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Singapore's SERI and Carl Zeiss invest SG$20 M for driving innovation in ophthalmic surgery

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Researchers will focus on innovations and improvements in refractive and cataract surgeries for better patient outcomes



The Singapore Eye Research Institute (SERI) and Carl Zeiss Meditec AG, one of the world's leading medical technology companies, have entered into a strategic partnership to advance surgical outcomes in refractive and cataract surgeries.

The collaboration, titled **OP**hthalmic **T**ech **I**nnovation by **Z**EISS and **S**ERI (OPTIZS), brings together cutting-edge expertise at a combined funding of nearly SG$20 million supported under Singapore's Research, Innovation and Enterprise 2025 Plan (RIE 2025). This initiative will support several research projects over the next three years with a focus on enhancing clinical outcomes and driving innovation in ophthalmic surgery.

Cataract and refractive surgeries are the most common ophthalmic surgical procedures worldwide, and demand for such surgeries is expected to increase with an ageing population and evolving lifestyle factors. However, in some cases post-operative patients can experience prolonged dry eyes, and corneal edema (where the clear layer that covers the pupil and iris loses transparency and there is swelling of the cornea).

ZEISS and SERI will work jointly to develop more personalised solutions and to enhance processes before and during surgery, so that patients can enjoy faster visual rehabilitation and better long-term stability after their surgeries. Researchers have identified opportunities for improving diagnostics and precision to further optimise cataract surgery results and provide more consistent results. The partnership will also work on providing new options for treating presbyopia and improving outcomes for patients with myopia and presbyopia, with the aim of developing more advanced procedures, with improved short-term and long-term results.

SERI has enjoyed a long-standing and fruitful collaboration with ZEISS dating back to 2008 when SERI was awarded its first Translational Clinical Research (TCR) grant from the National Medical Research Council for the Translational Research Innovations in Ocular Surgery (TRIOS) programme. Over the years, this partnership has deepened, with SERI and ZEISS working closely across research, education and clinical training. These efforts have played a pivotal role in nurturing local

talent and fostering collaboration between academic and industry stakeholders at SERI and the Singapore National Eye Centre (SNEC). ZEISS was also integral to the success of the second TCR grant in 2014, which focused on advancing innovations in lenticule implantation, a key area of ophthalmic research. Building on these achievements, SERI and ZEISS laid out future developments in three main areas: 1) advancing training and education, 2) joint research and development, and 3) clinical initiatives aimed at improving vision and patient satisfaction for both younger and ageing population.