

New nanotechnology drug to control blindness

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The Mexican company "Medical and Surgical Center for Retina" has created a way to deliver drugs in order to avoid risks and painful treatments in people with secondary blindness due to chronic

degenerative blindness such as diabetic retinopathy and degeneration of the eye. The innovative formula eliminates the need to administrate drugs by intraocular injection.

It is a nanotechnology product, which works with last-generation liposome particles concentrated in droplets, which function as a conveyor that wraps proteins or antibody fragments and allows its passage into the eye. Once inside, it releases the drugs.

The nanotechnology product reduces costs by 80 to 90 percent and is ideal for the elderly population. "With this technology, hospitals that have no resources can administer the prescribed drugs without requiring a a specialist or a particular facility. A physician's prescription is necessary, but it can be administered at home, which lowers the cost. "

Dr. Juan Carlos Altamirano Vallejo, medical director of the Medical and Surgical Center for Retina, says that the conditions that originate in the [retina](#) are mostly caused by chronic [degenerative diseases](#) such as diabetes ([diabetic retinopathy](#)) or macular degeneration. Patients with these conditions usually require one injection per month, which comes at a very high cost that increases if the procedure is needed for both eyes.

The company, located in Jalisco (central west state of Mexico) won the Mexican National Prize for Technology and Innovation and plans to conclude the Clinical Research regulated by the Federal Commission for Protection Against Health Risks (COFEPRIS) next year. The idea is for the medicine to be distributed in state and private health institutions. So far, the achieved results are the same as the ones obtained with intraocular injection, but without the inherent risks of this procedure, such as infection or retinal detachment.



Current talks are being held with COFEPRIS to conduct a study within several diseases and increase its use for different conditions. In the United States, patients who have followed the treatment have had positive results.

The Medical and Surgical Center for Retina provides medical care and a specialized retina Ophthalmology Clinic provides consultation, which also has an area of Biotechnology and Drug Research of Biomedical Engineering, Diagnosis and Treatment Equipment.

Altamirano Vallejo says that receiving the award opens the doors to

reach more people and prevent blindness. "It is the most important prize delivered by the Presidency of the Republic in the area of technology and innovation. For us, to have an entity such as the award foundation to guide us and allows us to learn, know skills, strengths and company administration makes us proud, specially the opportunity for a product like this to reach the market and prevent [blindness](#)."

Provided by Investigación y Desarrollo

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