

Glaucoma Research Society



Glaucoma Research Society 2024 November 13-16

Siem Reap, Cambodia

Programme



Glaucoma Research Society 2024
November 13-16





Welcome Message

It is my great pleasure to extend a warm welcome to you at the Glaucoma Research Society meeting in Siem Reap. The GRS is a prestigious global non-profit association, comprising distinguished glaucoma researchers dedicated to providing a forum for discussion and stimulation of innovative basic and clinical research to prevent glaucoma-associated blindness. The Program Committee, under the esteemed chairmanship of Dr. Pradeep Ramulu, along with Joel Schuman, Adriana Di Polo, and Tina Wong, has meticulously prepared an exceptional program designed to foster productive discussions. I wish to extend my heartfelt gratitude to our local host, Tin Aung, whose extraordinary efforts have provided a fantastic meeting space and social events. Additionally, I would like to acknowledge the tremendous contributions of our meeting organizer, OIC, and the dedicated staff for ensuring the smooth execution of this event. I hope this meeting is a valuable and enjoyable experience for everyone.

I look forward to seeing you in Siem Reap!

Ki Ho Park
GRS President

A warm welcome to every one of you to our biannual GRS meeting, held this year in beautiful Siem Reap.

Located in the heart of Cambodia, Siem Reap is not only a UNESCO World Heritage site and home to the majestic Angkor temples, but also a bustling hub of culture, learning and amazing cuisine. I can think no better place to host our GRS meeting, which is always a catalyst for new connections, innovative insights, and lasting memories.

Thank you again for entrusting me to co-organize this meeting as your "local host".

I hope you will immerse yourself in the rich tapestry of experiences that Siem Reap has to offer. Wishing everyone a wonderful few days of discovery and science!

Tin Aung
Local Host



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Executive Committee

President

Ki Ho Park

Past President

Balwantray Chauhan

Treasurer

Keith Martin

Secretary

Adriana Di Polo

Membership Committee Chair

C. Ross Ethier

Program Committee Chair

Pradeep Ramulu

Members-at-Large

Makoto Aihara

Donald Budenz

Tina Wong



Speakers and Moderators

Makoto Araie, Japan
Tin Aung, Singapore
Augusto Azuara-Blanco, UK
James D. Brandt, USA
Claude Burgoyne, USA
G. Chandra Sekhar, India
Balwantray Chauhan, Canada
Jack Cioffi, USA
Francesca Cordeiro, UK
Jamie Craig, Australia
Jonathon Crowston, Australia
Robert D'Amato, USA
Tanuj Dada, India
Helen Danesh-Meyer, New Zealand
Adriana Di Polo, Canada
C. Ross Ethier, USA
John Fingert, USA
Brad Fortune, USA
David Friedman, USA
David Garway-Heath, UK
Gus Gazzard, UK
Chris Girkin, USA
Jeff Goldberg, USA
Franz Grehn, Germany
Mingguang He, Hong Kong
Ki Ho Park, Korea
Megumi Honjo, Japan
Hari Jayaram, UK
Jin Wook Jeoung, Korea
Tom Johnson, USA
Jost Jonas, Germany
Peng Khaw, UK
Anthony Khawaja, UK
Tae-Woo Kim, Korea

Miriam Kolko, Denmark
Chris Leung, Hong Kong
Leonard Levin, Canada
Jeffrey Liebmann, USA
Vijaya Lingam, India
David Mackey, Australia
Nick Marsh-Armstrong, USA
Keith Martin, Australia
Toru Nakazawa, Japan
Yvonne Ou, USA
Pradeep Ramulu, USA
Kyung Rim Sung, Korea
Ursula Schlotzer-Schrehardt, Germany
Leopold Schmetterer, Singapore
Joel Schuman, USA
Ramanji Sihota, India
Ingeborg Stalmans, Belgium
Dan Stamer, USA
Joshua Stein, USA
Ernst Tamm, Germany
Clement Tham, Hong Kong
Fotis Topouzis, Greece
Carlo Traverso, Italy
Monica Vetter, USA
Yaxing Wang, China
Derek Welsbie, USA
Da-Wen Lu, Taiwan
Janey Wiggs, USA
Gadi Wollstein, USA
Tina Wong, Singapore
Don Zack, USA
Linda Zangwill, USA
Xiulan Zhang, China



Thursday November 14	Friday November 15	Saturday November 16
Phokeethra Ballroom	Phokeethra Ballroom	Phokeethra Ballroom
07:30 - 17:00 Registration Desk Opening	07:30 - 08:30 Meditation Mini-Session	
08:00 - 08:05 Welcome	08:30 - 09:20 Goldmann Lecture	08:00 - 09:50 Session 6
08:05 - 10:00 Session 1		
10:00 - 10:25 Break	09:20 - 09:40 Break	09:50 - 10:10 Break
10:25 - 12:15 Session 2	09:40 - 11:30 Session 5	10:10 - 12:00 Session 7
	11:30 - 12:20 Business Meeting	
12:15 - 13:10 Lunch	12:20 - 13:20 Lunch	12:00 - 13:00 Lunch
13:10 - 15:00 Session 3		13:00 - 14:50 Session 8
	13:30 - 22:30 (optional tour)	14:50 - 15:15 Break
15:00 - 15:25 Break	Half Day Tour at Angkor Wat & Bayon Temple	15:15 - 17:05 Session 9
15:25 - 17:15 Session 4	& Dinner at Kanell Restaurant with Apsara Dance	
19:00 - 22:30 Dinner at Mahob Restaurant		19:00 - 22:30 Dinner at Malis Siem Reap Restaurant



Phokeethra Ballroom

Thursday, November 14

08:00 - 08:05

Welcome

Pradeep Ramulu

08:05 - 10:00

SESSION 1 - FINDING UNDETECTED DISEASE

Moderators: **James D. Brandt, Vijaya Lingam, Ramanji Sihota**

08:05 Introduction to session

James D. Brandt, Vijaya Lingam, Ramanji Sihota

08:07 Undetected glaucoma: where is it a problem in the 21st century?
What are the trends?

Vijaya Lingam

08:12 Prevalence studies - What have we learned, and what are their role in detecting glaucoma in the future?

Yaxing Wang

08:22 *Discussion*

08:32 Finding those at high risk for PACG - what approach should we be taking?

Mingguang He

08:42 *Discussion*

08:52 Building systems to find undetected glaucoma - when is it worthwhile?

David Friedman

09:02 *Discussion*

09:12 Screening for glaucoma in those at high genetic risk - opportunities and obstacles

Anthony Khawaja

09:22 *Discussion*

09:32 Can surveillance and/or clinical data be used to understand community level detection and treatment

Joshua Stein

09:42 Designing systems of care for individuals screening "positive" for glaucoma

Hari Jayaram

09:52 *Discussion & Wrap-up*

10:00 *Break*



Phokeethra Ballroom

Thursday, November 14

10:25 - 12:15

**SESSION 2 - NOVEL APPROACHES FOR IMPROVING
DETECTION AND PROGRESSION**

Moderators: **Jost Jonas, Ingeborg Stalmans**

- 10:25** Introduction to session
Jost Jonas, Ingeborg Stalmans
- 10:27** Do we know what progression is? Distinguishing disease-related change from aging effects
Balwantray Chauhan
- 10:37** *Discussion*
- 10:47** OCT measures beyond axonal/cellular thickness: do they have marginal diagnostic utility?
Gadi Wollstein
- 10:57** *Discussion*
- 11:07** What the dead can teach us about glaucoma in the living
Chris Girkin
- 11:17** *Discussion*
- 11:27** Integrating genetic risk with traditional measures in the assessment of glaucoma progression
Jamie Craig
- 11:37** *Discussion*
- 11:47** Using higher order features of the the rNFL to assess glaucoma
Chris Leung
- 11:57** *Discussion & Wrap-up*
- 12:15** *Lunch*



Phokeethra Ballroom

13:10 - 15:00

SESSION 3 - ARTIFICIAL INTELLIGENCE AND PERSONALIZED MEDICINE

Moderators: **Ki Ho Park, Makoto Araie**

- 13:10** Introduction to session
Ki Ho Park, Makoto Araie
- 13:12** Can artificial intelligence allow us to distinguish glaucoma from other diseases?
Jin Wook Jeoung
- 13:22** *Discussion*
- 13:32** How much can AI improve glaucoma progression over traditional methods?
Kyung Rim Sung
- 13:42** *Discussion*
- 13:52** What test(s) are most amenable to enable AI approaches to Glaucoma detection and progression?
Xiulan Zhang
- 14:02** *Discussion*
- 14:12** Making AI-based detection and progression a collaborative effort – what do we need to standardize processes and validate algorithms?
Linda Zangwill
- 14:22** *Discussion*
- 14:32** The glaucoma practice of today and the future – how will AI change it?
Toru Nakazawa
- 14:42** *Discussion & Wrap-up*
- 15:00** *Break*



Phokeethra Ballroom

Thursday, November 14

15:25 - 17:15

SESSION 4 - THE SCIENCE OF GLAUCOMA SURGERY

Moderators: **Franz Grehn, Peng Khaw, Carlo Traverso**

- 15:25** Introduction to session
Franz Grehn, Peng Khaw, Carlo Traverso
- 15:27** Autotaxin and other targetable pathways for IOP elevation
Megumi Honjo
- 15:37** *Discussion*
- 15:47** Battling scarring and improving surgical outcomes : targeting the macrophage. Is this the missing piece?
Tina Wong
- 15:57** *Discussion*
- 16:07** Improving the surgical treatment of glaucoma through clinical trials –successes and failures
Augusto Azuara-Blanco
- 16:17** *Discussion*
- 16:27** Patient-reported outcomes - Have they helped our field? What can make them transformative?
Pradeep Ramulu
- 16:37** *Discussion*
- 16:47** Clinical endpoints in glaucoma trials – what needs to be better?
Gus Gazzard
- 16:57** *Discussion & Wrap-up*



Phokeethra Ballroom

07:30 - 08:30

MEDITATION MINI-SESSION

Moderator: **G. Chandra Sekhar**

07:30 Introduction to meditation
(local speaker TBD)

07:50 Meditation session

08:10 Benefits of meditation in glaucoma
Tanuj Dada

08:20 *Discussion*

08:30 - 09:20

GOLDMANN LECTURE

Moderator: **Ki Ho Park**

08:30 Introduction of Goldmann Lecturer
Jack Cioffi

08:35 How optic nerve head biomechanics has clarified the defining
pathophysiology and OCT structural phenotype of human glaucoma
Claude Burgoyne

09:10 *Discussion*

09:20 *Break*



Phokeethra Ballroom

09:40 - 11:30

SESSION 5 - INNOVATIONS IN THE ASSESSMENT AND UNDERSTANDING OF AQUEOUS HUMOR OUTFLOW

Moderators: **Tin Aung, Ursula Schlötzer-Schrehardt**

09:40 Introduction to session

Tin Aung, Ursula Schlötzer-Schrehardt

09:42 Thrombospondin mutations and dysregulation of trabecular meshwork outflow in childhood glaucoma

Robert D'Amato

09:52 *Discussion*

10:02 The genetics of primary open angle and primary angle closure glaucoma: what has it taught us about aqueous outflow pathophysiology

Tin Aung

10:12 *Discussion*

10:22 Current and future methods to pharmacologically alter trabecular outflow

Da Wen Lu

10:32 *Discussion*

10:42 Macrophage regulation of trabecular outflow

Dan Stamer

10:52 *Discussion*

11:02 Stem cell treatment to regenerate trabecular outflow

C. Ross Ethier

11:12 *Discussion & Wrap-up*

11:30 - 12:20

Business Meeting

Moderators: **Adriana Di Polo, Ki Ho Park**

Friday, November 15



Phokeethra Ballroom

08:00 – 09:50

SESSION 6 - BIOENERGETIC INSUFFICIENCY AND ITS ROLE IN GLAUCOMA PATHOGENESIS

Moderators: **Jonathon Crowston, Jeff Liebmann**

08:00 Introduction to session

Jonathon Crowston, Jeff Liebmann

08:02 What genetics has taught us about the specific energetic pathways involved in glaucoma

Janey Wiggs

08:12 *Discussion*

08:22 The interplay between bioenergetic dysfunction and inflammation in glaucoma

Miriam Kolko

08:32 *Discussion*

08:42 RGC mitophagy and its role in disease pathogenesis

Nick Marsh-Armstrong

08:52 *Discussion*

09:02 Evaluating in vivo mitochondrial function and its relationship to disease and disease progression

David Garway-Heath

09:12 *Discussion*

09:22 Nicotinamide – an update on the good the bad and the ugly

Jonathan Crowston

09:32 *Discussion & Wrap-up*

09:50 *Break*



Phokeethra Ballroom

10:10 - 12:00

**SESSION 7 - VASCULAR DYSFUNCTION, BLOOD FLOW, AND
AUTOREGULATION**

Moderators: **Clement Tham, Fotis Topouzis**

- 10:10** Introduction to session
Clement Tham, Fotis Topouzis
- 10:12** Evidence for vascular autoregulation in the retinal vasculature,
and autoregulatory loss in glaucoma
Brad Fortune
- 10:22** *Discussion*
- 10:32** Connexins: functions in normal retinovascular physiology and
glaucoma pathogenesis
Helen Danesh-Meyer
- 10:42** *Discussion*
- 10:52** Mitochondrial deficits in microvascular endothelium: does it impact
glaucomatous neurodegeneration?
Adriana Di Polo
- 11:02** *Discussion*
- 11:12** Ocular perfusion: cause or consequence of glaucoma
Leopold Schmetterer
- 11:22** *Discussion*
- 11:32** Markers of vascular disease in glaucoma – prospects for clinical
utility
Tae-Woo Kim
- 11:42** *Discussion & Wrap-up*
- 12:00** *Lunch*

Saturday, November 16



Phokeethra Ballroom

13:00 - 14:50

SESSION 8 - GENE THERAPY IN GLAUCOMA

Moderators: **David Mackey, Don Zack**

- 13:00** Introduction to session
David Mackey, Don Zack
- 13:02** Using genetics to identify targets for individualized gene-directed therapy
John Fingert
- 13:12** *Discussion*
- 13:22** Modification of RGC signaling pathways via gene therapy: which pathways? What techniques?
Donald Zack
- 13:32** *Discussion*
- 13:42** Endpoints for glaucoma gene therapy trials - DARC and beyond
Francesca Cordiero
- 13:52** *Discussion*
- 14:02** Targeting aqueous outflow with gene therapy
Ernst Tamm
- 14:12** *Discussion*
- 14:22** Gene therapy for optic nerve protection and repair - bench to bedside
Keith Martin
- 14:32** *Discussion & Wrap-up*
- 14:50** *Break*



Phokeethra Ballroom

15:15 - 17:05

SESSION 9 - RGC REPLACEMENT AND OPTIC NERVE REGENERATION

Moderators: **Leonard Levin, Monica Vetter**

- 15:15** Introduction to session
Leonard Levin, Monica Vetter
- 15:17** Functional engraftment of transplanted human RGCs
Tom Johnson
- 15:27** *Discussion*
- 15:37** Next generation models and tools for RGC transplantation
Jeff Goldberg
- 15:47** *Discussion*
- 15:57** Neuroprotection to promote RGC replacement
Derek Welsbie
- 16:07** *Discussion*
- 16:17** Repair of inner retinal circuits
Yvonne Ou
- 16:27** *Discussion*
- 16:37** Clinical approaches to RGC replacement and optic nerve regeneration
Leonard Levin
- 16:47** *Discussion & Wrap-up*

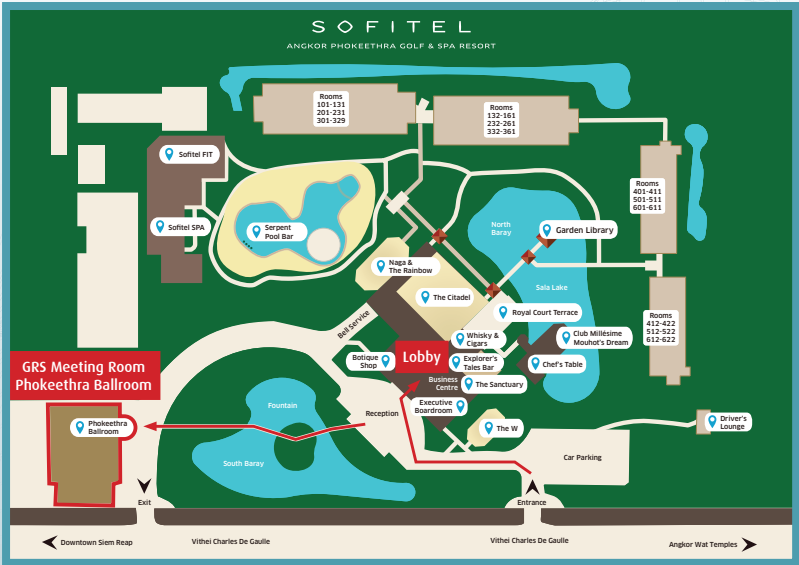
Saturday, November 16



SIEM REAP CITY MAP



MEETING VENUE





GENERAL INFORMATION

Meeting Location

The GRS 2024 meeting will be held at the Sofitel Angkor Phokeethra Golf & Spa Resort in Siem Reap, Cambodia. The venue is located in the heart of the city, just a few minutes on foot from all the main points of interest. Address: Khum, Vithei Preah Sihanouk Ave, Krong Siem Reap 17259, Cambodia.

Registration Fees (VAT included)

GRS member	€ 600,00
Guest of a GRS member	€ 600,00
Accompanying person	€ 350,00

Registration for GRS Members and Guests includes:

- ✓ Attendance to the Scientific Sessions
- ✓ Welcome Reception on November 13 at poolside of the hotel
- ✓ Dinner on November 14
- ✓ Farewell Dinner on November 16
- ✓ Lunch and coffee breaks from November 14 to November 16

Registration for Accompanying Persons includes:

- ✓ Welcome Reception on November 13 at poolside of the hotel
- ✓ Dinner on November 14
- ✓ Farewell Dinner on November 16

Desk

The Organizing Secretariat Desk will be open for registration and information according to the following schedule:

Wednesday, November 13	17:00 – 19:00
Thursday, November 14	07:30 – 17:00
Friday, November 15	07:30 – 13:00
Saturday, November 16	08:00 – 17:00

Please collect the meeting kit at the Secretariat Desk and wear your name badge during the scientific sessions and social activities.



GENERAL INFORMATION

Certificate of Attendance

The certificate of attendance will be sent by e-mail after the event.

Slide Preparation and Preview

You can preview your slides in the Phokeethra Ballroom, main meeting room, at the speaker ready corner. Speakers are kindly requested to use PowerPoint (versions 2003 or later). All presentations must be loaded into the system in advance. The use of personal computers is not possible. Speakers are advised to check their presentations beforehand to ensure that videos or special animations run correctly. Presentations must be handed to the AV technicians at least two hours before the start of the session. The Phokeethra Ballroom, the main meeting room is equipped with a screen and a video projector.

Dress Code

The dress code will be informal for all sessions and social events.

Insurance

The organisers are not responsible for individual medical, travel or personal insurance. Registrants and accompanying persons should arrange their own coverage.

Catering

Coffee breaks and buffet lunches are included in the registration fee. All the registered participants are welcome to join the Social Events included in the registration fee (please see Social Events section for further information).

Internet Connections

Free Wi-Fi access will be available in the meeting area.

Contact Information

For assistance, please contact the Organizing Secretariat:



Viale della Giovine Italia, 17 | 50122, Florence – Italy

Tel.: +39 055 50351 | Fax: +39 055 500 1912

For general questions: infoGRS@oic.it

For questions about registration and accommodation: registrationGRS@oic.it

Your OIC staff assistance on site in Siem Reap: Sara Turini +39 366 6951059 | s.tuirmi@oic.it

Your SNEC/SERI contact on site in Siem Reap: Dr Nicholas Tan, Dr Ruben Hemelings



SOCIAL EVENTS

Wednesday, November 13, 2024

19:00–20:30 | Welcome Reception – At the poolside of the Hotel Sofitel Angkor Phokeethra Golf & Spa Resort

Thursday, November 14, 2024

18:30 transfer – 19:00–22:30 | Dinner at Mahob Restaurant

Mahob (it means 'food' in Khmer) is a new restaurant born in the lively foodie scene of Siem Reap. It combines the talents of the chef and owner with the freshest local ingredients in the beautiful setting of a wooden house.

Saturday, November 16, 2024

18:30 transfer – 19:00–22:30 | Dinner at Malis Siem Reap Restaurant

You will experience fine dining at its best in Siem Reap at Malis Siem Reap and learn about the 'Local Cambodian cuisine' at the restaurant owned by Cambodia's most famous chef, Luu Meng. Inspired by the early 10th century Kravan Temple this impressive new building provides modern Cambodian cuisine at its finest.

Optional Tour

Not included in the Registration Fee

**Half Day Tour at Angkor Wat & Bayon Temple
& Dinner at Kanell Restaurant with Apsara Dance**

Friday, November 15, 2024

14:00 – transfer to Angkor Wat & Bayon Temple

You will explore the Temples of Angkor Wat, the largest religious building in the world. Built by Suryavarman II in the early 12th century as a state temple and later mausoleum, Angkor Wat was originally an Hindu complex to honour the God Vishnu. The visit moves on to the ancient city of Angkor Thom, surrounded by 8 m high and 12 km long walls, the city has been the last capital of the Khmer Empire. Angkor Thom holds important monuments as the Bayon Temple that you will visit.

19:00 transfer – Dinner at Kanell Restaurant with Show

After the tour, the day continues with a wonderful dinner based on local, fresh and delicious Asian Cuisine. During the dinner you will be enchanted by heavenly Apsara dancers (traditional dance played by women, sewn into tight-fitting traditional dress, whose graceful, sinuous gestures are codified to narrate classical myths or religious stories) and a demonstration of the Cambodian martial art called "bokator". The carvings at Bayon Temple show this ancient art what the world knows today as 'Thai boxing' and was performed in the ancient Angkor Kingdom.



The GRS is pleased to welcome the following guests to the 2024 meetings. Guests of GRS Members are those who are felt by the inviting member to be future GRS members.

Guests of GRS Members

Sanjay Asrani
Katharina Bell
Ching-Yu Cheng
Robert D'Amato
Gerhard Garhöfer
Ronnie George
Michael Girard
Paul Healey
Esther Hoffmann
Anton Hommer
Hari Jayaram
Gauti Johannesson
Chan Yun Kim
Mitchell Lawlor
Eun Ji Lee
Fei Li
Yutao Liu
Giovanni Montesano
Bill Morgan
Karin Pillunat
Daniela Alina Popa Cherecheanu
Andrew Pouw
Husain Rahat
Hitomi Saito
Ian Sigal
Owen Siggs
Swaminathan Swarup
Clemens Vass
Jithin Yohannan

Inviting GRS Members

Tin Aung
Jonathan Crowston
Jost Jonas
Janey Wiggs
Carlo Enrico Traverso
Vijaya Lingam
Anthony Khawaja
Keith Martin
Norbert Pfeiffer
Ingeborg Stalmans
Peng Khaw
Gus Gazzard
Ki Ho Park
Helen Danesh-Meyer
Tae-woo Kim
Christopher Kai-Shun Leung
William Stamer
David Garway-Heath
Balwantray Chauhan
Lutz Pillunat
Leopold Schmetterer
John Fingert
Tina Wong
Makoto Araie
C. Ross Ethier
Jamie Craig
Filipe Medeiros
Franz Grehn
Pradeep Ramulu

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Glaucoma Research Society



Guest of host country

Rachel Chong
Jacqueline Chua
Monisha Nongpiur
Zhenxun Wang

Guests from Regions Underrepresented in the GRS Membership

Olusola Oluyinka Olawoye, Nigeria
Srinivasan Kavitha, India
Kossama Chukmol, Cambodia
Tung Thanh Hoang, Vietnam

Fellows from Singapore helping with AV/logistics:

Dr Nicholas Tan and Dr Ruben Hemelings

Glaucoma Research Society



Glaucoma Research Society 2024 November 13-16

Siem Reap, Cambodia



ORGANIZING SECRETARIAT

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