



# Scientific Program







※Regarding to the program of 37th JSOC, please refer to the page 43.

# Scientific Sessions

## Welcome and Introduction

Sep.24 (Fri) 8:40~8:45 Room A (2F North Hall)

President of 2nd IOCS & 37th JSOC: **Yuichiro Ogura** (Nagoya City Univ)

President-Emeritus of IOCS: **David Huang** (Oregon Health & Science Univ)

## Session1: Basic Science and Technology

Sep.24 (Fri) 8:45~9:35 Room A (2F North Hall)

Moderators: **Hao F. Zhang** (Northwestern Univ)

**Yuichiro Ogura** (Nagoya City Univ)

8:45 **IO1-1 Non-Doppler OCT methods for measuring blood flow in the retinal and choroidal vasculature**

○Benjamin J. Vakoc

(Wellman Center for Photomedicine, Massachusetts General Hospital and Harvard Medical School, Boston, Massachusetts 02114, USA)

8:55 **IO1-2 Companion diagnostics in ophthalmology by Doppler holography**

Leo Puyo, Michel Paques, ○Michael Atlan

(Langevin Institute and Quinze-Vingts Eye Hospital Paris, France)

9:05 **IO1-3 Direct measurement of pulse wave propagation in the human retinal capillary network**

○Phillip Bedggood, Andrew Metha

(The Univ of Melbourne)

9:15 **IO1-4 Direct Measurement of Capillary Blood flow the Human Retinal Capillary Network**

○Stephen A. Burns, Raymond L. Warner, Kaitlyn Sapoznik, Alessandra Carmichael, Thomas J Gast,

(Indiana University, School of Optometry, Bloomington, 47405, United States of America)

9:25 **Discussion**

## Session2: OCT/OCTA Technology Updates and AI

Sep.24 (Fri) 9:40~10:30 Room A (2F North Hall)

Moderators: **Rainer A. Leitgeb** (Medical Univ Vienna)

**David Huang** (Oregon Health & Science Univ)

9:40 **IO2-1 Quantification and dynamic characterization of intermittent retinal capillary perfusion in sickle cell disease using serial OCT angiography and adaptive optics angiography**

○Richard B. Rosen<sup>1,2</sup>, Davis B. Zhou<sup>1,2</sup>, Alexander Pinhas<sup>1</sup>, Maria V. Castanos<sup>1,2</sup>,

Rishard Weitz<sup>1</sup>, Peter Gillette<sup>4</sup>, Jeffrey Glassberg<sup>3</sup>, Justin V. Migacz<sup>1,2</sup>,


Toco Y.P. Chui<sup>1,2</sup>

<sup>1</sup>New York Eye and Ear Infirmary at Mount Sinai/Icahn Sch of Med at Mount Sinai,

<sup>2</sup>Ophthalmology, Icahn School of Medicine at Mount Sinai, New York, NY,

<sup>3</sup>Emergency Medicine, Icahn School of Medicine at Mount Sinai, New York, NY,

<sup>4</sup>Internal Medicine, Kings County Hospital Center, Brooklyn, NY)

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- 9:50 **IO2-2 Nonperfusion area segmentation in three retinal plexuses on wide-field OCT angiography using a deep convolutional neural network**  
 ○Yukun Guo, Tristan T. Hormel, Min Gao, Qisheng You, Jie Wang, Christina J Flaxel, Steven T. Bailey, Thomas S. Hwang, Yali Jia  
 (OHSU Casey Eye Inst)
- 10:00 **IO2-3 Vessel depictability dependence on the hemodynamics in optical coherence tomography angiography: an adaptive optics scanning light ophthalmoscope study**  
 ○Masaharu Ishikura, Akihito Uji, Yuki Muraoka, Shin Kadomoto, Naomi Nishigori, Akitaka Tsujikawa  
 (Kyoto Univ)
- 10:10 **IO2-4 Motion-free imaging of vasculature and pigment by Lissajous polarization OCT**  
 ○Yoshiaki Yasuno<sup>1</sup>, Shuichi Makita<sup>1</sup>, Masahiro Miura<sup>2</sup>  
 (<sup>1</sup>Univ of Tsukuba, <sup>2</sup>Tokyo Medical University Ibaraki Medical Center, Japan)
- 10:20 **Discussion**

**Refreshment Break and Exhibition**

Sep.24 (Fri) 10:30~10:45 Room C (2F Central Hal)

**Session3: Glaucoma & Optic Nerve Diseases**

Sep.24 (Fri) 10:45~11:35 Room A (2F North Hall)

Moderators: **Yali Jia** (Oregon Health & Science Univ)

**Kazuhisa Sugiyama** (Kanazawa Univ)

- 10:45 **IO3-1 Diagnosing and Monitoring Glaucoma with OCTA**  
 ○Robert N. Weinreb  
 (Hamilton Glaucoma Center and Shiley Eye Institute at the University of California San Diego)
- 10:55 **IO3-2 Relevance of ocular circulation in glaucoma-OCT angiography study ?**  
 ○Michael S Kook  
 (Department of Ophthalmology, College of Medicine, Univ of Ulsan, Asan Medical Center)
- 11:05 **IO3-3 Association between blood flow on the temporal optic nerve head and central visual function in glaucoma patients**  
 ○Toru Nakazawa  
 (Tohoku Univ)
- 11:15 **IO3-4 Prediction of the outcomes of trabecular-targeted minimally invasive glaucoma surgery using anterior segment OCTA**  
 ○Yoko Okamoto, Tadamichi Akagi, Kenji Suda, Takanori Kameda, Masahiro Miyake, Hanako Ohashi Ikeda, Shin Kadomoto, Akihito Uji, Akitaka Tsujikawa  
 (Kyoto Univ)
- 11:25 **Discussion**



**Session4: Systemic Disease and Optic Nerve** Sep.24 (Fri) 11:40~12:30 Room A (2F North Hall)

Moderators: **Akitaka Tsujikawa** (Kyoto Univ)  
**Richard B. Rosen** (New York Eye & Ear Infirmary of Mount Sinai)

- 11:40 **IO4-1 Reduced blood flow and pulsatility in the choroidal watershed and peripapillary hypoperfusion zones and relation to the optic nerve circulation**  
○Randy Kardon<sup>1,2</sup>, Sohan Hayreh<sup>1</sup>, Ryuya Hashimoto<sup>1</sup>  
(<sup>1</sup>Univ of Iowa/Iowa City VA Ctr of Excellence for the Prevention and Treatment of Visual Loss, <sup>2</sup>Iowa City VA Center of Excellence for the Prevention and Treatment of Visual Loss, Iowa City, IA, United States)
  
- 11:50 **IO4-2 Optic nerve head microarchitecture: en-face OCT and OCT angiographic imaging of lamina cribrosa, neuroretinal rim, and vasculature imaging in glaucomatous eyes**  
○Toco Y.P. Chui<sup>1,2</sup>, Davis B. Zhou<sup>1,2</sup>, Maria V. Castanos<sup>2</sup>, Oscar Otero-Marquez<sup>1</sup>, Justin Migacz<sup>1</sup>, Rachel E. Linderman<sup>3</sup>, Joseph Carroll<sup>3,4</sup>, Donald C. Hood<sup>5,6</sup>, Robert Ritch<sup>1</sup>, Richard B. Rosen<sup>1,2</sup>  
(<sup>1</sup>New York Eye and Ear Infirmary of Mount Sinai/Icahn Sch of Med at Mount Sinai, <sup>2</sup>Icahn School of Medicine at Mount Sinai, New York, NY, USA, <sup>3</sup>Cell Biology, Neurobiology & Anatomy, Medical College of Wisconsin, Milwaukee, WI, USA, <sup>4</sup>Ophthalmology & Visual Sciences, Medical College of Wisconsin, Milwaukee, WI, USA, <sup>5</sup>Department of Psychology, Columbia University, New York, NY, USA, <sup>6</sup>Department of Ophthalmology, Columbia University, New York, NY, USA)
  
- 12:00 **IO4-3 Optic disk blood perfusion and oxygenation in glaucoma**  
○Martin Hammer, Walthard Vilser, Thomas Riemer, Hosni Al Zoubi, Rowena Schultz  
(Univ Hosp Jena)
  
- 12:10 **IO4-4 Retinal and choroidal OCTA in patients with systemic hypertension**  
○Leo Schmetterer  
(Singapore Eye Research Institute)
  
- 12:20 **Discussion**

**Luncheon Seminar 1** Sep.24 (Fri) 12:45~13:45 Room A (2F North Hall)

Chair: **Yuichiro Ogura** (Nagoya City Univ)

**Secret Stories of Optical Coherence Tomography (OCT) and Optical Coherence Tomography Angiography (OCTA)**

- LS1-1 OCT angiography of CNV: what have we learned in 3D**  
Amani A. Fawzi  
(Northwestern Univ)
  
- LS1-2 Stories from the early history of optical coherence tomography**  
David Huang  
(Oregon Health & Science Univ)

Sponsored by : Novartis Pharma K.K.

**Update on Treatment Strategies for Sever RVOs**

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**LS2-1 Update on treatments for CRVO**

Yasuhiro Iesato  
(Shinshu Univ)

**LS2-2 Update on treatments for persistent BRVO**

Motohiro Kamei  
(Aichi Medical Univ)

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

**IOCS Business Meeting – Members Only**

Sep.24 (Fri) 14:00~14:30 Room A (2F North Hall)

**Session5: Physiology & Pathophysiology**

Sep.24 (Fri) 14:35~15:25 Room A (2F North Hall)

Moderators: **Min Wang** (Eye and ENT Hosp of Fudan Univ)  
**Ann E. Elsner** (Indiana Univ- Bloomington)

14:35 **IO5-1 Retinal oxygenation with a damaged choriocapillaris**

○Robert A. Linsenmeier  
(Northwestern Univ)

14:45 **IO5-2 Withdraw**

14:55 **IO5-3 Differential reperfusion patterns in retinal vascular plexuses following increase in intraocular pressure an OCT angiography study**

○Gemmy Cheung  
(Singapore Nat Eye Ctr)

15:05 **IO5-4 Withdraw**

15:05 **Discussion**

**Session6: Diabetic Retinopathy**

Sep.24 (Fri) 15:30~16:20 Room A (2F North Hall)

Moderators: **Sebastian Wolf** (Univ of Bern)  
**Fumi Gomi** (Hyogo Coll of Med)

15:30 **IO6-1 Deep-learning-aided detection of referable and vision threatening diabetic retinopathy based on structural and angiographic OCT**

○Yali Jia, Pengxiao Zang, Tristan T. Hormel, Yukun Guo, Thomas S. Hwang  
(OHSU Casey Eye Inst)



- 15:40 **IO6-2 Retinal blood flow regulation and neural retinal function in diabetic mice**  
○Taiji Nagaoka  
(Nihon Univ)
- 15:50 **IO6-3 Clinical application of single-capture 65° widefield (WF) optical coherence tomography angiography (OCTA) for detection of retinal perfusion and neovascularization in eyes of diabetic patients**  
○Andreas Pollreisz<sup>1)</sup>, Michael Niederleithner<sup>2)</sup>, Aleksandra Sedova<sup>1)</sup>, Felix Datlinger<sup>1)</sup>, Tilman Schmoll<sup>2,3)</sup>, Rainer A. Leitgeb<sup>2)</sup>, Ursula Schmidt-Erfurth<sup>1)</sup>  
(<sup>1)</sup>Med Univ Vienna, <sup>2)</sup>Center for Medical Physics and Biomedical Engineering; Medical University Vienna, Austria, <sup>3)</sup>Carl Zeiss Meditec, Inc., Dublin, CA, USA)
- 16:00 **IO6-4 Modified geometric perfusion deficit analysis for detecting clinically referable eyes with diabetic retinopathy**  
○Peter L. Nesper<sup>1,2)</sup>, Amani A. Fawzi<sup>1)</sup>  
(<sup>1)</sup>Northwestern Univ, <sup>2)</sup>Department of Ophthalmology, Chicago Medical School, Rosalind Franklin University of Medicine and Science, North Chicago, Illinois, USA)
- 16:10 **Discussion**

**Refreshment Break and Exhibition**

Sep.24 (Fri) 16:20~16:35 Room C (2F Central Hall)

**Session7: PCV & Other Retinal Diseases**

Sep.24 (Fri) 16:35~17:25 Room A (2F North Hall)

Moderators: Tomohiro Iida (Tokyo Women's Med Univ)

Amani A. Fawzi (Northwestern Univ)

- 16:35 **IO7-1 Central Serous Chorioretinopathy and Circumscribed Choroidal Hemangiomas, a Strange Intersection**  
○Richard F. Spaide  
(Vitreous, Retina, Macula Consultants of New York)
- 16:45 **IO7-2 Unusual features related with pachychoroid**  
○Won Ki Lee  
(Nune Eye Hosp)
- 16:55 **IO7-3 Flow signal in polyps is a biomarker of early recurrence after combination therapy in polypoidal choroidal vasculopathy**  
○Hisashi Fukuyama, Yuki Komuku, Takashi Araki, Fumi Gomi  
(Hyogo Coll of Med)
- 17:05 **IO7-4 A clinical state-of-the-art of AI in AMD care**  
○Ursula Schmidt-Erfurth  
(Med Uni of Vienna)
- 17:15 **Discussion**

Moderators: **Shih-Jen Chen** (Taipei Veterans General Hosp)**Ursula Schmidt-Erfurth** (Med Univ of Vienna)

- 17:30 **IO8-1 OCT and OCT angiography in optic neuropathies**  
○Ping Wei, Julie Falardeau, Jie Wang, Liang Liu, Ou Tan, Yali Jia, David Huang  
(OHSU Casey Eye Inst)
- 17:40 **IO8-2 Narrow beam optical coherence tomography angiography**  
○Ramin Tadayoni, Sophie Bonnin, Stephanie Magazzeni  
(Université de Paris, Ophthalmology Department, AP-HP, Lariboisière, Saint Louis  
and Fondation Rothschild Hospitals, Paris, France.)
- 17:50 **IO8-3 Relating retinal oxygen metabolism, thickness and visual function in  
experimental ischemia/reperfusion**  
○Mahnaz Shahidi<sup>1)</sup>, Nathanael Matei<sup>1)</sup>, Sophie Leahy<sup>1)</sup>, Norman P. Blair<sup>2)</sup>  
(<sup>1)</sup>Univ of Southern California, <sup>2)</sup>Department of Ophthalmology and Visual Sciences,  
University of Illinois at Chicago)
- 18:00 **IO8-4 Plexus specific quantification of fluid volume in diabetic macular edema**  
○Kotaro Tsuboi, Qi Sheng You, Yukun Guo, Jie Wang, Christina J. Flaxel,  
Steven T. Bailey, David Huang, Yali Jia, Thomas S. Hwang  
(OHSU Casey Eye Inst)
- 18:10 **IO8-5 Diagnostic accuracy of optical coherence tomography angiography compared  
with multimodal imaging for choroidal neovascularization in central serous  
chorioretinopathy**  
○Danny Siu-Chun Ng<sup>1)</sup>, Mary Ho<sup>1)</sup>, Lijia Chen<sup>1)</sup>, Fanny Lai-Ting Yip<sup>1)</sup>, Wee Min Teh<sup>2)</sup>,  
Linbin Zhou<sup>1)</sup>, Shaheeda Mohamed<sup>1)</sup>, Chi Wai Tsang<sup>1)</sup>, Timothy Y. Y. Lai<sup>1)</sup>  
(<sup>1)</sup>The Chinese Univ of Hong Kong, <sup>2)</sup>Hospital Melaka, Malaysia)
- 18:20 **Discussion**

President-Elect of IOCS: **Ursula Schmidt-Erfurth** (Med Univ of Vienna)





## Evening Seminar 1

Sep.24 (Fri) 18:45~19:45 Room A (2F North Hall)

Chair: **Yuichiro Ogura** (Nagoya City Univ)

### Deeper Imaging into Chorioretinal Circulation with Swept Source OCT

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**ES1-1 Using deep-learning for the assessment of diabetic macular ischemia on OCT-angiography images**

Carol Cheung  
(The Chinese Univ of Hong Kong)

**ES1-2 New insights into CSC-What we have learned from swept-source OCT**

Hideki Koizumi  
(Univ of the Ryukyus)

Sponsored by : TOPCON CORPORATION/TOPCON MEDICAL JAPAN CO., LTD.

## Evening Seminar 2

Sep.24 (Fri) 18:45~19:45 Room B (2F South Hall)

Chair: **Toshinori Murata** (Shinshu Univ)

### Focus on Wide Field OCT & High Resolution OCT

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**ES2-1 Exploration of novel clinical benefits with high resolution OCT and OCT angiography**

Mineo Kondo  
(Mie Univ)

**ES2-2 Clinical application of novel ultra wide field SS-OCT and OCT angiography**

Takao Hirano  
(Shinshu Univ)

Sponsored by : Canon Inc./CANON MEDTECH SUPPLY CORPORATION

# Poster Sessions

\* There is no on-site poster presentation. They will be held only online (on-demand streaming).

## Poster Session: AI-TECH

- IP1-1 Automated region of interest selection improves the deep learning based segmentation of hyper-reflective foci in optical coherence tomography images**  
○Minhaj Alam<sup>1)</sup>, Maximilian Pfau<sup>2)</sup>, Darvin Yi<sup>3)</sup>, Daniel L. Rubin<sup>1,4)</sup>, Joelle Hallak<sup>3)</sup>  
(<sup>1)</sup>Stanford Univ, <sup>2)</sup>Department of Ophthalmology, University of Bonn, Bonn, Germany, <sup>3)</sup>Illinois Eye and Ear Infirmary, Department of Ophthalmology and Visual Sciences, University of Illinois at Chicago, Chicago, IL, USA, <sup>4)</sup>Department of Radiology, Stanford University, Stanford, CA, USA)
- IP1-2 A deep learning-based quantitative framework for retinopathy of prematurity severity: comparison with expert diagnosis of plus disease.**  
○J. Peter Campbell<sup>1)</sup>, RV Paul Chan<sup>2)</sup>, Jayashree Kalpathy-Cramer<sup>3)</sup>, Michael Chiang<sup>4)</sup>  
(<sup>1)</sup>OHSU Casey Eye Inst, <sup>2)</sup>University of Illinois, Chicago, Illinois, USA, <sup>3)</sup>Massachusetts General Hospital, Boston, Massachusetts, USA., <sup>4)</sup>National Eye Institute, Bethesda, MD, USA)
- IP1-3 Reconstruction of high-resolution OCT angiograms of retinal intermediate and deep capillary plexuses using deep learning**  
○Min Gao, Tristan T. Hormel, Jie Wang, Yukun Guo, Steven Bailey, Homas S Hwang, Yali Jia  
(OHSU Casey Eye Inst)
- IP1-4 Ultrahigh speed and widefield handheld swept source OCTA in pediatric retinal imaging**  
○Yifan Jian, Shuibin Ni, Susan Ostmo, Ringo Ng, Xiang Wei, Yali Jia, David Huang, J. Peter Campbell  
(OHSU Casey Eye Inst)
- IP1-5 Automated classification model for pachychoroid using machine learning**  
○Hideki Shiihara<sup>1)</sup>, Shozo Sonoda<sup>1)</sup>, Hiroto Terasaki<sup>1)</sup>, Guangzhou An<sup>2)</sup>, Hideo Yokota<sup>3)</sup>, Masahiro Akiba<sup>2)</sup>, Taiji Sakamoto<sup>1)</sup>  
(<sup>1)</sup>Kagoshima Univ, <sup>2)</sup>R&D Division, Topcon Corporation, Tokyo, Japan, <sup>3)</sup>Image Processing Research Team, RIKEN Center for Advanced Photonics, RIKEN, Wako, Japan)
- IP1-6 Diagnosing and segmenting choroidal neovascularization in optical coherence tomographic angiography using deep learning**  
○Jie Wang<sup>1,2)</sup>, Tristan Hormel<sup>1)</sup>, Kotaro Tsuboi<sup>1,3)</sup>, Xiaogang Wang<sup>4)</sup>, Xiaoyan Ding<sup>5)</sup>, Xiaoyan Peng<sup>6)</sup>, Steven T. Bailey<sup>1)</sup>, Yali Jia<sup>1,2)</sup>  
(<sup>1)</sup>OHSU Casey Eye Inst/Oregon Health & Science Univ, <sup>2)</sup>Department of Biomedical Engineering, Oregon Health & Science University, Portland, Oregon, USA, <sup>3)</sup>Department of Ophthalmology, Aichi Medical University, Nagakute, Japan, <sup>4)</sup>Shanxi Eye Hospital, Taiyuan, Shanxi, China, <sup>5)</sup>State Key Laboratory of Ophthalmology, Zhongshan Ophthalmic Center, Sun Yat-sen University, Guangzhou, China, <sup>6)</sup>Beijing Institute of Ophthalmology, Beijing Tongren Eye Center, Beijing Tongren Hospital, Capital Medical University, Beijing Ophthalmology and Visual Science Key Lab, Beijing, China.)



**IP1-7 Evaluation of UC Davis clinical multi-modal retinal imaging system with active retinal tracking and wavefront sensing for imaging of retinal and choroidal vasculature.**

○Robert J. Zawadzki<sup>1,2)</sup>, Kari V. Vienola<sup>1)</sup>, Oscar Ramos-Soto<sup>3)</sup>, Justin V. Migacz<sup>4)</sup>,  
Iwona Gorczynska<sup>5)</sup>, Sandra E. Balderas-Mata<sup>1)</sup>, Ravi S. Jonnal<sup>1)</sup>

(<sup>1)</sup>UC Davis, (<sup>2</sup>)UC Davis Eye-Pod Small Animal Ocular Imaging Laboratory, Department of Cell Biology and Human Anatomy, UC Davis, 4320 Tupper Hall, Davis, California 95616, (<sup>3</sup>)Division de Electronica y Computacion, Universidad de Guadalajara Centro Universitario de Ciencias Exactas e Ingenieria, Guadalajara, Jalisco, Mexico, (<sup>4</sup>)New York Eye and Ear Infirmary of Mount Sinai, New York, NY 10003, (<sup>5</sup>)Department of Biophysics and Medical Physics, Institute of Physics, Nicolaus Copernicus University, 87-100 Torun, Poland)

**Poster Session: Amd-Csr-Pachy-Choroid Imaging**

**IP2-1 Combined quantitative and qualitative optical coherence tomography angiography biomarkers for predicting active neovascular age-related macular degeneration**

○Cherng-Ru Hsu<sup>1,2)</sup>, Tso-Ting Lai<sup>1)</sup>, Yi-Ting Hsieh<sup>1)</sup>, Tzyy-Chang Ho<sup>1)</sup>, Chung-May Yang<sup>1)</sup>,  
Chang-Hao Yang<sup>1)</sup>

(<sup>1</sup>)Nat Taiwan Univ Hosp/Tri-Service Gen Hosp, (<sup>2</sup>)Department of Ophthalmology, Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan)

**IP2-2 OCTA biomarkers of CNV secondary to aged-related macular degeneration following intravitreal aflibercept**

○Junwoo Lee, Jong Beom Park, Kiyong Kim, Eung Suk Kim, Seung-Young Yu  
(Kyung Hee Univ)

**IP2-3 Changes in choroidal structure in central serous chorioretinopathy with and without steroids**

○Takashi Araki, Eri Tahara, Fumi Gomi  
(Hyogo Coll of Med)

**IP2-4 The one year outcome of polypoidal choroidal vasculopathy after intravitreal conbercept injections based on “point to point” OCTA follow up**

○Rui Hua  
(China Med Univ)

**IP2-5 Peripheral chorioretinal imaging through a front prism on optical coherence tomography angiography**

○Kentaro Kawai, Tomoaki Murakami, Saori Sakaguchi, Tatsuya Yamada, Shin Kadomoto,  
Akihito Uji, Akitaka Tsujikawa  
(Kyoto Univ)

**IP2-6 Morphological and functional analyses of the choroidal circulation in central serous chorioretinopathy**

○Shoko Matsuzaki, Yuki Muraoka, Shin Kadomoto, Ayako Takahashi, Masahiro Miyake,  
Naoko Arakawa-Ueda, Tomotaka Wakazono, Manabu Miyata, Akihito Uji, Sotaro Ooto,  
Akitaka Tsujikawa  
(Kyoto Univ)




## Poster Session: Ant Seg and Glaucoma

- IP3-1 Short-term effects of different types of anti-glaucoma eyedrop on the sclero-conjunctival vasculature assessed using anterior segment OCTA in normal eyes: a pilot study**  
○Tadamichi Akagi, Yoko Okamoto, Takanori Kameda, Kenji Suda, Masahiro Miyake, Hanako Ohashi Ikeda, Akitaka Tsujikawa  
(Kyoto Univ)
- IP3-2 Assessment of vascularity on the bleb surface following trabeculectomy**  
○Masashi Takata<sup>1)</sup>, Tomohiro Sekiya<sup>1)</sup>, Atsuya Ide<sup>2)</sup>, Kou Kakusho<sup>2)</sup>, Takeshi Okadome<sup>2)</sup>, Fumi Gomi<sup>1)</sup>  
(<sup>1)</sup>Hyogo Coll of Med, <sup>2)</sup>Department of Human System Interaction, Kwansai Gakuin University, Nishinomiya, Hyogo, Japan)
- IP3-3 Long-term efficacy and safety of subconjunctival/ perilesional 5-fluorouracil injections for ocular surface squamous neoplasia**  
○Rui Hua, Yuzhao Sun  
(China Med Univ)
- IP3-4 Glaucoma diagnostic accuracy of doppler optical coherence tomography retinal blood flow**  
○Tsubasa Abe<sup>1)</sup>, Takafumi Yoshioka<sup>1)</sup>, Youngseok Song<sup>1)</sup>, Tomofumi Tani<sup>1)</sup>, Tsuneaki Omae<sup>1)</sup>, Kengo Takahashi<sup>1)</sup>, Yoshitaka Takizawa<sup>1)</sup>, Tomoko Ro-Mase<sup>1)</sup>, Akira Tanner<sup>1)</sup>, Satoshi Ishiko<sup>1)</sup>, Kana Minamide<sup>2)</sup>, Jun Sakai<sup>2)</sup>, Masahiro Akiba<sup>2)</sup>, Akitoshi Yoshida<sup>1)</sup>  
(<sup>1)</sup>Asahikawa Med Univ, <sup>2)</sup>Topcon corporation, Tokyo, Japan)
- IP3-5 Autoregulation of blood flow in the human retina, choroid and optic nerve in response to acute decrease in intraocular pressure in healthy eyes and optic neuropathy using novel vacuum goggles**  
○Ryuya Hashimoto<sup>1)</sup>, Zaidoon Al-Share<sup>1)</sup>, Nitsan Dudevan-Strier<sup>1)</sup>, Julie Nellis<sup>1,2)</sup>, Jan Full<sup>1,2)</sup>, Randy H Kardon<sup>1,2)</sup>  
(<sup>1)</sup>Univ of Iowa, <sup>2)</sup>Iowa City VA Center for the Prevention and Treatment of Visual Loss, Iowa City, IA, United States)
- IP3-6 Withdraw**
- IP3-7 Ocular pulse waveform in the ONH differs between glaucomatous (GL) and glaucoma suspect (GLS) eyes in individuals with similar systemic pulse waveforms**  
○Hongli Yang, Grant Gull, Cindy Albert, Lin Wang, Stuart Gardner  
(Legacy Health)



## Poster Session: Application

- IP4-1 Influence of retinal and choroidal perfusion times measured using dye angiography on quantitative analysis of OCT-angiography**  
○Aude Ambresin<sup>1,2,3</sup>, Dilsah Körpe<sup>3</sup>, Rodolphe Vallée<sup>2,4,5</sup>, Daniela Gallo Castro<sup>1,2,4</sup>, Georgios N. Tsiropoulos<sup>1,2,6</sup>  
(<sup>1</sup>RétinElysée Ctr/Swiss Visio Montchoisi/UNIL, <sup>2</sup>Swiss Visio Montchoisi (Lausanne, Switzerland), <sup>3</sup>UNIL (Lausanne, Switzerland), <sup>4</sup>Swiss Glaucoma Research Foundation (Lausanne, Switzerland), <sup>5</sup>LMA CNRS 7348, DACTIM team (Poitiers, France), <sup>6</sup>Aristotle University of Thessaloniki (Thessaloniki, Greece))
- IP4-2 Monitoring of thermal expansion during micropulse laser therapy by phase-resolved optical coherence tomography**  
○Jia-Pu Syu, Shih-Jen Chen, Wen-Chuan Kuo  
(Nat Yang-Ming Univ)
- IP4-3 Comparison between oral and intravenous wide-field fluorescein angiography (FA) in clinical follow-up of retinopathy of prematurity (ROP) children**  
○Wei-Chi Wu, Xiao Chun Ling, Hung-Da Chou, Laura Liu, Chi-Chun Lai, Kuan-Jen Chen, Yih-Shiou Hwang  
(Chang Gung Memorial Hosp)
- IP4-4 Monitoring proliferative diabetic retinopathy with optical coherence tomography angiography**  
○Qi Sheng You, Yukun Guo, Christina J. Flaxel, Steven T. Bailey, David Huang, Thomas S. Hwang, Yali Jia  
(OHSU Casey Eye Inst)
- IP4-5 Conjunctival and scleral OCT angiography of normal eyes**  
○Yan Li, Yali Jia, David Huang  
(OHSU Casey Eye Inst)
- IP4-6 Choroidal melanin thickness measurement in healthy Japanese subjects by polarization-sensitive optical coherence tomography**  
○Masahiro Miura<sup>1</sup>, Shuichi Makita<sup>2</sup>, Yoshiaki Yasuno<sup>2</sup>, Takuya Iwasaki<sup>1</sup>, Shinnosuke Azuma<sup>3</sup>, Toshihiro Mino<sup>3</sup>, Tatsuo Yamaguchi<sup>3</sup>  
(<sup>1</sup>Tokyo Med Univ, <sup>2</sup>Computational Optics Group, University of Tsukuba, Tsukuba, Japan, <sup>3</sup>Topcon Corporation, Tokyo, Japan)
- IP4-7 Resistance Index of retinal blood flow from doppler optical coherence tomography flowmeter is associated with cardio-ankle vascular index**  
○Yoshitaka Takizawa<sup>1</sup>, Youngseok Song<sup>1</sup>, Tomofumi Tani<sup>1</sup>, Tsuneaki Omae<sup>1</sup>, Takafumi Yoshioka<sup>1</sup>, Kengo Takahashi<sup>1</sup>, Tsubasa Abe<sup>1</sup>, Tomoko Ro-Mase<sup>1</sup>, Akira Tanner<sup>1</sup>, Satoshi Ishiko<sup>1</sup>, Kana Minamide<sup>2</sup>, Jun Sakai<sup>2</sup>, Masahiro Akiba<sup>2</sup>, Nobuyoshi Azuma<sup>3</sup>, Akitoshi Yoshida<sup>1</sup>  
(<sup>1</sup>Asahikawa Med Univ, <sup>2</sup>Topcon corporation, Tokyo, Japan, <sup>3</sup>Department of Surgery, Asahikawa Medical University, Asahikawa, Japan)



## Poster Session: New Therapies

- IP5-1 Retinal vascular effects of novel soluble guanylate cyclase activator (sGCα) runcaciguat**  
○Khaled Nassar<sup>2</sup>, William Schubert<sup>2</sup>, Zhenhua Xu<sup>1</sup>, Carsten Terjung<sup>2</sup>, Lingli Zhou<sup>1</sup>, Katja Rheindorf<sup>2</sup>, James Guerra<sup>1</sup>, Hanna Eilken<sup>3</sup>, Elia J. Duh<sup>1</sup>  
(<sup>1</sup>Bayer AG, <sup>2</sup>Bayer AG, Wuppertal, Germany, <sup>3</sup>Bayer U.S LLC, Cambridge, MA, USA)
- IP5-2 Efficacy and safety of intravitreal Ziv-aflibercept for the treatment of patient with diabetic macula edema refractory to intravitreal bevacizumab : a pilot study**  
○Suthasinee Sinawat  
(KKU Eye Center, Department of Ophthalmology, Faculty of Medicine, Khon Kaen University, Khon Kaen, Thailand)
- IP5-3 The effects of antiplatelets on anti-VEGF treatment for diabetic macular edema**  
○Pimpisa Vudhichaiphun, Kornwipa Hemarat, Plern Sutra, Chavisa Boonyavee, Yodpong Chantarasorn  
(Vajira Hosp Navamindradhiraj Univ)
- IP5-4 HORNBILL: A Phase I/IIa trial examining the safety of BI-X in patients with diabetic macular ischemia and diabetic retinopathy treated with pan-retinal photocoagulation**  
○Victor Chong<sup>1</sup>, Harsha Sen<sup>2</sup>, Raj Maturi<sup>3</sup>, Louis-Josef Bour<sup>1</sup>, Sobha Sivaprasad<sup>4</sup>, Elizabeth Pearce<sup>1</sup>, Quan Dong Nguyen<sup>5</sup>  
(<sup>1</sup>Boehringer Ingelheim, <sup>2</sup>Trinity Research Group, Eye Center South, USA, <sup>3</sup>Midwest Eye Institute, USA, <sup>4</sup>NIHR Moorfields Biomedical Research Centre, UK, <sup>5</sup>Byers Eye Institute, Stanford University School of Medicine, USA.)
- IP5-5 Withdraw**

## Poster Session: Retina-Misc

- IP6-1 Microstructure of nonjuxtapapillary microvasculature dropout in healthy myopic eyes**  
○Gyu-Nam Kim<sup>1</sup>, Eun Ji Lee<sup>2</sup>, Tae-Woo Kim<sup>2</sup>  
(<sup>1</sup>Gyeongsang Nat Univ Hosp, <sup>2</sup>Seoul National University Bundang Hospital, Seongnam, South Korea)
- IP6-2 Assessment of microvascular changes using OCTA post phacoemulsification surgery in an Indian population**  
○Tos TJM Berendschot<sup>1</sup>, Supriya Dabir<sup>2</sup>, Vaidehi Bhatt<sup>3</sup>, Rakesh Barot<sup>3</sup>, Sujatha Mohan<sup>3</sup>, Mohan Rajan<sup>3</sup>, Carroll AB Webers<sup>1</sup>  
(<sup>1</sup>Univ Eye Cl Maastricht, <sup>2</sup>Department of Retina, Rajan Eye Care Pvt Ltd, Chennai, India, <sup>3</sup>Department of Ophthalmology, Rajiv Gandhi Medical College, Thane, India, <sup>4</sup>Department of Cataract & Refractive Surgery, Rajan Eye Care Pvt Ltd, Chennai, India)
- IP6-3 Essential thrombocythemia manifesting as ophthalmic artery occlusion**  
○Yodpong Chantarasorn  
(Navamindradhiraj Univ)
- IP6-4 New knowledge came with high-resolution cross-sectional optical coherence tomography angiography**  
○Xiaoling Liu, Weiwei Zheng  
(Wenzhou Med Univ)



- IP6-5 Decreased thickness of peripapillary retinal nerve fiber layer (pRNFL) and ganglion cell complex (GCC) in patients with werner syndrome.**  
○Mizuki Ikeda, Hiroataka Yokouchi, Takayuki Baba, Shuichi Yamamoto  
(Chiba Univ)
- IP6-6 Evaluating macular telangiectasia with OCT/OCTA**  
○Min Wang, Yao Zhou, Chen Zou  
(Eye and ENT Hosp of Fudan Univ)
- IP6-7 Deposits on retinal surface seen on optical coherence tomography in ocular amyloidosis**  
○Shinji Kakihara, Takao Hirano, Yorishige Matsuda, Daiki Takano, Akira Imai,  
Teruyoshi Miyahara, Toshinori Murata  
(Shinshu Univ)
- IP6-8 Quantitative OCT and OCTA of retinal neurovascular degeneration in an Alzheimer's disease model**  
○Tae-Hoon Kim<sup>1)</sup>, Taeyoon Son<sup>1)</sup>, Xincheng Yao<sup>1,2)</sup>  
(<sup>1</sup>)Richard and Loan Hill Department of Bioengineering, Univ of Illinois at Chicago, <sup>2</sup>)Department of Ophthalmology and Visual Sciences, University of Illinois at Chicago, Chicago, Illinois, USA)

### Poster Session: Surgery

- IP7-1 The associations between macular structure and idiopathic epiretinal membrane formation – a matched comparison study**  
○Yi-Ting Hsieh, I-Hsin Ma, Chung-May Yang  
(Nat Taiwan Univ Hosp)
- IP7-2 Characteristics and surgical outcomes of rhegmatogenous retinal detachments that develop after intravitreal injections**  
○Ikuko Mizunoya, Takayuki Baba, Gen Miura, Tomoaki Tatsumi, Madoka Sakurai,  
Shuichi Yamamoto  
(Chiba Univ)
- IP7-3 Surgical outcomes of vitrectomy for breakthrough vitreous hemorrhage in eyes with exudative age-related macular degeneration**  
○Yuya Saito, Takayuki Baba, Takehito Iwase, Tomohiro Nizawa, Hiroataka Yokouchi,  
Mariko Kubota-Taniai, Masayasu Kitahashi, Shuichi Yamamoto  
(Chiba Univ)
- IP7-4 Retinal Microvascular Changes following Internal Limiting Membrane Peeling Surgery for Epiretinal Membrane versus Macular Hole**  
○Seung-Young Yu, Kyungwoo Yoon, Eung Suk Kim, Kiyoung Kim  
(Kyung Hee Univ)

**IP8-1 A novel biomarker for good visual prognosis in eyes with BRVO**

○Motohiro Kamei, Hiroshi Sasajima  
(Aichi Med Univ)

**IP8-2 Relationship between Reflectivity Changes on Optical Coherence Tomography Angiography and Vascular Leakage of Retinal Vein Occlusion Associated-Microaneurysms**

○Naomi Nishigori, Yuki Muraoka, Shin Kadomoto, Akihito Uji, Masaharu Ishikura, Tomoaki Murakami, Sotaro Ooto, Akitaka Tsujikawa  
(Kyoto Univ)

**IP8-3 Comparison of detecting microaneurysms using fluorescein angiography, indocyanine green angiography and OCT angiography in diabetic macular edema**

○Miho Nozaki, Yuichiro Ogura  
(Nagoya City Univ)

**IP8-4 Anteroposterior positions of retinal arterial macroaneurysms and their association with the visual prognosis**

○Saori Sakaguchi, Yuki Muraoka, Sotaro Ooto, Tomoaki Murakami, Manabu Miyata, Akihito Uji, Shin Kadomoto, Naomi Nishigori, Akitaka Tsujikawa  
(Kyoto Univ)

**IP8-5 Withdraw**

**IP8-6 Prevalence and distribution of venous loops and association with retinal ischemia in diabetic retinopathy using widefield swept-source optical coherence tomography angiography (WF SS-OCTA)**

○John B Miller, Rongrong Le, Ying Cui, Edward S Lu, Ying Zhu, Raviv Katz, Itika Garg, Jay Wang, Yifan Lu, Ines Lains, Dean Elliott, Deeba Husain, Joan W Miller, Leo A Kim, David M. Wu, Demetrios G Vavvas  
(Massachusetts Eye and Ear Infirmary)