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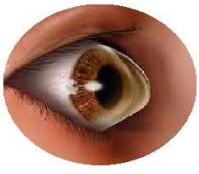
LV Prasad Eye Institute gets patent for cell therapy designed to repair damaged cornea

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One notable application of the therapy is in treating Keratoconus



Cornea Scar – Opacity



Keratoconus – Corneal thinning

In a pioneering development, the LV Prasad Eye Institute (LVPEI) in Hyderabad has been awarded a patent by the Patent Office, Government of India, for a groundbreaking cell therapy designed to repair damaged corneas caused by various corneal diseases. The patent, valid for 20 years under the Patents Act, 1970, heralds a potential paradigm shift in the treatment of corneal conditions.

The patented therapy relies on a unique composition of stem cells derived from the eye's surface and two clotting factors, intricately layered together. The inventors behind this innovative approach, Dr Sayan Basu and Dr Vivek Singh from LVPEI, represent a convergence of medical expertise and scientific research.

Corneal scarring, a consequence of infections or accidents that render the cornea opaque, leads to corneal blindness, a significant cause of vision impairment, particularly in low- and middle-income countries. Traditional solutions involve complex corneal transplants with lifelong management.

The patented composition presents a potential alternative, utilising either the individual's own corneal stem cells or donor cells to repopulate the corneal surface with healthy, transparent cells.

One notable application of this therapy is in treating Keratoconus, a chronic condition causing the cornea to thin and change shape, distorting vision. By employing this patented therapy, there is a prospect of replenishing corneal collagen, the connective protein crucial for maintaining corneal shape. Strengthening the cornea through collagen replenishment could offer a promising treatment for Keratoconus.

Currently undergoing clinical trials, this pioneering 'cell composition' based therapy represents a significant milestone in the field of ophthalmology and cell-based treatment, holding the promise of transforming the landscape of corneal disease management.