELHI, NEW DELHI, India. 3. University of University of Melbourne, Center for Eye Research, University of Melbourne, VIC, Australia.

501 - P32-21
Attenuation of Lysyl Oxidase and Collagen Gene Expression in Keratoconus patient corneal epithelium corresponds to disease severity
Tejal SJ 2 Rohit Shetty 4 Vishal Arora 2 Rudy M. A. Nuijts 1 Arkasubhra Ghosh 3 Abhijit Roy 3 Natasha Pahuja 1
1. Cornea and Refractive Department , Narayana Nethralaya, Bangalore, Karnataka, India. 2. Cataract and Refractive Department , Narayana Nethralaya, Bangalore, Bengaluru, India. 3. Grow Research Laboratory, Narayana Nethralaya, Bangalore, Karnataka, India. 4. Cornea and Refractive Surgeries, Narayana Nethralaya, Bangalore, Bengaluru, India.

502 - P33-22
Safety of Intracameral Moxifloxacin/Dexamethasone Fixed-Dose Formulation on the Corneal Endothelium in a Rabbit Model
Reginald Robert Tan 1 Joseph Anthony Tumbocon 1 Ruben Lim Bon Siong 1 Jay Vicencio 1
1. Eye Institute, St Luke’s Medical Center, Quezon City, Metro Manila, Philippines.

503 - P34-23
Expression of Eph receptors in corneal endothelium
Jennifer Young 1 Neil Richardson 1,2 Damien Harkin 1,2
1. Queensland Eye Institute, South Brisbane, QLD, Australia. 2. School of Biomedical Sciences, Queensland University of Technology, Brisbane, QLD, Australia.

504 - P35-24
The influence of dextran on the in-vitro development of corneal endothelium in corneoscleral rims prior to transplantation
Filip Filev 1
1. Ophthalmology, University Medical Center Hamburg-Eppendorf , Hamburg, Hamburg, Germany.

505 - P36-25
A case of a corneal bee sting monitored by anterior segment optical coherence tomography
Emi Inagaki 1 Shigeto Shimmura 1 Yutaka Hara 2 Shin Hatou 1 Kazuo Tsubota 1
1. Ophthalmology, Keio University, Tokyo, Japan. 2. Haru Eye Clinic, Otawara, Japan.
506 - P37-26
Tear expression profiling of cytokine, chemokine and soluble receptor in keratoconus patients
Jeewon Mok 1 Kyong-Sun Na 1,2 Choun-Ki Joo 1,2

507 - P38-27
The use of corneal densitometry in assessing the treatment outcome after corneal transplantation
Syafifah Faiza Syed Mohd Dardin 1,2
1. School of Medicine, University of Manchester, Manchester, United Kingdom. 2. Department of Ophthalmology, Hospital Putrajaya, Wilayah Persekutuan Putrajaya, Wilayah Persekutuan Putrajaya, Malaysia.

508 - P39-28
Inhibition of lymphangiogenesis and hemangiogenesis in corneal inflammation by subconjunctival Prox1 siRNA injection in rats
Chang Rae Rho 1,2 Jun-Sub Choi 2 Choun-Ki Joo 1,2

509 - P40-29
Suppression of corneal inflammation by inhibition of lymphangiogenesis in rat alkali burn model
Jun-Sub Choi 1 Chang Rae Rho 1 Choun-Ki Joo 1,2

510 - P41-30
Decellularized human corneal limbus for limbal reconstruction
Kristina Spaniol 1 Mathias Roth 1 Gerd Geerling 1 Stefan Schrader 1
1. Ophthalmology, University Hospital Düsseldorf, Düsseldorf, Germany.

511 - P42-31
P2Y2 agonist promotes corneal epithelial wound healing
Yong Soo Byun 1 Woong-Joo Whang 1 Choun-Ki Joo 1
1. Department of Ophthalmology and Visual Science, Catholic University of Korea, Seoul St. Mary’s Hospital, Seoul, Korea (the Republic of).

512 - P43-32
Upstream Signal Transduction Pathway of HSP27 Phosphorylation Can Control Corneal Epithelial Cell Migration and Apoptosis during Wound Healing
Jae Yong Kim 1 Soon-Suk Kang 1 Eun-Soon Kim 1 Hungwon Tchah 1
1. Ophthalmology, University of Ulsan College of Medicine, Asan Medical Center, Seoul, Seoul, Korea (the Republic of).

513 - P44-33
High prevalence of sleep and mood disorders in dry eye patients-The survey of 1000 eye clinic visitors-
Masahiko Ayaki 1 Motoko Kawashima 1 Kazuno Negishi 1 Taishiro Kishimoto 2 Masaru Mimura 2 Kazuo Tsubota 3
1. Ophthalmology, Keio University, Tokyo, Japan. 2. Psychiatry, Keio University, Tokyo, Japan.

514 - P45-34
Sjögren’s syndrome-like exocrinopathy and dry eye of TRAF6 deficient mice
Satoko Nakano 1 Kaori Noguchi 2 Takashi Kobayashi 2 Toshiaki Kubota 1
1. Ophthalmology, Oita University, Yufu-City, Oita, Japan. 2. Infectious Disease Control, Oita University, Yufu-City, Oita, Japan.

515 - P46-35
Compensatory increase in tear volume and mucins in Meibomian gland dysfunction caused by stearoyl-CoA desaturase-1 deficiency
Takaaki Inaba 1 Yasuhisa Tanaka 1 Shusaku Tamaki 3 Tomotaka Ito 1 Ntambi James 2 Kazuo Tsubota 3
1. Department of Ophthalmology, Keio University School of Medicine, Tokyo, Japan. 2. Departments of Biochemistry and of Nutritional Sciences, University of Wisconsin-Madison, madison, WI, United States.

516 - P47-36
Effectiveness of rebamipide prodrug in a mouse model induced dry eye
Woon hyung Ghim 1 Kyong Jin Cho 1 Moo Hwan Chang 1
1. Dankook University Meidical College, Cheonan, Korea (the Republic of).

517 - P48-37
Expression of the ocular surface mucins in dry eye patients
Yan Wang 1 Liangliang Niu 1 Jihong Wu 1 Jianjiang Xu 1
1. Ophthalmology, Eye and ENT Hospital of Fudan University, Shanghai, China.

518 - P49-38
Lagosleep a New Eyelid Syndrome
Eduardo Arenas 1,2 Ingrid Ulloa 1
1. Cundinamarca, Universidad El Bosque, Bogota, Colombia. 2. Cundinamarca, Universidad Nacional de Colombia, Bogota, Colombia.

Study Group: Dry eye
The Relationship between Blinking and Ocular Surface Abnormalities
Hiroaki Kato 1 Norihiko Yokoi 1 Rieko Sakai 1 Mengxi Niu 1 Akhide Watanabe 1 Shigeru Kinoshita 1
1. Department of Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan.

Lactoferrin Alleviates Desiccating and Restraint Stress Induced Dry Eye Disease by Reducing Lacrimal Gland and Corneal Inflammation
Samuel Connell 1 Motoko Kawashima 1 Shigeru Nakamura 1 Toshihiro Imada 1 Kokoro Sano 1 Akiko Ito 1 Kai Jin 1 Ryuji Hisamura 1 Kazuo Tsubota 1
1. Department of Ophthalmology, Keio University, Tokyo, Japan.

Effects of a warm compress with menthol on the tear film conditions
Reiko Arita 1,2 Naoyuki Morishige 1 Ichiro Sakamoto 4 Natsuko Imai 1 Michihiro Igaki 5 Atsushi Suzuki 7 Kazuo Tsubota 2
1. Ophthalmology, Itoh Clinic, Saitama, Saitama, Japan. 2. Ophthalmology, Keio University, Tokyo, Japan. 3. Ophthalmology, Yamaguchi University, Ube City, Japan. 4. Personal Health Care Products Research Laboratories, KAO Corporation, Tokyo, Japan. 5. Personal Health Care Products Research Laboratories, KAO Corporation, Tokyo, Japan. 6. Personal Health Care Products Research Laboratories, KAO Corporation, Tokyo, Japan. 7. Personal Health Care Products Research Laboratories, KAO Corporation, Tokyo, Japan.

Proteolytic Degradation of Galectin-3 in Dry Eye
Yuichi Uchino 1 Jerome Mauris 1 Ashley M. Woodward 1 Julia Dieckow 1 Francisco Amparo 1 Reza Dana 1 Flavio Mantelli 1 Pablo Argueso 1
1. Schepens Eye Research Institute, Department of Ophthalmology, Harvard Medical School, Boston, MA, United States. 2. IRCCS Fondazione GB Bietti, Rome, Italy.

Increase in tear secretion by abdominal breathing in healthy women
Kokoro Sano 1 Motoko Kawashima 1 Kazuhiro Ikeura 1 Reiko Arita 1 Kazuo Tsubota 1
1. Department of Ophthalmology, Keio University School of Medicine, Tokyo, Japan.

An association between SNPs in the TNFA promoter region and Korean Dry Eye Disease patients
Sung A Lim 1 Jeewon Mok 1 Kyung-Sun Na 1 Hee-Jung Ju 1 Choun-Ki Joo 1

Topical rebamipide improves subjective symptoms of dry eye by modulating pain sensation in cornea
Yoshiaki Tagawa 1,2 Nobuyoshi Kitaichi 1 Takeshi Ohguchi 2 Erdal Tan Ishizuka 1,2 Saori Inafuku 1,2 Satoshi Kinoshita 1,2 Atsuhiro Kanda 1,2 Kousuke Noda 1,2 Susumu Ishida 1,2
1. Laboratory of Ocular Cell Biology and Visual Science, Hokkaido University Graduate School of Medicine, Sapporo, Japan. 2. Department of Ophthalmology, Hokkaido University Graduate School of Medicine, Sapporo, Japan. 3. Department of Ophthalmology, Health Sciences University of Hokkaido, Sapporo, Japan.

Effects of punctal occlusion on dry eye clinical signs and symptoms, and tear cytokine levels using direct measurement and generalized linear modeling
Louis Tong 1 Roger Beuerman 1 Susan Simonyi 3 David A. Hollander 1 Michael E. Stern 3

Influence of warm compress and eyelid massage on the tear lipid layer thickness in office workers
Takashi Kojima 1,2 Osama M. Ibrahim 2 Murat Dogru 3,2 Kazuo Tsubota 2
1. Ophthalmology, Gifu Red Cross Hospital, Gifu, Japan. 2. Ophthalmology, Keio University School of Medicine, Tokyo, Japan. 3. Ophthalmology, Tokyo Dental College, Chiba, Japan.

Withdrawn
Clinical predictors of early dry eye, objective vs subjective comparison
Balamurali Vasudevan 1 Emily Washek 2 1. Optometry, Midwestern University, Glendale, AZ, United States. 2. Osteopathic Medicine, Midwestern University, Glendale, AZ, United States.

Study of various lubricants in the eye using modern assessment tools
Dhawal Haria 1 Tejal Sj 1 Dr Rohit Shetty 1
1. Ophthalmology, Narayana Nethralaya, Bangalore, Karnataka, India.

Immunohistochemical localization of D- β -aspartic acid-containing proteins, a molecular marker of aging, in pterygium
Yuichi Kaji 1 Tetsuro Oshika 1 Ryouhei Nejima 2 Saiyo Mori 2 Kazunori Miyata 2 Noriko Fujii 3
1. Ophthalmology, Tsukuba University, Tsukuba, Japan. 2. Ophthalmology, Miyata Eye Hospital, Miyakonojo, Japan. 3. Research Reactor Institut, Kyoto University, Sennan, Japan.
Downregulation of IL-8, ECP, and total IgE in the tears of patients with atopic keratoconjunctivitis treated with rebamipide eyedrops

Mayumi Ueta 1, 2, Jun Shoji 3, Chie Sotozono 1, Shigeru Kinoshita 1
1. Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan. 2. Doshisha University, Kyotanabe, Kyotanabe, Japan. 3. Nihon University School of Medicine, Tokyo, Japan.

A case with refractory scleritis remitted by abatacept treatment

Akio Miyakoshi 1, Tomoko Nakamura 1, Koichiro Shinoda 1, Atsushi Hayashi 1
1. University of Toyama, Toyama, Japan.

Comparative Study of Eyelid Hygiene Solutions in Meibomian Gland Dysfunction

Jatuporn Duangpatra 1, Theerapat Tantayakom 1, Wiwan Sansanayudh 1, Raveewan Choontanom 1, Kanaspana klanarongran 1
1. Ophthalmology, Phramongkutklao Hospital, Bangkok, Thailand.

Vernal keratoconjunctivitis, clinical and therapeutic aspects

Sihem Lazreg 1
1. Centre Dr Lazreg, Blida, Algeria.

Comparison of SLET(simple limbal epithelial transplantation) with CLAU (conjunctival limbal autograft) in unilateral chronic ocular burns

Ritu Arora 1, Pallavi Dokania 1, J L Goyal 1, Parul Jain 1, Aditi Manudhane 1, Pooja Jain 1, Richa Agarwal 1
1. Ophthalmology, Guru Nanak Eye Centre, New Delhi, India.

Role of Matrix Metalloproteinase in Stevens - Johnson syndrome (SJS) Ocular Sequelae Patients

Renu Venugopal 1, Seema Sen 1, Seema Kashyap 1, Tushar Agarwal 1, Namrata Sharma 1
1. All India Institute of Medical Sciences, New Delhi, India.

Is Vitamin D Receptor Knockout Mice a Qualified Model of Meibomian Gland Dysfunction?

Kai Jin 1, Motoko Kawashima 1, Masataka Ito 2, Kazuo Tsubota 1
1. Department of Ophthalmology, Keio University School of Medicine, Tokyo, Japan. 2. Developmental Anatomy, National Defense Medical College, Tokyo, Japan.

Study Group: Kawashima Group

Determination of tegafur and 5-fluorouracil in tear by HILIC-MS/MS

Ritsuko Obuchi 1, 2, Xiao-Pen Lee 2, Makiko Hirosawa 1, Hiroo Ishida 2, Ken-ichi Fujita 4, Susumu Nittono 2, Masato Yoshida 1, Yasutsuna Sasaki 3, 4, Keizo Sato 2, Haruo Takahashi 1
1. Department of Ophthalmology, Showa University School of Medicine, Tokyo, Japan. 2. Department of Legal Medicine, Showa University School of Medicine, Tokyo, Japan. 3. Division of Medical Oncology, Department of Medicine, Showa University School of Medicine, Tokyo, Japan. 4. Institute of Molecular Oncology, Showa University, Tokyo, Japan.

3D meibography for diagnosis of dry eye

Young-Sik Yoo 1, Kyung-Sun Na 1, Choun-Ki Joo 1
1. The Catholic University of Korea, Seoul, Korea (the Republic of).
Plenary Session 9  
Cutting Edge Aging Research

Organizers
Kazuo Tsubota  
Keio University School of Medicine, Shinjuku, Tokyo, Japan  
Jonathan Crowston  
University of Melbourne, East Melbourne, VIC, Australia

544: PS9-1  
Autophagy: an intracellular degradation system  
Keynote Speaker: Noboru Mizushima 1  
1. Department of Biochemistry and Molecular Biology, Graduate School and Faculty of Medicine, The University of Tokyo, Bunkyo-ku, Tokyo, Japan.

545: PS9-2  
Lifestyle and the ageing optic nerve  
Speaker: Jonathan Crowston 1, 2  
1. Department of Ophthalmology, University of Melbourne, East Melbourne, VIC, Australia. 2. Centre for Eye Research Australia, Melbourne, VIC, Australia.

546: PS9-3  
Dry Eye Research from the Aspect of Aging  
Speaker: Kazuo Tsubota 1  
1. Department of Ophthalmology, Keio University School of Medicine, Shinjuku, Tokyo, Japan.

Chair  
Yozo Miyake  
Aichi Medical University, Nagakute, Aichi, Japan

584: PL3  
Gene Polymorphism-based Personalized Patient Care in AMD  
Speaker: Nagahisa Yoshimura 1  
1. Department of Ophthalmology and Visual Sciences, Kyoto University Graduate School of Medical Science, Kyoto, Kyoto, Japan.
Luncheon Seminar 16
The Future of Eyeglasses - Functional Eyewear

Sponsored by JIN Co., LTD.

Organizer
Norihiko Yokoi
Kyoto Prefectural University of Medicine, Kyoto, Kyoto, Japan

The Future of Eyeglasses - Functional Eyewear
Speaker: Kazuo Tsubota 1
1. Department of Ophthalmology, Keio University School of Medicine, Shinjuku-ku, Tokyo, Japan.

Symposium 21
Retinal Imaging

Organizers
Akitoshi Yoshida
Asahikawa Medical University, Asahikawa, Hokkaido, Japan
Gemmy Cheung Chui Ming
Singapore Eye Research Institute, Singapore, Singapore

Fundus Autofluorescence in Clinical Practice
Speaker: Tetsuji Sekiryu 1
1. Department of Ophthalmology, Fukushima Medical University School of Medicine, Fukushima, Fukushima, Japan.

Scanning Laser Ophthalmoscope
Speaker: Satoshi Ishiko 1
1. Department of Medicine and Engineering Combined Research Institute, Asahikawa Medical University, Asahikawa, Hokkaido, Japan.

Ultra-wide-field imaging in the management of retinal diseases
Speaker: Jaeryung Oh 1
1. Department of Ophthalmology, Korea University College of Medicine, Seongbuk, Seoul, Korea (the Republic of).

Application of reflectivity-based and motion-based OCT for diagnosis and management of retinal diseases
Speaker: Masanori Hangai 1
1. Ophthalmology, Saitama Medical University, Iruma, Saitama, Japan.

Adaptive Optics Fundus Camera
Speaker: Yasuki Ito 1
1. Department of Ophthalmology, Nagoya University Graduate School of Medicine, Nagoya, Aichi, Japan.
Plenary Lecture 4

Chair
Kazuo Tsubota
Keio University School of Medicine, Shinjuku, Tokyo, Japan

Recent Progress in iPS Cell Research and Application
Speaker: Shinya Yamanaka
1. Center for iPS Cell Research and Application, Kyoto University, Kyoto, Kyoto, Japan. 2. The J. David Gladstone Institutes, Gladstone Institute of Cardiovascular Disease, and L.K. Whittier Foundation Investigator in Stem Cell Biology, San Francisco, CA, United States.
Plenary Session 10
New Insights into Corneal Cell Biology

Organizers
Shizuya Saika
Wakayama Medical University School of Medicine, Wakayama, Wakayama, Japan
Kyoung Yul Seo
Yonsei University College of Medicine, Seodaemun, Seoul, Korea (the Republic of)

547: PS10-1
Limbal stem cells and niche microenvironments for corneal surface regeneration
Keynote Speaker: Ursula Schlötzer-Schrehardt 1 Friedrich E. Kruse 1
1. Department of Ophthalmology, University of Erlangen-Nuernberg, Erlangen, Germany.

548: PS10-2
UV-induced ocular surface inflammation is related to HMGB1 via reactive oxygen species (ROS)
Speaker: Kyoung Yul Seo 1 Soo Jung Han 1 Sangchul Yoon 1 Jeon-Soo Shin 2
1. Department of Ophthalmology, Yonsei University College of Medicine, Seodaemun-gu, Seoul, Korea (the Republic of).
2. Department of Microbiology and Immunology, Yonsei University College of Medicine, Seoul, Korea (the Republic of).

549: PS10-3
Neurotrophic keratopathy: involvement of cation channel receptors in the pathogenesis of
Speaker: Shizuya Saika 1
1. Department of Ophthalmology, Wakayama Medical University School of Medicine, Wakayama, Wakayama, Japan.

550: PS10-4
The New Cell Surface Markers for Human Corneal endothelial Cells
Speaker: Jodhbir S. Mehta 1,2
2. Tissue Engineering and Stem Cell, Singapore Eye Research Institute, Singapore, Singapore.

551: PS10-5
Cell-injection therapy as a new therapeutic modality for corneal endothelial diseases
Speaker: Noriko Koizumi 1,2
1. Department of Biomedical Engineering Faculty of Life and Medical Sciences, Doshisha University, Kyotanabe, Kyoto, Japan.
2. Department of Ophthalmology, Kyoto Prefectural University of Medicine, Kyoto, Japan.
Symposium 22
Molecular Genetics of Eye Diseases

Organizers
Yoshihiro Hotta
Hamamatsu University School of Medicine, Hamamatsu, Shizuoka, Japan
Hyeong Gon Yu
Seoul National University College of Medicine, Jongno-gu, Seoul, Korea (the Republic of)

662: SY22-1
Molecular genetics of anophthalmia/microphthalmia
Speaker: Maki Fukami
1. Department of Molecular Endocrinology, National Research Institute for Child Health and Development, Setagaya, Tokyo, Japan.

663: SY22-2
Molecular genetics of Miyake’s disease
Speaker: Takeshi Iwata
1. National Institute of Sensory Organs, Tokyo Medical Center, National Hospital Organization, Megro-ku, Tokyo, Japan.

664: SY22-3
Mutation analysis of Japanese retinitis pigmentosa patients for various causative genes including EYS and USH2A using multiple methods
Speaker: Shinsei Minoshima
1. Medical Photonics Research Center, Hamamatsu University School of Medicine, Hamamatsu, Shizuoka, Japan.

665: SY22-4
Targeted exome sequencing in Korean with retinitis pigmentosa
Speaker: Hyeong Gon Yu
1. Department of Ophthalmology, Seoul National University College of Medicine, Seoul, South, Korea (the Republic of).

666: SY22-5
Targeted exome sequencing in Chinese patients with inherited retinal degenerations
Speaker: Zi-Bing Jin
1. Lab for Stem Cell & Retinal Regeneration Division of Ophthalmic Genetics, The Eye Hospital of Wenzhou Medical University, Wenzhou, Zhejiang, China.
Symposium 23
New Insight for Retinal Detachment, Damage and Treatment

Organizers
Hiroko Terasaki
Nagoya University Graduate School of Medicine, Nagoya, Aichi, Japan
Taiji Sakamoto
Kagoshima University Graduate School of Medicine and Dental Sciences, Kagoshima, Kagoshima, Japan
Demetrios G. Vavvas
Harvard Medical School, Boston, MA, United States

552: SY23-1
Toxic effects of extracellular histones and their neutralization by vitreous in retinal detachment
Speaker: Hiroki Kawano 1
1. Department of Ophthalmology, Kagoshima University Graduate School of Medical and Dental Sciences, Kagoshima, Kagoshima, Japan.

553: SY23-2
Biological change in retinal detachment
Speaker: Hiroki Kaneko 1
1. Department of Ophthalmology, Nagoya University Graduate School of Medicine, Nagoya, Aichi, Japan.

554: SY23-3
Retinal and Choroidal Changes after RD surgery
Speaker: Ga Eun Cho 1 Se Woong Kang 1
1. Department of Ophthalmology, Sunkyunkwan University School of Medicine, Gangnam, Seoul, Korea (the Republic of).

555: SY23-4
The protective effects of the proteasome inhibitor bortezomib on ischemia-reperfusion injury in the rat retina
Speaker: Chang-Hao Yang 1
1. Department of Ophthalmology, National Taiwan University Hospital, Taipei, Taiwan.

556: SY23-5
New strategies in neuroprotection and regeneration for retinal diseases
Keynote Speaker: Demetrios G. Vavvas 1 Yusuke Murakami 1 Hidetaka Matsumoto 1 Keiko Kataoka 1 George Trichonas 1 Maki Kayama 1 Toshio Hisatomi 3 Hiroko Terasaki 2 Tatsuro Ishibashi 2 Joan Miller 1
1. Department of Ophthalmology, Harvard Medical School, Boston, MA, United States. 2. Nagoya, Nagoya, Japan. 3. Kyushu University, Fukuoka, Japan.

Symposium 24
Epigenetics in Ocular Development and Diseases

Organizers
Sumiko Watanabe
Institute of Medical Science, University of Tokyo, Minato, Tokyo, Japan
Biao Yan
Nanjing Medical University, Nanjing, China

579: SY24-1
The microRNA regulates the lens development and differentiation
Speaker: Eri Kubo 1
1. Department of Ophthalmology, Kanazawa Medical University, Kahoku, Ishikawa, Japan.

Study Group: LE

580: SY24-2
Roles of Histone methylation for retinal bipolar cell differentiation
Speaker: Sumiko Watanabe 1
1. Department of Molecular and Developmental Biology, Institute of Medical Science, University of Tokyo, Minato, Tokyo, Japan.

581: SY24-3
Genomewide DNA methylation analysis of primary human trabecular meshwork cells with dexamethasone stimulation
Speaker: Akira Matsuda 1
1. Laboratory of Ocular Atopic Diseases, Juntendo University Graduate School of Medicine, Bunkyo, Tokyo, Japan.

582: SY24-4
Age-related macular degeneration and DNA methylation
Speaker: Paul N. Baird 1
1. Centre for Eye Research Australia, University of Melbourne, East Melbourne, VIC, Australia.

583: SY24-5
Pathogenic role of IncRNA-MALAT1 in endothelial cell dysfunction in diabetes mellitus
Speaker: Biao Yan 1
1. Nanjing medical university, Nanjing, China.

Study Group: Jing-Yu Liu, Jin Yao, Xiu-Miao Li, Jiang Qin
**Luncheon Seminar 18**
Clinical Practice of Pathologic Myopia - Clinical Study for Myopic CNV and Case Conference

Sponsored by Novartis Pharma K.K.

Organizers
Akito Hirakata
Kyorin University School of Medicine, Mitaka, Tokyo, Japan
Kyoko Ohno-Matsui
Tokyo Medical and Dental University, Bunkyo, Tokyo, Japan

**Overview on RADIANCE study**
Speaker: Hyeong Gon Yu
1. Department of Ophthalmology, Seoul National University College of Medicine, Seoul, South, Korea (the Republic of).

**Case Presentation Speaker:** Hyeong Gon Yu
1. Department of Ophthalmology, Seoul National University College of Medicine, Seoul, South, Korea (the Republic of).

**Case Presentation Speaker:** Gemmy Cheung Chui Ming

**Case Presentation Speaker:** Won-Ki Lee
1. The Catholic University of Korea, Seoul, Korea (the Republic of).

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**Symposium 25**
Inflammatory Mechanisms in Diabetic Retinopathy and Other Retinal Degeneration

Organizers
Masaru Takeuchi
National Defense Medical College, Tokorozawa, Saitama, Japan
Susumu Ishida
Hokkaido University Graduate School of Medicine, Sapporo, Hokkaido, Japan

**Role of VEGF as a pro-inflammatory cytokine in diabetic macular edema**
Speaker: Susumu Ishida
1. Department of Ophthalmology, Hokkaido University Graduate School of Medicine, Sapporo, Hokkaido, Japan.

**Elevation of Th17-associated cytokines in the vitreous fluids of proliferative diabetic retinopathy**
Speaker: Masaru Takeuchi

**Role of high-mobility group box-1 in the development of diabetic retinopathy**
Speaker: Ahmed M. Abu El-Asrar
1. Department of Ophthalmology, College of Medicine, King Saud University, Heidelberg, Saudi Arabia.

**Neuro-inflammation in diabetic retinopathy via the renin-angiotensin system activation**
Speaker: Toshihide Kurihara
1. Keio University School of Medicine, Tokyo, Japan.

**Role of inflammation in retinitis pigmentosa**
Speaker: Yasuhiro Ikeda
1. Ophthalmology, Kyushu University, Fukuoka, Japan.

**Role of inflammation in age-related macular degeneration**
Speaker: Miho Nozaki
1. Department of Ophthalmology and Visual Science, Nagoya City University Graduate School of Medical Sciences, Nagoya, Aichi, Japan.
**Morning Seminar 3**

**Japanese Cedar Pollinosis - Ocular Symptoms and Quality of Life -**

Sponsored by Santen Pharmaceutical Co., Ltd.

**Organizer**

Atsuki Fukushima
Kochi Medical School, Nankoku, Kochi, Japan

542: MS3-1

A Quality of Life Questionaire for Japanese Allergic Conjunctival Disease

**Speaker:** Kazumi Fukagawa 1,2

1. Ryogoku Eye Clinic, Tokyo, Japan. 2. Ophthalmology, Keio Univ. School of Med., Tokyo, Japan.

Study Group: Japanese Ocular Allergology Society

543: MS3-2

Treatment of Allergic Conjunctivitis in Consideration for QOL

**Speaker:** Jun Shoji 1

1. Department of Ophthalmology, Nihon University School of Medicine, Itabashi, Tokyo, Japan.

**Plenary Session 11**

**Myopia; Genes or Enviroment?**

**Organizers**

David A. Mackey
University of Western Australia, Crawley, WA, Australia

Kyoko Ohno-Matsui
Tokyo Medical and Dental University, Bunkyo, Tokyo, Japan

557: PS11-1

Epidemiology of Myopia

**Speaker:** Ryo Kawasaki 1

1. Department of Public Health, Yamagata University Faculty of Medicine, Yamagata, Yamagata, Japan.

558: PS11-2

Influence of environment

**Speaker:** Jost B. Jonas 1

1. Department of Ophthalmology, Medical Faculty Mannheim, University Heidelberg, Heidelberg, Germany.

559: PS11-3

Genetics for myopia, high myopia, and extreme myopia in Japan

**Speaker:** Masahiro Miyake 1

1. Department of Ophthalmology, Kyoto University Graduate School of Medicine, Kyoto, Kyoto, Japan.

Study Group: Nagahama study group

560: PS11-4

Characterization of genes and gene by environment interactions for myopia in Asian populations

**Speaker:** Qiao Fan 1

1. Singapore Eye Research Institute, Singapore, Singapore.

Study Group: CREAM

561: PS11-5

Genes and Environment affecting myopia in Australia

**Speaker:** David A. Mackey 1, Alex Hewitt 1,2, Seyhan Yazar 1, Maria Franchina 1

1. Lions Eye Institute, University of Western Australia, Crawley, WA, Australia. 2. Centre for Eye Research Australia, Melbourne, VIC, Australia.
11:10 AM - 12:10 PM 503 (5F)/Room 4

Special Interest Groups 6
Retinal Development and Regeneration

Organizers
Takahisa Furukawa
Institute for Protein Research, Osaka University, Suita, Osaka, Japan
Masayo Takahashi
Center for Developmental Biology, RIKEN, Chuo, Kobe, Japan

585: SIG6-1
Differentiation of retinal precursor cells from human embryonic stem cell
Speaker: Jung Hyun Park 1,2 Hyeong Gon Yu 1
1. Ophthalmology, School of Medicine, Seoul National University, Seoul, Korea (the Republic of). 2. Ophthalmology, Seoul Paik Hospital, Inje University, Seoul, Korea (the Republic of).

586: SIG6-2
Regeneration therapy for retinal degeneration
Speaker: Michiko Mandai 1
1. Laboratory for Retinal Regeneration, RIKEN Center for Developmental Biology, Kobe, Hyogo, Japan.

587: SIG6-3
Retinal development and retinitis pigmentosa
Speaker: Shinichi Fukuda 1
1. Department of Ophthalmology, Institute of Clinical Medicine University of Tsukuba, Tsukuba, Ibaraki, Japan.

588: SIG6-4
Atp6ap2/(pro)renin receptor is associated with cell polarity required for laminar formation during retinal development in mice
Speaker: Atsuhiro Kanda 1
1. Department of Ophthalmology, Hokkaido University Graduate School of Medicine, Sapporo, Hokkaido, Japan.

12:20 PM - 1:20 PM 503 (5F)/Room 4

Luncheon Seminar 19
Key Factors in Glaucoma Treatment: Start and Strengthen

Sponsored by Santen Pharmaceutical Co., Ltd.

Organizers
Yasuaki Kuwayama
Fukushima Eye Clinic, Osaka, Osaka, Japan
Goji Tomita
Toho University Ohashi Medical Center, Meguro, Tokyo,

593: LS19-1
Which patients and when to start … PPG and early phase
Speaker: Atsuya Miki 1
1. Ophthalmology, Osaka University, Suita, Osaka, Japan.

594: LS19-2
Consider risk factors … Desired patients to strengthen earlier
Speaker: Makoto Aihara 1
1. Yotsuya Shirato Eye Clinic, Tokyo, Japan.

595: LS19-3
Keep lifelong vision … Desired patients to strengthen more
Speaker: Hiroshi Sakai 1
1. University of the Ryukyus, Nishihara, Japan.
Symposium 26
Recent Topics in Anti-aging in Ophthalmology

Organizers
Nobuyoshi Kitaichi
Health Sciences University of Hokkaido, Sapporo, Hokkaido, Japan
Motoko Kawashima
Keio University School of Medicine, Shinjuku, Tokyo, Japan

671: SY26-1
Aging and oxidative stress in human corneal epithelial cells: protective effects of natural antioxidants
Speaker: Kyung Chul Yoon
1. Department of Ophthalmology, Chonnam National University Medical School and Hospital, Gwangju, Gwangju, Korea (the Republic of).

672: SY26-2
Anti-aging approach for dry eye disease
Speaker: Motoko Kawashima
1. Department of Ophthalmology, Keio University School of Medicine, Shinjuku, Tokyo, Japan.

673: SY26-3
Accommodation and asthenopia
Speaker: Nobuyoshi Kitaichi
1. Ophthalmology, Health Sciences University of Hokkaido, Sapporo, Hokkaido, Japan. 2. Ophthalmology, Hokkaido University, Sapporo, Japan.

674: SY26-4
Oxidative stress and glaucoma
Speaker: Kenya Yuki
1. Harvard Medical School, Boston Children's Hospital, Boston, MA, Japan.

675: SY26-5
Light stress-induced aging of retina and its possible modifications
Speaker: Masaki Tanito
1. Division of Ophthalmology, Matsue Red Cross Hospital, Matsue, Shimane, Japan.
**Immunology/Microbiology - Paper**

**Moderators**

Justine Smith  
Flinders University, Adelaide, South Australia, Australia

Atsuki Fukushima  
Kochi Medical School, Nankoku, Kochi, Japan

**562-1**

The C-C Chemokine receptor 6 (CCR6) is crucial for Th2-driven allergic conjunctivitis  
So-Hyang Chung 1 Choun-Ki Joo 1  
1. Seoul St. Mary’s Hospital, The Catholic University of Korea, Seoul, Korea (the Republic of).

**563-2**

Regulatory T Cell Dysfunction in High-Risk Corneal Transplantation  
Takenori Inomata 1 Jing Hua 1 Sang-Mok Lee 1 Tina Shiang 1 Homer Chang 1 Qiang Zhang 1 Reza Dana 1  
1. Ophthalmology, Schepens Eye Research Institute/ Massachusetts Eye and Ear Infirmary/ Harvard Medical School, Boston, MA, United States.  
2. Ophthalmology, Hallym University College of Medicine, Gyeonggi-do, Korea (the Republic of).

**564-3**

Withdrawn  
CD73/adenosine axis contributes to the immunosuppressive ability of mesenchymal stem cells in experiment autoimmune uveitis  
Xiaomin Zhang 1  
1. Tianjin Medica University Eye Hospital & Eye Institute, Tianjin, China.

**565-4**

Epigenetic Therapy for Ocular Inflammation  
Lai Wei 1  
1. State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China.

**566-5**

Characteristic T-cell populations in the vitreous fluid of eyes with viral infection-associated uveitis  
Kazuichi Maruyama 1 Tomohito Sato 1 Yoko Karasawa 1 Masataka Ito 1 Masaru Takeuchi 1  
1. Ophthalmology, Tohoku University Graduate School of Medicine, Sendai, Japan.  
2. Infection Control and Laboratory Medicine, Kyoto Prefectural University of Medicine, Kyoto, Japan.  
3. RIKEN Center for Development Biology, Kobe, Japan.  
4. Ophthalmology, Tokyo Dental and Medical University, Tokyo, Japan.

**567-6**

Analysis of cytokines related to helper T cells in the vitreous of endogenous and infectious uveitis  
Masaki Shibata 1 Tomohito Sato 1 Yoko Karasawa 1 Masataka Ito 1 Masaru Takeuchi 1  

**10:05 AM - 10:55 AM**

**Anatomy/Pathology - Paper**

**Moderators**

Toshinori Murata  
School of Medicine, Shinshu University, Matsumoto, Nagano, Japan

Hidetoshi Yamashita  
Yamagata University School of Medicine, Yamagata, Yamagata, Japan

**574-1**

Comparison of Posterior Eye Shape using Retinal SD-OCT and MRI  
Anthony N. Kuo 1 Ryan P. McNabb 1 Sina Farsiu 2-1 Seang Mei Saw 1 Terri Young 4,1 Joseph A. Izatt 4,1  
1. Duke Eye Center, Durham, NC, United States.  
2. Biomedical Engineering, Duke University, Durham, NC, United States.  
4. Ophthalmology and Visual Sciences, University of Wisconsin, Madison, WI, United States.

**575-2**

Induction of apoptosis by resveratrol in human uveal melanoma cells  
Sandeep Goswami 1 Arpna Srivastava 1 Bhavna Chawla 2 Neelam Puskar 1 Mandeep S. Bajaj 2 Seema Kashyap 2 Jasbir Kaur 1  
1. Department of Ocular Biochemistry, Dr. Rajendra Prasad Centre for Ophthalmic Sciences, All India Institute of Medical Sciences, New Delhi, India.  
2. Ocular Oncology and Pediatric Ophthalmology Services, Dr. Rajendra Prasad Centre for Ophthalmic Sciences, All India Institute of Medical Sciences, New Delhi, India.  
3. Department of Ocular Pathology, Dr. Rajendra Prasad Centre for Ophthalmic Sciences, All India Institute of Medical Sciences, New Delhi, India.

**576-3**

NADPH Oxidase-4 as an Indicator of Reactive Oxygen Species Stress in Retinoblastoma  
Lata Singh 1 Seema Kashyap 1 Neelam Pusker 1 Seema Sen 1 Jasbir Kaur 1 Anjana Sharma 4  
1. Ocular Pathology, All India Institute of Medical Sciences, New Delhi, India.  
2. Ophthalmology, All India Institute of Medical Sciences, New Delhi, India.  
3. Ocular Biochemistry, All India Institute of Medical Sciences, New Delhi, India.  
4. Ocular Microbiology, All India Institute of Medical Sciences, New Delhi, India.

**577-4**

Correlation of HMG protein with Clinicohistopathological Parameters in Primary Retinoblastoma  
Mithalesh K. Singh 1 Lata Singh 1 Seema Kashyap 1 Neelam Pusker 2 Seema Sen 1 Anjana Sharma 2 Bhavna Chawla 2  
1. Ocular Pathology, All India Institute of Medical Sciences, New Delhi, Delhi, India.  
2. Ophthalmology, All India Institute of Medical Sciences, New Delhi, Delhi, India.  
3. Ocular Microbiology, All India Institute of Medical Sciences, New Delhi, India.  
4. Ophthalmology, All India Institute of Medical Sciences, New Delhi, India.

**578-5**

Profiling of MicroRNAs Involved in Retinal Degeneration Caused by Selective Müller Cell Ablation  
Sook Hyun Chung 1 Weiyong Shen 1 SoRa Lee 1 Mark Gilles 1  
1. Clinical Ophthalmology and Eye Health, Save Sight Institute, Sydney, NSW, Australia.
Genetic variants associated with exfoliation glaucoma affect promoter activity of the LOXL1 antisense gene

R Rand Allingham 1 Khor Chiea Chuen 3 Mineo Ozaki 2 Susan Williams 4 Allison Ashley-Koch 1 Inas Aboobakar 1 Tin Aung 3 Michael Hauser 1

Taflotan sine reveals beneficial effects on the tear film and ocular surface, a proteomic study

Franz H. Grus 1 Sebastian Funke 1 Sabine Beck 1 Katrin Lorenz 1 Marion Kotterer 1 Dominik Wolters 1 Norbert Pfeiffer 1
1. Ophthalmology, University Medical Center, Experimental Ophthalmology, Mainz, Germany.

Malondialdehyde is Increased in Wet AMD Patients’ Serum and Eyes

Fuxiang Ye 1 Hiroki Kaneko 1 Ryu Iijma 1 Yosuke Nagasaka 1 Kei Takayama 1 Masatoshi Nagaya 1 Hiroko Terasaki 1
1. Ophthalmology, Nagoya University Graduate School of Medicine, Nagoya, Aichi, Japan.

Loss of function analysis of nicotinamide nucleotide adenyllytransferase 1 gene in developing mouse retina

Akira Murakami 1 Eisuke Arai 1 Yuki Yoshikawa 2 Sumiko Watanabe 2
1. Department of Ophthalmology, Juntendo Univ Grad School of Medicine, Tokyo, Japan. 2. Department of Molecular and Developmental Biology, Institute of Medical Science, University of Tokyo, Tokyo, Japan.

Modulation of miRNA-7 trafficking and ubiquitin protein ligase A (UBE2A)-mediated amyloidogenesis by the circular RNA (circRNA) ciRS-7 in age-related macular degeneration (AMD)

Walter Lukwi 2,1 Yuhai Zhao 3,1 Aileen Pogue 5 Surjyadipta Bhattacharjee 4
1. Neurology and Ophthalmology, LSU Neuroscience Center, New Orleans, LA, United States. 2. Neurology and Ophthalmology, LSU Neuroscience Center, New Orleans, LA, United States. 3. LSU Neuroscience Center, New Orleans, LA, United States. 4. LSU Neuroscience Center, New Orleans, LA, United States. 5. Alchem Biotech, Toronto, ON, Canada.
1:25 PM - 2:25 PM  
301-304 (3F) / Exhibition Hall

**Retina - Poster**

**596 - P01-1**

Current Changes in Treatment and Medical Expense of Age-Related Macular Degeneration in Japan

Atsuki Kume 1 Kenji Kashiwagi 1 Tomohiro Ohshiro 1 Yoichi Sakurada 1 1. Ophthalmology, University of Yamanashi, Chuo, Japan.

**597 - P02-2**

Structural predictors of the development of choroidal neovascularisation in early age-related macular degeneration

Thomas Hong 1 Geoffrey K. Broadhead 1,2 Andrew A. Chang 1,2 1. Sydney Institute of Vision Science, Sydney, NSW, Australia. 2. Save Sight Institute, The University of Sydney, Sydney, NSW, Australia.

**598 - P03-3**

Reliability of Smartphone-Based Electronic Visual Acuity Testing, (Applications in Remote Monitoring and Clinical Research of Macular Pathology)

Seung-Young Yu 1 Hyung Woo Kwak 1 1. Ophthalmology, Kyung Hee University Hospital, Seoul, Korea (the Republic of).

**599 - P04-4**

Proteomic analysis of exudative age-related macular degeneration

Kiichiro Okano 1 Tsutomu Sakai 1 Hideo Kohno 1 Takeo Iwamoto 2 Hiroshi Tsuneoka 1 1. Ophthalmology, Tokyo Jikei University School of Medicine, Tokyo, Japan. 2. Molecular cell biology, Tokyo Jikei University School of Medicine, Tokyo, Japan.

**600 - P05-5**

Quantitative Analysis of Fundus Autofluorescence in Exudative Age-related Macular Degeneration, Long-term Follow-up

Kyung Hoon Seo 1 Min Seok Kang 1 Ki Young Kim 1 Seung-Young Yu 1 Hyung Woo Kwak 1 1. Ophthalmology, Kyung Hee University Hospital, Seoul, Korea (the Republic of).

**601 - P06-6**

Structural and Functional Relationship between Optical Coherence Tomography and Custom Developed Manipl E-Amsler Screening Test Inpatients with Macular Diseases

Shalaja S 1 Swetha M 1 Ramesh S Ve 2 Avik Ray 2 Abhishek Bhaduri 3 1. Ophthalmology, Kasturba Medical College, Manipal, Karnataka, India. 2. Department of Optometry, School of Allied Health Sciences, Manipal University, Manipal, Karnataka, India. 3. Apps2Ease Pvt. Ltd., Mutbi, Manipal Institute of Technology, Manipal, India, Manipal, Karnataka, India.

**602 - P07-7**

Inner choroidal layer thickness in central serous chorioretinopathy by enhanced depth imaging optical coherence tomography

Katsuaki Miki 1 Yoshimi Nagai 1 Tomoyuki Chihara 1 Motoki Kimura 1 Masayuki Onaka 1 Kanji Takahashi 1 1. Kansai Medical University, Hirakata, Japan.

**603 - P08-8**

Factors Influencing Need for Retreatment and Long-term Visual Outcome After Intravitreal Bevacizumab For Myopic Choroidal Neovascularization

Danny Ng 1 Alvin Kwok 1 Walton Li 1 1. Ophthalmology, Hong Kong Sanatorium and Hospital, Hong Kong, Hong Kong. 2. Ophthalmology, Tung Wah Eastern Hospital, Hong Kong, Hong Kong.

**604 - P09-9**

Diurnal blood pressure variation type in diabetic patients with macular edema

Kihoko Kato 1,2 Norihito Doi 2 Tomonori Sakoguchi 1 Tetsuro Kamada 1 Taiji Sakamoto 2 1. Department of Diabetology, Imamura Hospital, Kagoshima, Japan. 2. Department of Ophthalmology, University of Kagoshima, Kagoshima, Japan. 3. Department of Ophthalmology, Imamura Hospital, Kagoshima, Japan. 4. Miyata Eye Hospital, Miyakonojou, Japan.

**605 - P10-10**

Relationship between outer retinal microstructural changes and visual acuity in diabetic macular edema

Raymond L. Wong 1,2 Ian Wong 3 1. Department of Ophthalmology and Visual Science, The Chinese University of Hong Kong, Hong Kong SAR, n/a, Hong Kong. 2. Department of Ophthalmology, Hong Kong Eye Hospital, Hong Kong SAR, n/a, Hong Kong. 3. Department of Ophthalmology, The University of Hong Kong, Hong Kong SAR, n/a, Hong Kong.

**606 - P11-11**

Quantitative analysis of automated retinal layer segmentation in ischemic and non-ischemic diabetic macular edema using spectral domain optical coherence tomography

Abhishek Jain 1 Wolf Sebastian 1 Martin Zinkernagel 1 Andreas Ebner 1 1. Augenklinik, Inselspital, Bern, Switzerland.

**607 - P12-12**

Evaluating the Outcome of National Health Insurance (NHI)-Approved Three-Dose Intravitreal Ranibizumab Injection in Eyes with Diabetic Macular Edema (DME) in Taiwan

Yu-fan Chang 1,2 Tai-Chi Lin 1,2 Chang-Sue Yang 1,2 Po-Kang Lin 1,2 An-Fei Lee 1,2 Ling-Ing Lau 1,2 Fang-Yi Tsai 1,2 Fenq-Lih Lee 1,2 Shih-Jen Chen 1,2 1. Department of Ophthalmology, Taipei Veterans General Hospital, Taipei, Taiwan. 2. School of Medicine, National Yang-Ming University, Taipei, Taiwan.
608 - P13-13
Intravitreal bevacizumab increases intraocular inflammatory factor levels after injection in patients with proliferative diabetic retinopathy
Jing Wen 1, 2, Yanrong Jiang 1, 2
1. Department of ophthalmology, Peking University People’s hospital, Beijing, China. 2. Key Laboratory of Vision Loss and Restoration, Ministry of Education, Beijing, China.

609 - P14-14
Evaluation of ganglion cell-inner plexiform layer thickness according to nerve conduction velocity and autonomic nerve function in diabetes
Ki Young Kim 1 Min Seok Kang 1 Seung-Young Yu 1 Hyung Woo Kwak 1
1. Ophthalmology, Kyung Hee University Hospital, Seoul, Korea (the Republic of).

610 - P15-15
Short Pulse Duration High-Power Laser Photocoagulation During Vitrectomy for Diabetic Retinopathy Reduces Postoperative Inflammation
Masahiko Sugimoto 1 Atsushi Ichio 1 Mineo Kondo 1
1. Ophthalmology, Mie University School of Medicine, Tsu, Japan.

611 - P16-16
Comparison of Navigated and Conventional Panretinal Pattern Scan Laser Photocoagulation for Diabetic Retinopathy
Yuichi Toriyama 1 Takao Hirano 1 Toshinori Murata 1
1. Ophthalmology, Shinshu-university, Matsumoto, Japan.

612 - P17-17
Navilas® navigated laser system treatment for diabetic macular edema
Takao Hirano 1 Yuichi Toriyama 1 Toshinori Murata 1
1. Ophthalmology, Shinshu University, Matsumoto, Nagano, Japan.

613 - P18-18
Withdrawn
Clinical and microbiological profile of patients with Corynebacterium endophthalmitis, Review of a decade
Savitri Sharma 1 Joveeta Joseph 1 Khemlal Nirmalkar 1 Annie Mathai 2
1. Jhaveri Microbiology Centre, L V Prasad Eye Institute, Hyderabad, Telangana, India. 2. Kanuri Santamma Retina-Vitreous Services, L. V. Prasad Eye Institute, Hyderabad, India.

614 - P19-19
Implications of Visually Symptomatic vs Asymptomatic Fungal Eye Disease
Shagun Dhaliwal 1, 2 Johnathan Kim 2 Luke Potts 3, 2 Jason Smart 4, 2 Kevin Lai 4, 3 Robert Rosa 3, 2 Angela Hochhalter 2 Juhee Song 2
1. Internal Medicine, Exempla Saint Joseph Hospital, Denver, CO, United States. 2. Texas A&M Health Science Center College of Medicine, Temple, TX, United States. 3. Eye Institute, Scott & White, Temple, TX, United States. 4. Dean Mcgee Eye Institute, University of Oklahoma, Oklahoma City, OK, United States.

615 - P20-20
Optical coherence tomographic highly reflective line in eyes with resolved macular edema associated with branch retinal vein occlusion
Taiji Hasegawa 1 Naonori Masuda 1 Nahoko Ogata 1
1. Ophthalmology, Nara Medical University, Kashihara, Nara, Japan.

616 - P21-21
The occurrence and progression of outer retinal tubulation in Chinese patients after intravitreal injections of ranibizumab
Rui Hua 1 Lei Chen 1
1. Ophthalmology, First Hospital of China Medical University, Shenyang, Liao Ning, China.

617 - P22-22
Spectral Domain Optical Coherence Tomography of occult optic disc pit
Jyothsna Rajagopal 1 Chandra Kumar H V 1 Sri Ganesh 1
1. Nethradya Super Speciality Eye Hospital, Bangalore, India.

618 - P23-23
Fundus autofluorescence and onset time in central serous chorioretinopathy
Ichiro Maruko 1, 2 Yutaka Ishikawa 1 Kanako Itagaki 1 Yukinori Sugano 2 Tetsuju Sekiyu 2 Iida Tomohiro 1
1. Ophthalmology, Tokyo Women’s Medical University, Tokyo, Japan. 2. Ophthalmology, Fukushima Medical University School of Medicine, Fukushima, Japan.

619 - P24-24
Peripapillary choroidal thickness in central serous chorioretinopathy, Is choroid outside of the macula also thick?
Jaeryung Oh 1 Young-Ho Kim 1 Cheolmin Yun 1
1. Department of Ophthalmology, Korea University College of Medicine, Seongbuk, Seoul, Korea (the Republic of).

620 - P25-25
A Report On Fluorescein Angiographies Done At A Tertiary Institution Since The Approval Of PHIC Circular No. 0035 S. 2013 (17 DEC 2013)
Bryan Jason B. Atenza 1 Sherman Valero 1

621 - P26-26
En face imaging of Optical Coherence Tomography in a case of choroidal rupture
Tomoko Mase 1 Satoshi Ishiko 2 Tomofumi Tani 1 Kazuhiro Sugawara 1 Akitoshi Yoshida 1
1. Ophthalmology, Asahikawa Medical University, Asahikawa, Japan. 2. Medicine and Engineering Combined Research Institute, Asahikawa Medical University, Asahikawa, Japan. 3. Asahikawa Medical University, Asaikawa, Japan.
Normal Macular Thickness in Healthy Indian Eyes using Spectral-Domain Optical Coherence Tomography
Dr. Tanie Natung 1
1. Ophthalmology, North Eastern Indira Gandhi Regional Institute of Health & Medical Sciences, Shillong, India.

Experimental visualization and quantification of vitreous contamination following intravitreal injections
Hiroyuki Nakashizuka 1 Jun Shoji 1 Akiko Ishimori 1 Mitsuko Yuzawa 1
1. Ophthalmology, Division of Ophthalmology, Department of Visual Sciences, Nihon University School of Medicine, Tokyo, Japan.

Half-dose Verteporfin Photodynamic Therapy for Aquired Vitelliform Lesions associated with central serous chorioretinopathy
Hajime Onoe 1 Kyoko Fujita 1 Mitsuko Yuzawa 1
1. Department of Ophthalmology, Nihon University School of Medicine, Tokyo, Japan.

Bilateral central retinal vein occlusion associated with mantle cell lymphoma
Nana Furuya 1 Toshiyuki Oshitari 1 Eiju Sato 1 Shuichi Yamamoto 1
1. Ophthalmology and Visual Science, Chiba University Graduate School of Medicine, Chiba, Japan.

Comparison of Subfoveal Choroidal Thickness Results according to Photodynamic Therapy Spot Size for Chronic Central Serous Chorioretinopathy
Min Seok Kang 1 Seung-Young Yu 1 Hyung Woo Kwak 1
1. Ophthalmology, Kyung Hee University Hospital, Seoul, Korea (the Republic of).

Regional Macular Function, Evaluating Repeatability in Tractional Epiretinal Membranes
Adil Syed 1,2 Meidong Zhu 1,2 Andrew A. Chang 1,2
1. Sydney Institute of Vision Science, Sydney, NSW, Australia. 2. Save Sight Institute, University of Sydney, Sydney, NSW, Australia.

Discrepancy in Fluorescein Angiography and Optical Coherence Tomography Findings of Macular Edema in Intermediate Uveitis
Bohyuck Kim 1 Hyeong Gon Yu 1
1. Ophthalmology, Seoul National University College of Medicine, Seoul, Korea (the Republic of).

Correlation between OCT findings and visual outcomes after anti-VEGF therapy for RVO
Akiko Mino 1 Yoshinori Mitamura 1 Takashi Katome 1 Takeshi Naito 1
1. Ophthalmology Department, University of Tokushima, Tokushima city, Tokushima, Japan.

Role of scleral buckling in addition to vitrectomy for the treatment of rhegmatogenous retinal detachment, systematic review and meta-analysis
Takashi Ueta 1 Kiyoito Totsuka 1 Murilo Roggia 1 Hiroko Inui 1 Yasuo Noda 1
1. Department of Ophthalmology, Graduate School of Medicine and Faculty of Medicine, The University of Tokyo, Tokyo, Japan.

Peripheral Prosthetic Vision in the Inferior Visual Field as a Means to Improve Mobility Performance
Marc Patrick H. Zapa 1 Paul B. Matteucci 1 Nigel H. Lovell 1 Gregg J. Suanning 1
1. Graduate School Of Biomedical Engineering, UNSW Australia, Sydney, NSW, Australia.

Autosomal dominant cone-rod dystrophy with GUCY2D gene mutations in three Japanese families
Takuro Fujimaki 1 Ai Yanagawa 1 Keiko Fujiki 1 Akira Murakami 1
1. Ophthalmology, Juntendo University Graduate School of Medicine, Tokyo, Japan.

Attempt neonatal fundus blood flow measurement using a Laser speckle flowgraphy (LSFG)
Tadashi Matsumoto 1 Yukinobu Okajima 1 Yuichi Hori 1
1. Toho University Omori Medical Center, Tokyo, Japan.

Parental Awareness of the Need for ROP Screening of Premature Infants in North China
Jing Feng 1 Yi Chen 1 Xiaoxin Li 1
1. Ophthalmology, Peking University People’s Hospital, Beijing, China.

Characteristics and outcomes of fall-related open-globe injuries in pseudophakic patients
Shaheen Kavoussi 1 Martin Slade 1 Seth Meskin 1 Ron Adelman 1
1. Ophthalmology, Yale University, New Haven, CT, United States.

Evisceration Or Reconstruction In Case Of Globe Rupture With No Light Perception
Sundaram Natarajan 1 Arun K. Pandey 1 Gauri Khare 1
1. Ophthalmology, Aditya Jyot Eye Hospital, Mumbai, India.
The application of pulsed water jets in vitreoretinal surgery and relevant retinal findings
Hiroshi Kunikata 1 Yuji Tanaka 1 Naoko Aizawa 1 Atsuhiro Nakagawa 2 Teiji Tominaga 2 Toru Nakazawa 1
1. Ophthalmology, Tohoku University Graduate School of Medicine, Sendai, Japan. 2. Neurosurgery, Tohoku University Graduate School of Medicine, Sendai, Japan.

In Vivo Emulsification Analysis of 1000 and 5000 Silicone Oil After Retinal Detachment Surgery
Arief Kartasasmata 1, 2 Widi Astuti 1 Roova Virgana 1, 2 Risdi Risdiana 3
1. Ophthalmology, Faculty of Medicine Padjadjaran University, Bandung, Indonesia. 2. Vitreoretinal, Cicendo National Eye Hospital, Bandung, Indonesia. 3. Physics, Faculty of Mathematics and Natural Science Padjadjaran University, Bandung, Indonesia.

Influences of 27-gauge transconjunctival sutureless vitrectomy on postoperative corneal topographic conditions
Takafumi Hirashima 1 Yohei Satou 1 Takeshi Moriya 1 Takao Utsumi 1 Miou Hirose 1 Hideyasu Oh 1
1. Ophthalmology, Hyogo Prefectural Amagasaki Hospital, Amagasaki, Hyogo, Japan.

Novel surgical technique for the treatment of the massive subretinal hemorrhage
Takahiro Sogawa 1 Kaori Sayanagi 1 Yasushi Ikuno 1 Noriyasu Hashida 1 Chikako Hara 1 Yoko Fukushima 1 Miki Sawa 1 Kohji Nishida 1
1. Ophthalmology, Osaka University Graduate School of Medicine, Suita, Japan.

The comparison of surgical outcome of idiopathic epiretinal membrane using ICG (IndoCyanine Green) or BBG (Brilliant Blue G)
Atsuhide Takesue 1 Kouki Kanbayashi 1 Takahide Suzuki 1 Toshiyuki Yokoyama 1
1. Juntendo University Nerima Hospital, Tokyo, Japan.

Prediction of spontaneous closure and visual outcome in traumatic macular hole with spectral domain optical coherence tomography
Haoyu Chen 1 Weiqi Chen 1 Kangkeng Zheng 1
1. Joint Shantou International Eye Center, Shantou, China.

Unexplained entity of CNVM following VR surgery
Krishna Nagaradh 1 Chandra Kumar H.V 1 Naveen K 1 Divya Chandran 1 Jyothsna Rajagopal 1
1. Nethradhama Super Speciality Eye Hospital, Bangalore, India.

A new anti-suppression approach improves the contrast sensitivity and visual evoked potential in anisometric amblyopia
Ying Yuan 1 Jiangan He 2 Min Li 1 Huiqin Cheng 1 Billian Ke 1
1. Ophthalmology, Shanghai First People’s Hospital Affiliated to Shanghai Jiaotong University, Shanghai, Shanghai, China. 2. Shanghai Eye Diseases Prevention & Treatment Center, Shanghai, China.

Objective assessment of visual functions in individuals with severe motor and intellectual disabilities
Kenji Suzuki 1 Takahiro Niida 1 Yuma Shinomiya 1 Hitoshi Uchiyama 1 Yoko Komachi 1 Hiroshi Mochizuki 1
1. International University of Health and Welfare, Ohtawara, Tochigi, Japan.

Dynamics of Distractor and Target Spatial Averaging in the Global Effect of Saccades
Woo Young Choi 1, 2 Jayalakshmi Viswanathan 2 Jason Barton 2
1. Department of Medicine (Neurology), University of Alberta, Edmonton, AB, Canada. 2. Departments of Medicine (Neurology), Ophthalmology and Visual Sciences, University of British Columbia, Vancouver, BC, Canada.

Evaluation of macular inner retinal layer in optic tract syndrome using swept-source optical coherence tomography
Katsutoshi Goto 1, 2 Atsushi Miki 1, 3 Tsutomu Yamashita 1, 3 Syunsuke Araki 1 Go Takizawa 1 Kenichi Mizukawa 1 Junichi Kiryu 1
1. Ophthalmology, Kawasaki Medical School, Kurashiki, Japan. 2. Doctoral Program in Sensory Science, Graduate School of Health Science and Technology, Kawasaki University of Medical Welfare, Kurashiki, Japan. 3. Sensory Science, Faculty of Health Science and Technology, Kawasaki University of Medical Welfare, Kurashiki, Japan.

Clinical measurement of ocular counter-rolling during head tilt using fundus photography
Han Woong Lim 1 Minjee Lee 2 Seung Hun Park 1 Sei yeul Oh 2 Yumi Song 2 Sang Won Moon 1
649 - P54-6
Retinal ganglion cell atrophy in homonymous hemianopia due to acquired occipital lesions using swept-source OCT
1. Sensory Science, Faculty of Health Science and Technology, Kawasaki University of Medical Welfare, Kurashiki, Japan. 2. Ophthalmology, Kawasaki Medical School, Kurashiki, Japan. 3. Doctoral Programme in Sensory Science, Graduate School of Health Science and Technology, Kawasaki University of Medical Welfare, Kurashiki, Japan.

650 - P55-7
Intraosseous orbital cellular hemangioma with intracranial involvement
Tun Hang Yeo, Bernard C Ho, Boon Chuan Pang, Eugenie W Poh.
1. National Healthcare Group Eye Institute, Tan Tock Seng Hospital, Singapore, Singapore. 2. Department of Pathology, Tan Tock Seng Hospital, Singapore, Singapore. 3. Department of Neurosurgery, National Neuroscience Institute, Singapore, Singapore.

651 - P56-8
Case of blepharospasm and cellulitis following facial plastic surgery
Ryutaro Akiba, Toshiyuki Oshitari, Shuichi Yamamoto.
1. Ophthalmology and Visual Science, Chiba University Graduate School of Medicine, Chiba, Japan.

652 - P57-9
Buccal mucous membrane grafting for cicatricial entropion
1. Dong-A University Hospital, Busan, Korea (the Republic of).

653 - P58-10
Suture infection suspected to be caused by silk thread used in suspension surgery for ptosis
Yukinobu Okajima, Tadashi Matsumoto, Yuichi Hori.
1. Toho University Medical Center, Tokyo, Japan.

654 - P59-11
Noninvasive Assessment of Extraocular Muscle Insertion Using 3-Dimensional Anterior Segment Optical Coherence Tomography before Strabismus Reoperation
Yuka Sato, Shinichi Fukuda, Takahiro Hiraoka, Tetsuro Oshika.
1. Department of Ophthalmology, Tsukuba Memorial Hospital, Tsukuba, Ibaraki, Japan. 2. Department of Ophthalmology, Faculty of Medicine, University of Tsukuba, Tsukuba, Ibaraki, Japan.

655 - P60-12
Effects of divergence with base-in prisms on near visual function
Manami Kawai, Satoshi Ishiko, Noriko Nishikawa, Ikuko Yamaga, Kazuhiro Sugawara, Akitoshi Yoshida.
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