Celebrating LVPEI at ARVO 2025

One of the world's premier eye research conferences, the **Annual Meeting of the Association for Research in Vision and Ophthalmology (ARVO),** concluded this month at Salt Lake City, USA. At a glittering ceremony during the meeting, on 7th May, Dr Geeta Vemuganti, Distinguished Pathologist and Scientist at LVPEI, was feted with the *Mildred Weisenfeld award*. All of us were immensely proud to see her visage projected across huge screens before an international audience of her peers and thousands of attendees.

In her inspiring acceptance speech, Geeta shared her journey in ocular pathology, particularly her pioneering work with stem cells and their unique regenerative powers. These advances have enabled corneal epithelial cell transplantation – a cornerstone of LVPEI's innovation in ocular surface reconstruction. She also spotlighted a critical area of ongoing research: using stem cells for regenerating the lacrimal gland, potentially offering relief to millions affected by Dry Eye Disease (DED) – a condition projected to affect nearly 40% of India's urban population by 2030. Her talk showcased our team's determination to solve deeply complex clinical problems with cutting edge science.

Stem cells, however, carry a dual nature and can also 'go rogue,' becoming malignant tumours such as Retinoblastoma. LVPEI's team, in collaboration with the School of Medical Sciences at the University of Hyderabad (which Geeta headed until recently) are tackling this challenge by isolating and characterizing these cancerous stem cells, testing drug efficacy, and developing targeted drug delivery systems – all through cost-effective, innovative models.

With over 250 publications and three decades of research, Geeta is not only a scientific luminary but also a mentor to generations of researchers. Her long-standing contributions to ARVO in various leadership roles have strengthened global eye research. In many ways, her journey mirrors LVPEI's: deep-rooted translational science, boldly advancing the frontiers of vision care.

A Strong LVPEI Presence at ARVO 2025

Geeta was one of the four LVPEI awardees this year – a matter of great pride for all of us. As mentioned in my earlier note, Drs Mudit Tyagi, Swathi Kaliki, and Vishal Raval were also honoured during this year's ARVO meeting. Their collective achievements are an inspiration to all of us cheering from home.

Our multidisciplinary contingent of over 40 delegates with a good mix of clinicians, basic scientists, PhD students and principal investigators represented LVPEI's research both in breadth and excellence. About half of them received prestigious travel grants. Together, they delivered over 12 papers and 30 posters and contributed to plenary sessions – spanning topics from the vision sciences, oculomics, genetics, microbiology, pathology, even a dash of social science that LVPEI produces.

From Laboratory to Life: Tackling Real-World Challenges

Several sessions brought key LVPEI themes to the forefront. Dr Vijaya Gothwal led a global plenary on managing cognitive and motor decline in aging populations, especially when these coincide with vision impairment. As populations age, understanding these connections – how vision loss may serve as a harbinger, or marker, of dementias and cognitive decline in older adults - is crucial.

Dr Sayan Basu moderated a session on the 'ocular surface, tear film, and the lacrimal gland' bringing together global insights into various aspects of human tears and the ocular surface.

Our papers and posters covered a range of clinical and scientific interests: from 3D bioprinting, infections, inflammation and other diseases, innovative drug delivery systems, refractive errors and myopia, and new surgical techniques—the sort of themes you would expect from a top-notch eye institute. But, beyond clinical breakthroughs, our researchers also explored social and systemic themes.

Dr Deeksha Thorat's survey examined safety practices in industrial setting revealing major gaps in preventive measures for ocular chemical injuries.

Dr Ponnari Gottipati's poster discussed the 'Leaky pipeline'—the global trend of declining numbers of women as they advance into leadership roles in an organization. At an institute like LVPEI, where women form a significant part of our workforce, recognizing and addressing these barriers is vital.

This scale and diversity underscore the strength and interdisciplinary nature of LVPEI's research ecosystem. These global gatherings are vital – not just to share our work but to forge new partnerships and tap into the vibrant pulse of global vision science. *In a world teeming with research ideas and opportunities, there is much to offer and much to learn from.*

Standing on the Shoulders of Giants

These achievements reflect decades of thoughtful investment in research at LVPEI. One photograph from ARVO captures it perfectly: Dr Gullapalli N Rao, our founder chair, standing next to the 2025 awardees with a quite smile of satisfaction and pride.

Few of us have the pleasure of watching decades-long dreams mature through the tireless and committed efforts of our colleagues and friends. Dr D Balasubramanian, our emeritus chair of research; the late Prof Brien Holden (after whom our research centre is named); the late Dr Kallam Anji Reddy of Dr Reddy's Laboratories; Sreekanth and Sudhakar Ravi, co-founders of SonicWall, who supported our stem cell laboratory that propelled Geeta's work; and many other well-wishers would be so proud of our group's achievements. We are also deeply grateful to our partners and research collaborators from around the world for their role in this success.

A big cheer to the team—onward, with courage and curiosity!

-Prashant Garg