Stanford OPHTHALMOLOGY | Stanford Center for Optic Disc Drusen | Byers Eye Institute

The Stanford Center for Optic Disc Drusen 3rd Annual Hybrid Conference

Tuesday, May 31, 2022 • 8AM-4PM PDT

In person: Paul Berg Hall, Room C, at Li Ka Shing Center (LKSC) Conference Center
291 Campus Drive, Stanford, CA 94043

Virtual: via Zoom webinar

Visit the ODD website:
med.stanford.edu/optic-disc-drusen

Visit our department website:
med.stanford.edu/ophthalmology

EVENT ORGANIZERS

Joyce Liao, MD, PhD
Director, Center for Optic Disc Drusen at Stanford
Professor of Ophthalmology and of Neurology

Jeffrey Goldberg, MD, PhD
Blumenkranz Smead Professor and Chair of Ophthalmology

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Agenda

all times in PDT

Time	Topic	Speakers/Moderators
7:30am	Check-in **In person:** check in at registration desk and enjoy breakfast (rapid antigen test and N95 masks available at registration desk) **Virtual:** Zoom webinar opens	
8:00am-8:02am	Welcoming remarks	Jeffrey Goldberg, MD, PhD
8:02am-8:15am	Introduction to optic disc drusen and our research goals	Joyce Liao, MD, PhD
8:15am	Introduction of Session 1 Moderators	Joyce Liao, MD, PhD
8:15am-9:45am (90 min)	**Session 1: Imaging biomarkers of optic disc drusen**	**Moderators:** **Joyce Liao, MD, PhD** **Shannon Beres, MD**
8:15am-8:30am (15 min)	Imaging of optic disc drusen using optical coherence tomography	Steffen Hamann, MD, PhD
8:30am-8:45am (15 min)	En face autofluorescence imaging of optic disc drusen	Joyce Liao, MD, PhD
8:45am-9:00am (15 min)	Imaging of pediatric optic disc drusen	Shannon Beres, MD
9:00am-9:15am (15 min)	Retinal imaging scaling: why we should care and how to do it	Alfredo Dubra, PhD
9:15am-9:30am (15 min)	Imaging hyalocyte-like cells at the vitreoretinal interface with optical coherence tomography	Brian Soetikno, MD PhD
9:30am-9:45am (15 min)	**Panel 1: Diagnosis and imaging of optic disc drusen**	**All speakers**
9:45am-10:00am (15 min)	**Break (food and drink at lobby)**	
10:00am	**Introduction of Session 2 Moderators**	**Jeffrey Goldberg, MD, PhD**

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Agenda Continued

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Time	Topic	Speakers/Moderators
10:00am-11:45am (105 min)	**Session 2: Optic nerve biology and ectopic calcification**	**Moderators: Chinyere Agbaegbu Iweka, PhD David Myung, MD, PhD**
10:00am-10:15am (15 min)	Anterior optic nerve and vision loss in optic disc drusen	Yang Sun, MD, PhD
10:15am-10:35am (20 min)	Single cell transcriptome analysis of regenerating RGCs reveals potent glaucoma neural repair genes	Yang Hu, MD, PhD
10:35am-10:55am (20 min)	Mitochondrial function in optic disc drusen and anterior ischemic optic neuropathy	Chinyere Agbaegbu Iweka, PhD
10:55am-11:10am (15 min)	Calcification and optic disc drusen	David Myung, MD, PhD
11:10am-11:25am (15 min)	Ectopic calcification in human fibroblast and neurons	Joyce Liao, MD, PhD
(5 min buffer)		
11:30am-11:45am (15 min)	**Panel 2: Optic nerve pathology leading to development of vision loss in optic disc drusen**	**All speakers**
11:45am-12:00pm (15 min)	**Break (food and drink at lobby)**	
12:00pm-12:55pm (55 min)	**Patient Session, Open Discussion/ Lunch** **In person:** Paul Berg Hall, Room C, at Li Ka Shing Center (LKSC) Conference Center, 291 Campus Drive, Stanford, CA 94043 **Virtual:** via Zoom webinar	**Moderators: Shannon Beres, MD Heather Moss, MD, PhD Joyce Liao, MD, PhD**
(5 min buffer)		
1:00pm	**Introduction of Session 3 Moderators**	**Joyce Liao, MD, PhD**
1:00pm-2:30pm (90 min)	**Session 3: Novel therapies and clinical trial for optic disc drusen**	**Moderators: Heather Moss, MD, PhD Steffen Hamann, MD, PhD**

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Time	Topic	Speakers/Moderators
1:00pm-1:20pm (20 min)	It's all about the axon: developing new treatments for optic disc drusen	Leonard Levin, MD, PhD (virtual)
1:20pm-1:40pm (20 min)	International optic disc drusen studies consortium and the NARROW clinical trial	Steffen Hamann, MD, PhD
1:40pm-1:55pm (15 min)	Anti-oxidants and metabolic considerations in the treatment of optic disc drusen	Joyce Liao, MD, PhD
1:55pm-2:15pm (20 min)	Stem cells, neuroprotection, and regeneration	Jeffrey Goldberg, MD, PhD
2:15pm-2:30pm (15 min)	**Panel 3: Treatment of optic disc drusen and prevention of vision loss**	**All speakers**
2:30pm	**Wrap up**	**Joyce Liao, MD, PhD** **Jeffrey Goldberg, MD, PhD**
(15 min buffer)		
2:45pm-4:00pm (75 min)	**Reception and poster session (Berg Hall lobby)** **Poster presenters: Please stand by your poster at the first 30 min (2:45-3:15pm) of the poster session.** The attendees are excited to talk to the people who did the work. Note, the organizers will come by with gift card for the top 3 poster prizes during the poster session **In-person:** please pick up your souvenir at the registration desk during the poster session or when you leave **Virtual:** poster session and meeting souvenir are only for in person attendees. We hope you can join us in person in the future!	**All**
4:00pm	**Meeting ends**	Any issues, please email us at OpticDiscDrusen@stanford.edu

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Speakers

Shannon Beres, MD
Clinical Associate Professor of Neurology
Clinical Assistant Professor of Ophthalmology
Stanford University

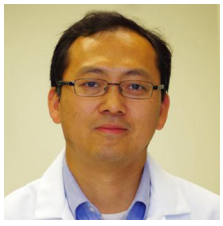
Dr. Shannon Beres is a pediatric and adult neuro-ophthalmologist. She is currently working on projects using hand-held optical coherence tomography in infants and young children. She contributes to multi-site studies in pediatric optic neuritis, cranial neuropathies, pseudotumor cerebri syndrome, and optic pathway gliomas.

Alfredo Dubra, PhD
Professor of Ophthalmology
Stanford University

Dr. Dubra is an expert in ophthalmic imaging and has pioneered and disseminated instrumentation for non-invasive visualization of retinal structure and function. He has improved the rigor and reproducibility of adaptive optics (AO) imaging, which provides unparalleled resolution and visualization of retinal neurons at a single cell level. His AO work has advanced our understanding of retinal and optic nerve diseases.

Jeffrey Goldberg, MD, PhD
Blumenkranz Smead Professor and Chair of Ophthalmology
Stanford University

Dr. Goldberg's clinical effort is focused on medical and surgical intervention for treatment of glaucoma and other optic nerve diseases. His research is directed at neuroprotection and regeneration of retinal ganglion cells and the optic nerve. His laboratory is developing novel stem cell and nanotherapeutics approaches for treatment of vision loss.



Yang Hu, MD, PhD
Associate Professor of Ophthalmology
Stanford University

Dr. Yang Hu is working on neuroprotection and axon regeneration for optic neuropathies. His lab focuses on the molecular mechanisms responsible for axon injury-induced neuronal degeneration with the goal of building on this understanding to develop effective combined strategies to promote neuroprotection, regeneration and functional recovery.

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Steffen Hamann, MD, PhD
Consultant Neuro-Ophthalmologist,
Clinical Research Associate Professor
University of Copenhagen, Denmark

Dr. Hamann's research interests center around optic neuropathies, where axonal compression and loss of blood supply lead to loss of vision. In 2015, he founded the international Optic Disc Drusen Studies (ODDS) Consortium, of which he is Chair. His goal is to investigate the etiology, diagnostic principles, structure-function relationships, and management of optic disc drusen.

Chinyere Agbaegbu Iweka, PhD
Postdoctoral Fellow
Department of Neurology, Stanford University

Dr. Iweka is an expert in mitochondrial biology in neurodegenerative diseases and aging. She is a member of the Dr. Katrin Andreasson's laboratory. Dr. Iweka received her PhD from Georgetown University after a Master of Science from Johns Hopkins University and Bachelor of Science from University of Maryland. She is the Co-Chair of the Stanford University Postdoctoral Association.

Leonard Levin, MD, PhD
Distinguished James McGill Professor and
Chair of Ophthalmology and Visual Sciences
McGill University

Dr. Levin's clinical expertise is in neuro-ophthalmology, particularly optic nerve disorders. His research is on developing new drugs for these diseases, many of which are difficult or impossible to treat. This work involves laboratory science, animal models, and the design of clinical trials to test the safety and efficacy of the drugs.

Joyce Liao, MD, PhD
Director, Center for Optic Disc Drusen at Stanford
Professor of Ophthalmology and Neurology
Stanford University

Dr. Liao is dedicated to making basic discoveries and improving clinical care and treatment of patients with eye-brain issues. She serves as the Director for the Stanford Center for Optic Disc Drusen at Byers Eye Institute, Vice Chair of Academic Affairs, Director of the Neuro-Ophthalmology Service, as well as Co-Director of the Vision Research Training Program.

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Speakers

Heather Moss, MD, PhD
Associate Professor of Ophthalmology and of Neurology
Stanford University

Dr. Moss is a physician scientist who provides expert neuro-ophthalmic clinical care. She directs an innovative clinical-research program in biomarker discovery. Dr. Moss's clinical and research interests focus on idiopathic intracranial hypertension, optic neuritis and other optic neuropathies, and multiple sclerosis. She is also an expert in telemedicine.

David Myung, MD, PhD
Assistant Professor of Ophthalmology and
by courtesy, of Chemical Engineering
Stanford University

Dr. Myung is an ophthalmologist and attending physician specializing in cataract and corneal surgery and external diseases of the eye. He is the Director of the Ophthalmic Innovation Program. Myung leads a research group that takes an interdisciplinary approach toward fostering regeneration of ocular tissues. He is also Director of the Stanford Teleophthalmology Automated Testing and Universal Screening Program, which is pushing the boundaries of telemedicine and AI to improve eye care worldwide.

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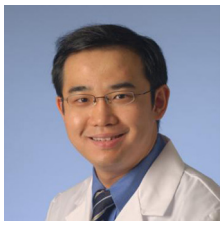
Speakers

Brian Soetikno, MD, PhD
Postdoctoral Fellow and SOAR Resident
Stanford University

Dr. Soetikno is an expert in near-infrared and visible-light optical coherence tomography and in vivo human ophthalmic imaging. He is investigating hyalocyte-like cells using serially acquired optical coherence tomography. He is also using deep learning algorithms to perform automatic retinal layer segmentation of optical coherence tomography images. Dr. Soetikno is currently a postdoctoral fellow at Stanford collaborating with Dr. Alfredo Dubra and Dr. Joyce Liao as part of his Stanford Ophthalmology Advance Research (SOAR) research year before starting ophthalmology residency training. He has just been awarded the 2022 Shaffer Grants for Innovative Glaucoma Research and the 2022 Knights Templar Eye Foundation Career-Starter Research Grant.



Yang Sun, MD, PhD
Associate Professor of Ophthalmology
Stanford University

Dr. Yang Sun is a clinician-scientist with clinical specialty in glaucoma. He practices at both Byers Eye Institute at Stanford as well as at VA Palo Alto Health Care System. He is an NIH and VA funded investigator with research focus on the role of inositol metabolism in eye development and disease. The current research interests in his lab include the elucidation of the mechanisms in cilia-mediated signaling in developmental and degenerative eye conditions.