



Vitreo Retina Society of Bihar

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6th Annual Conference, Hotel Maurya, Patna

VRSB 2025

NEWS LETTER

AIOS President's Message Dr Partha Biswas



On the Occasion of the 6th Annual Conference of VRSB August 1st-3rd, 2025 | Hotel Maurya, Patna

It gives me immense pleasure to extend my heartfelt congratulations to the Vitreo Retina Society of Bihar (VRSB) on the occasion of its 6th Annual Conference in the culturally rich and historic city of Patna.

Under the visionary guidance of Prof. Rajvardhan Azad and the dynamic leadership of Dr. Subhash Prasad (President) and Dr. Pooja Sinha (Secretary), VRSB has emerged as a shining example of academic excellence and professional unity. This year's scientific program—featuring cutting-edge retinal discussions, deferred live surgeries, and thought-provoking panels—is a testament to the Society's commitment to elevating retinal care in India.

I would also like to acknowledge the dedicated efforts of the entire VRSB team:

- ▶ Dr Shivendra Sahay – Vice President
- ▶ Dr Nagendra Prasad – Immediate Past President
- ▶ Dr Deepak Agrawal – Treasurer
- ▶ Dr Abhishek Kedia, Dr Abhishek Anand, Dr Satya Prakash Tiwary, Dr Kumar Vivek, Dr Shivani Sinha, Dr Vishal Kishore, and Dr Rajesh Agrawal – Executive Members

As President of the All India Ophthalmological Society (AIOS), I am proud to witness such regional academic societies flourish, contributing meaningfully to the national and global landscape of ophthalmology.

Wishing VRSB 2025 great success and an inspiring conference for all delegates.

Warm regards,
Dr. Partha Biswas
President, AIOS

VRSI President's Message Dr R Kim



Dear Colleagues and Friends,

It gives me immense pleasure to convey my heartfelt greetings to the Vitreo Retina Society of Bihar (VRSB) on the occasion of its 6th Annual Conference being held in the historic and culturally rich city of Patna.

VRSB has shown remarkable growth as an academic forum, thanks to the dedicated leadership of Dr. Subhash Prasad and Dr. Pooja Sinha. The support and guidance of stalwarts like Prof. Rajvardhan Azad have definitely elevated the stature and academic rigor of your endeavors. I was very happy to see the well curated scientific program with interactive sessions which reflect VRSB's commitment to clinical advancement and knowledge dissemination. It is particularly heartening to see the platform being extended to young ophthalmologists which will undoubtedly inspire the next generation of VR specialists.

On behalf of the Vitreo Retinal Society of India, I extend my warmest wishes for the grand success of the conference. May it continue to inspire collaboration, innovation, and the highest standards of patient care.

Congratulations and best wishes once again to the organizing team for their dedication and excellence.

With warm regards and best wishes,

Dr. Kim Ramasamy
President,
Vitreo Retinal Society of India (VRSI)



Editor - Dr Vishal Kishore

AIOS Secretary's Message Dr Santosh G Honavar



It is with great pleasure that I, on behalf of the All India Ophthalmological Society, extend my warm greetings to the Vitreo Retina Society of Bihar on the occasion of its 6th Annual Conference, being held in the historic city of Patna from 1st to 3rd August 2025.

The VRSB, under the able leadership of President Dr. Subhash Prasad and dynamic Secretary Dr. Pooja Sinha, with the guidance of Founder and Chair Emeritus Prof. Rajvardhan Azad, has, in a short span, emerged as a vibrant platform for scientific exchange, professional growth, and collegial fellowship among vitreoretinal specialists. This year's conference promises to be an outstanding confluence of knowledge and experience, featuring cutting-edge scientific sessions, thought-provoking panel discussions, and the presence of distinguished national and international faculty.

Such meticulously planned academic events play a pivotal role in shaping the future of our specialty by inspiring innovation, enhancing clinical acumen, and fostering collaborations across regions. I commend the organizing team for their dedication, vision, and commitment to excellence.

I wish the conference resounding success and the delegates a memorable and rewarding experience in Patna.

Warm regards,
Dr. Santosh G Honavar
Secretary, AIOS

VRSI Secretary's Message Dr Manisha Agrawal



Dear Members of the VRSB

It is indeed a pleasure to see how your society is growing day by day with so many members as part of it.

I have myself been participating in your annual conference for last few years and have always appreciated the enthusiasm with which the meeting is conducted. It has been a very good blend of academics and pleasure .

All the society members are doing a great job in the field of Vitreoretina with all complex surgeries being performed in Bihar itself.

I congratulate Dr Subhash Prasad, Dr Pooja Sinha along with all the office bearers for doing a great job in taking the society forward.

Look forward to VRSB working in collaboration with VRSI in future and wishing you all the best for the conference.

Regards
Dr Manisha Agarwal
General secretary VRSI



Co-Editor - Dr Rajesh Agrawal

Message from VRSB President

Dr Subhash Prasad



It is our great pleasure to welcome you to the 6th Annual Conference of the Vitreo Retina Society of Bihar (VRSB), to be held on 1st - 3rd August 2025 at Hotel Maurya, Patna. This event brings together leading vitreoretinal specialists, researchers, and clinicians from Bihar and across the country for two days of insightful discussions, knowledge sharing, collaborative learning and fellowship and cultural programme. Founder of VRSB, doyen of Indian Ophthalmology, Prof Rajvardhan Azad has been constantly guiding us and our dynamic secretary, Dr. Pooja Sinha, to meticulously plan every aspect of the conference to ensure a seamless and enriching experience for all delegates. We are confident that the scientific sessions and interactive panels will enrich your clinical practice and strengthen professional bonds. We look forward to your active participation in making this conference a grand success. Welcome once again to an exciting day of learning and innovation.

Message from VRSB President

Dr Pooja Sinha



Dear Hon'ble Members of VRSB,

On behalf of the Vitreo Retina Society of Bihar it gives me great pleasure and privilege to welcome you all to our 6th Annual Conference here in the historic city of Patna.

This year's conference promises an enriching academic experience featuring advancements in cutting edge technology and scientific discussions designed to be thought provoking. Live Retinal Surgery will be performed by eminent national and state faculties for the first time in the history of this conference & in India in a state Vitreo Retina Conference.

Patna, formerly known as Patliputra is situated on the southern bank of the sacred river Ganges. It is an important pilgrimage centre for Hindus, Buddhists, Jain & Sikhs alike. Among notable landmarks are ancient ruins of Nalanda & Vikramshila Universities, the magnificent Golghar and revered Takht Sri Patna Sahib Gurudwara.

This year we are introducing the website of Vitreo Retina Society of Bihar; thanks to the untiring effort of our president Dr Subhash Prasad. It will be released in the inaugural function of VRSB 2025.

My sincere and grateful thanks to Prof Raj Vardhan Azad Sir, the founder of VRSB and our constant source of inspiration, President Dr Subhash Prasad for his guidance and to all the executives who have worked hard to make this conference a grand success like Varanasi in 2022, Siliguri in 2023 and Ayodhya in 2024..

Wishing you a fruitful and enjoyable conference.

VRSB Office Bearers



Prof Rajvardhan Azad
Chair Emeritus



Dr Subhash Prasad
President



Dr Shivendra Sahay
Vice President



Dr Nagendra Pd
Imm Past President



Dr Pooja Sinha
Secretary



Dr Deepak Agrawal
Treasurer



Dr Abhishek Kedia
Executive



Dr Abhishek Anand
Executive



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Dr Kumar Vivek
Executive



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Executive



Dr Vishal Kishore
Executive



Dr Rajesh Agrawal
Executive

Newer nAMD treatment modalities focus on achieving longer-lasting effects, reducing treatment burden, and exploring alternative therapeutic targets beyond anti-VEGF. These include gene therapy, sustained-release drug delivery systems



like the Susvimo implant, and therapies targeting other pathways involved in nAMD development, such as the complement system and anti-angiopoietin 2 molecules. Here we describe an overview of recent and emerging treatment approaches for neovascular age-related macular degeneration (nAMD), based on the latest clinical data and developments.

1. Extended-duration anti-VEGF therapies

Faricimab (Vabysmo)

A bispecific antibody targeting both VEGF-A and Angiopoietin-2, dual inhibition has proven effective while permitting dosing intervals up to every 16 weeks. Phase III trials (TENAYA/LUCERNE) demonstrated non-inferiority to aflibercept given every eight weeks, offering reduced treatment burden.

KSI-301

An antibody-polymer conjugate designed for enhanced ocular stability and prolonged intraocular half-life. Early trials showed around 55% of participants could wait up to 6 months between injections, with gains in visual acuity and reduced central retinal thickness without major side effects

EYP-1901 (vorolanib sustained-release implant)

A bioerodible intravitreal insert releasing a small-molecule pan-VEGF receptor inhibitor. In Phase I (DAVID) results, a single injection reduced treatment frequency by ~75% over six to 12 months while maintaining stable visual outcome.

2. Novel molecular targets & combination biologics

OPT-302

A first-in-class biologic targeting VEGF-C and VEGF-D (beyond VEGF-A) in combination with standard anti-VEGF therapy (ranibizumab or aflibercept). Phase IIb data showed superior gains in visual acuity versus ranibizumab alone, and two pivotal Phase III trials—ShORE and COAST—are underway with results expected by end-2025.

IBI302 (efdamrofusp alfa)

A bispecific fusion protein inhibiting both VEGF and complement factors (C3b/C4b). Early Phase I trials in nAMD show tolerability and preclinical promise for dual-pathway suppression of angiogenesis and inflammation.

ISTH0036

An antisense oligonucleotide targeting TGF-β, evaluated in Phase IIa trials for nAMD and DME. Based on the NORSE TWO Phase III trial (nAMD), it demonstrated non-inferiority versus ranibizumab, with FDA action due by August 2025.

3. Gene therapy for sustained anti-VEGF expression

ABBV-RGX-314 / RGX-314

Using AAV8-mediated delivery of an anti-VEGF fragment gene, this gene therapy aims to reduce or eliminate the need for repeated injections. Subretinal and suprachoroidal delivery are being tested. Early trials show up to 80% reduction in injection frequency, with 50% of patients becoming injection-free; pivotal trials (ATMOSPHERE and ASCENT) are ongoing with regulatory filings expected late 2025 or early 2026.

Other gene therapy candidates in mid-phase trials include ADVM-022, 4D-150, and ixo-vec, each with unique capsids or multi-target profiles (e.g. VEGF plus RNAi components).

4. Novel mechanisms & repurposed biologics

Foselutoclax (LUBX1325)

A senolytic that targets senescent retinal cells via Bcl-xL inhibition, potentially addressing root inflammation and degeneration. Phase 2B data in nAMD and DME show functional benefit and electrophysiologic improvements; early studies are promising.

PRL3-zumab

Repurposed from oncology, this intravenous monoclonal antibody targets PRL-3, a protein upregulated in ocular neovascularization. In pre-clinical models, it reduced vascular leakage by ~86%; human trials for eye disease are expected to begin in late 2025 in Singapore.

ApoM (Apolipoprotein M)

A discovery with potential to prevent early AMD by enhancing cholesterol clearance in the retinal pigment epithelium, thereby reducing inflammation and deposit accumulation. So far investigated in animal studies, and may form basis for early-stage disease intervention.

5. Novel delivery routes: suprachoroidal space

Suprachoroidal injections and microneedles

Deliver drugs directly into the suprachoroidal space to maximize tissue targeting and reduce systemic exposure or injection complications. Devices like CLS-AX are being tested for nAMD, showing promising early durability and safety.

OCT Biomarker in Diabetic Retinopathy : An overview



Dr Vishal Kishore



Dr Vishal Agrawal

Optical Coherence Tomography (OCT) biomarkers are key indicators used to assess and monitor diabetic retinopathy (DR) and diabetic macular edema (DME). These biomarkers, visualized through OCT imaging, help in early detection, diagnosis, and management of DR and DME. Key OCT biomarkers include **central subfield thickness (CST), intraretinal fluid, subretinal fluid, hyperreflective foci, and ellipsoid zone (EZ) disruption**.



Disorganization of the Inner Retinal Layers (DRIL):

Disruption of the normal laminar structure of the inner retina, indicating damage to retinal neurons.

Epiretinal Membrane (ERM):

A thin layer of tissue that can form on the surface of the retina, potentially causing traction and visual distortion.

Intraretinal Microvascular Abnormalities (IRMAs):

Abnormalities in the retinal capillaries, often appearing as dilated or tortuous vessels, indicative of more advanced DR.

Vitreomacular Interface Abnormalities:

Changes in the vitreous gel and its attachment to the retina, including vitreomacular traction and vitreomacular adhesion, can impact DME development and progression.

Clinical Significance:

Early Detection:

OCT can detect early signs of DR and DME before they become visually significant, allowing for timely intervention.

Severity Assessment:

OCT biomarkers help assess the severity of DR and DME, guiding treatment decisions.

Treatment Monitoring:

OCT is used to monitor the response to treatment, such as anti-VEGF injections or laser photocoagulation, and to identify patients who may need adjustments to their treatment plan.

Prognosis Prediction:

Certain OCT biomarkers, like EZ disruption and DRIL, can be used to predict visual outcomes and the likelihood of treatment success.

Integration with OCT Angiography (OCTA):

Combining OCT with OCTA provides a more comprehensive assessment of DR and DME. OCTA visualizes the retinal vasculature, revealing microvascular changes like non-perfusion areas and capillary abnormalities, which can be correlated with OCT findings.

In summary, OCT biomarkers are essential tools for the diagnosis, management, and prognosis of diabetic retinopathy and diabetic macular edema. They provide valuable insights into the structural changes in the retina, enabling clinicians to make informed decisions and optimize patient outcomes.

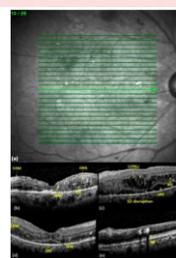


Figure 1: OCT biomarkers in diabetic retinopathy (DR) and diabetic macular edema (DME). (A) Representative OCT scan of a 55-year-old male patient with DR and DME. (B) OCT scan showing DRIL. (C) OCT scan showing ERM. (D) OCT scan showing IRMAs. (E) OCT scan showing vitreomacular traction. (F) OCT scan showing vitreomacular adhesion. (G) OCT scan showing EZ disruption. (H) OCT scan showing DRIL. (I) OCT scan showing DRIL. (J) OCT scan showing DRIL. (K) OCT scan showing DRIL. (L) OCT scan showing DRIL. (M) OCT scan showing DRIL. (N) OCT scan showing DRIL. (O) OCT scan showing DRIL. (P) OCT scan showing DRIL. (Q) OCT scan showing DRIL. (R) OCT scan showing DRIL. (S) OCT scan showing DRIL. (T) OCT scan showing DRIL. (U) OCT scan showing DRIL. (V) OCT scan showing DRIL. (W) OCT scan showing DRIL. (X) OCT scan showing DRIL. (Y) OCT scan showing DRIL. (Z) OCT scan showing DRIL.



Dr Rupak Roy - Professor of Ophthalmology
Deputy Medical Director - Sankara Nethralaya, Kolkata

Understanding and Interpreting the Directional OCT

Dr Ahana Sen - Fellow, Department of Vitreo Retina
Sankara Nethralaya, Kolkata



Directional OCT (D-OCT) is a technique that is independent of the OCT machine used where the angle of incidence of light entering into the pupil is changed thus causing change in the orientation of light incident on the retina.

As we know, the structures in the retina having an arrangement parallel to the entering beam of light appear to be hyporeflective whereas the structures having different arrangement and adjacent intercellular connections appear hyperreflective. Further, the retina is not a flat structure, rather a curved one. Thus there is a directional reflectivity property of the retinal elements. Retinal elements have maximal optical contrast when the light falls perpendicular on them.

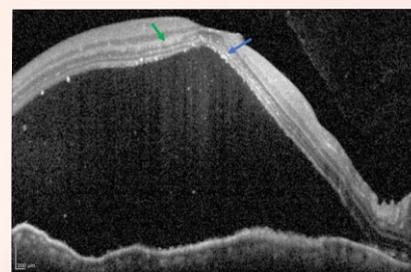
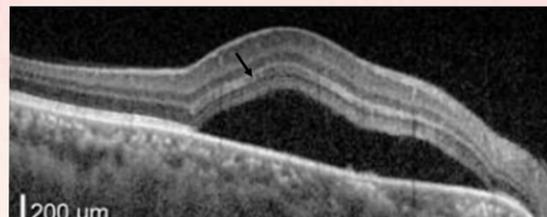
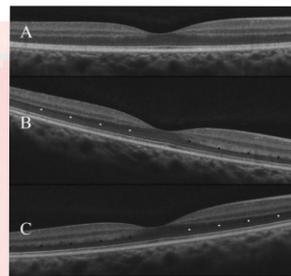
The Henle fibre layer has been recently described on OCT. When the entry beam is at the centre of the pupil, this layer is not picked up, as it is isoreflective to the outer plexiform layer, unless there is some pathology causing distortion of the normal retinal geometry. This can be seen in Figure 2 where the presence of subretinal fluid has resulted in the visibility of the HFL at the fovea.

It can be picked up by changing the position of the entry beam due to the oblique arrangement of fibres. Thus, if the angle of the entry beam is shifted nasally to the pupillary border, the incident light is perpendicular to the fibres temporal to the fovea. Thus the HFL in this area becomes hyperreflective. As this incident light is now parallel to the arrangement of fibres of the HFL nasal to the fovea, the HFL in this area becomes hyporeflective and hyperreflective outer plexiform layer and outer nuclear layer can be seen above and below it. Thus, shifting the entry beam towards the pupillary border causes hyperreflectivity of the contralateral HFL and hyporeflectivity of the ipsilateral HFL.(Figure 1) In Figure 3, there appears to be thickening of the ONL temporal to the fovea and thinning of the same layer nasal to the fovea. The presence of the subretinal fluid has actually led to the visibility of the HFL on the temporal side. Thus there is no actual thickening of the ONL.

Figure 3 demonstrates the Angular sign of HFL hyperreflectivity(ASHH) revealing the oblique arrangement of fibres in this layer.

Similarly, D-OCT can also be used to differentiate between true photoreceptor loss in the ONL or just displacement of photoreceptors from the normal position. The retinal nerve fibre layer can be used another example to demonstrate this property. It is highly reflective when the entry beam is at the centre of pupil and becomes less so when it turns to enter into the optic canal.

Thus one must be aware of this directional reflectivity as applying this technique can be used to gain a better understanding of various macular pathologies.



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