



# I-EXO

Regenerative Essence



## A HOPE FOR BETTER EYE

**Empowering Eyes through  
Precision Therapy**

SCs - EVs 外泌体技术  
再生抗衰老产品  
extracellular vesicles (EVs)  
& exosomes



(SECRET CELL Internal Circulations only)



# Exosomes

## Looking Back 3 Decades and Into The Future

**1983**

1st Discover  
Exosome

Stahl and group , Johnstone and group laboratories made a watertight case for the release of intraluminal vesicles from the cell, and defined them as "EXOSOME".

**1996**

Found the Immune  
Regulator

Discover of the immunological role of exosome in regulating immune functions.

**2006 - 07**

Found the Cell  
Communicator

Discover of exosome's role in intercellular communication as transport vesicles for various proteins, nucleic acid and bioactive lipid between cell.

**2013**

Nobel Prize  
3 Scientists



Prof. James E. Rothman, Prof. Randy W. Schekman  
and Prof. Thomas C. Südhof

**2010 - 20**

New Light in  
Medicine

More than 94,000 published article on exosomes as potent drivers of healing & repair mechanism for various indications such as neurological injuries, kidney damage, diabetic complications, Eye Diseases. Etc.

**2021**

Covid - 19  
Breakthrough

Exosome is used by hospital for clinical studies to treat moderate to severe Covid - 19 patients. A promising result was observed with 29 out of 30 patients being discharged from hospital within 5 days.





# Our daily LIFESTYLE



Long term use of  
Electronic Devices



Reading



Refractive Eye Surgery



Using Contact Lens



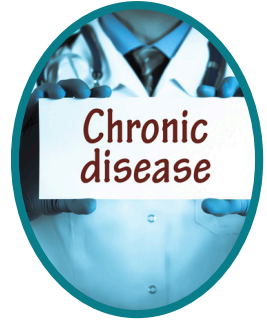
Very Dry Climate



Ageing



Certain Diseases



Chronic Disease



No Medicines



No Injections

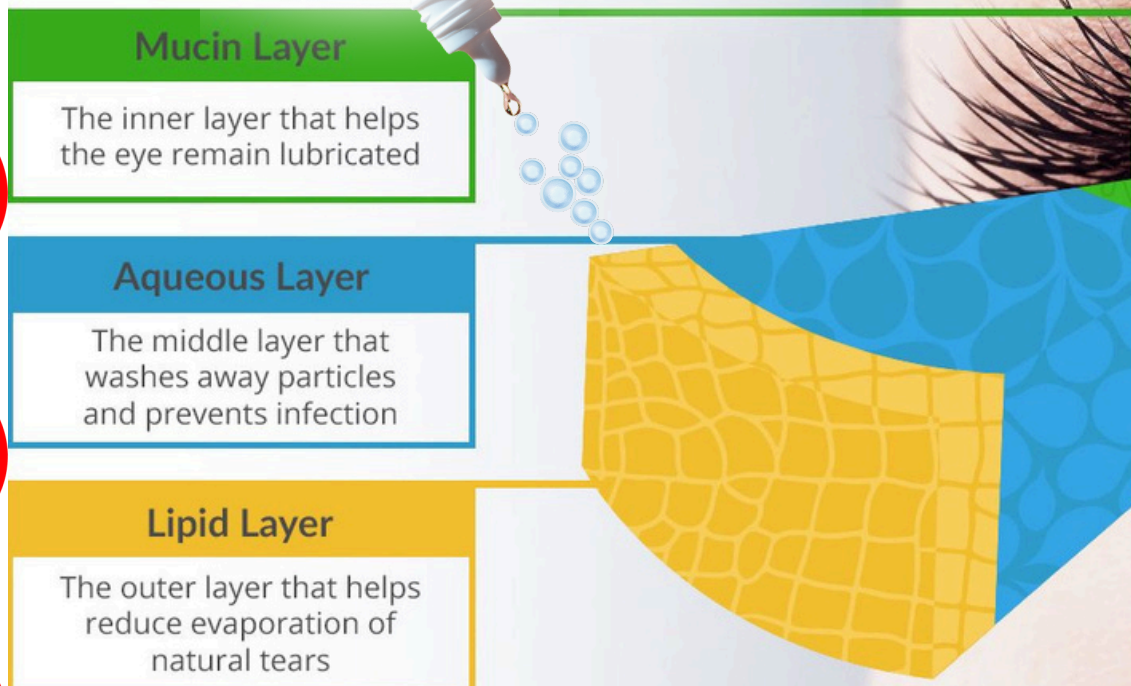


No Surgery



No Side Effects

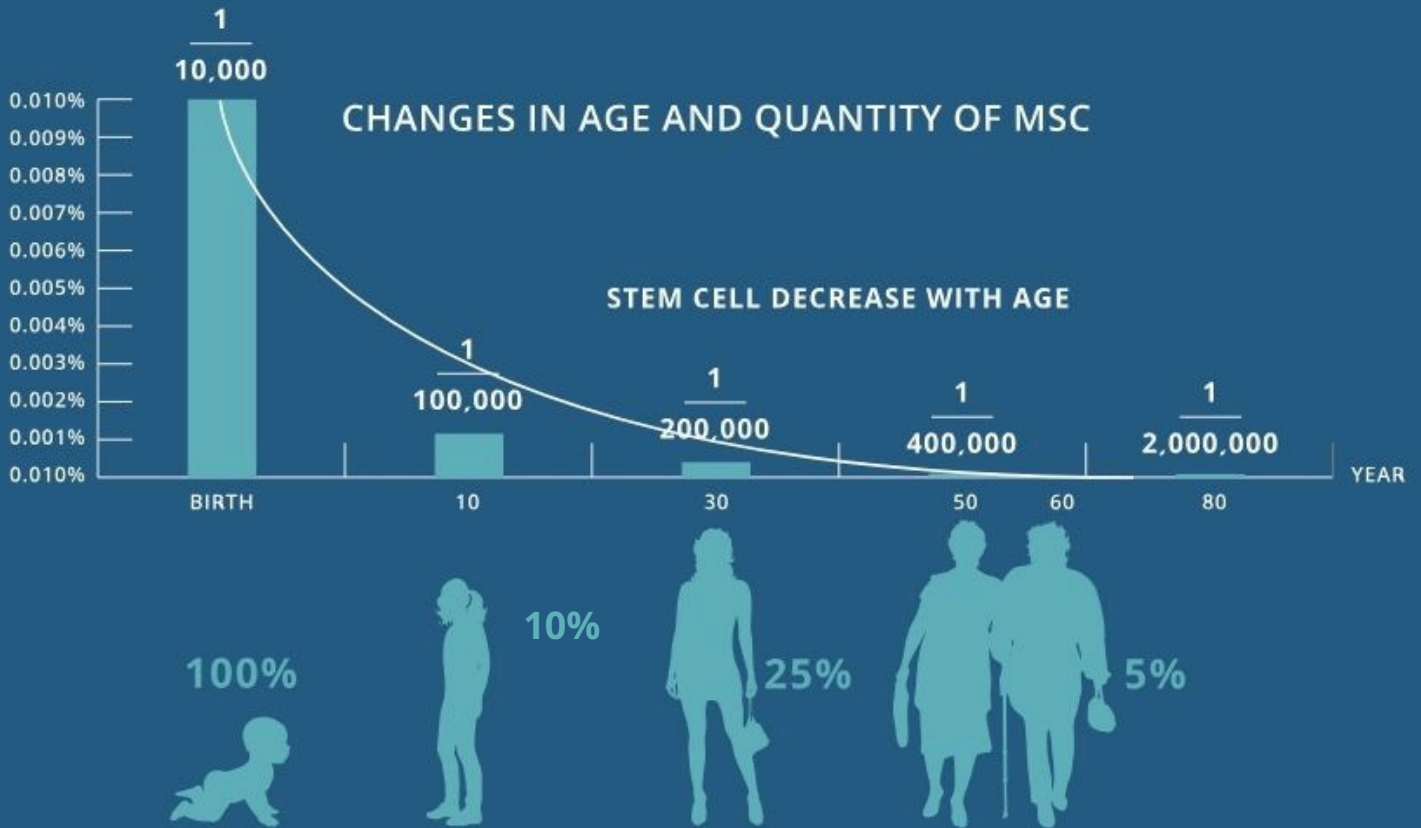
When any of these layers are not functioning correctly,  
Eye Diseases symptoms can occur.



Upside to this potential treatment is that **Exosomes are also unlikely to cause side effects in and of themselves, as they're already common in the eye.** Unlike eye drops with chemical additives, exosomes won't cause red eyes, dryness, itchiness, or excessive tearing up when administered.

Source from: <https://glaucoma.org/articles/exosomes-in-the-retina-could-be-used-to-treat-glaucoma>

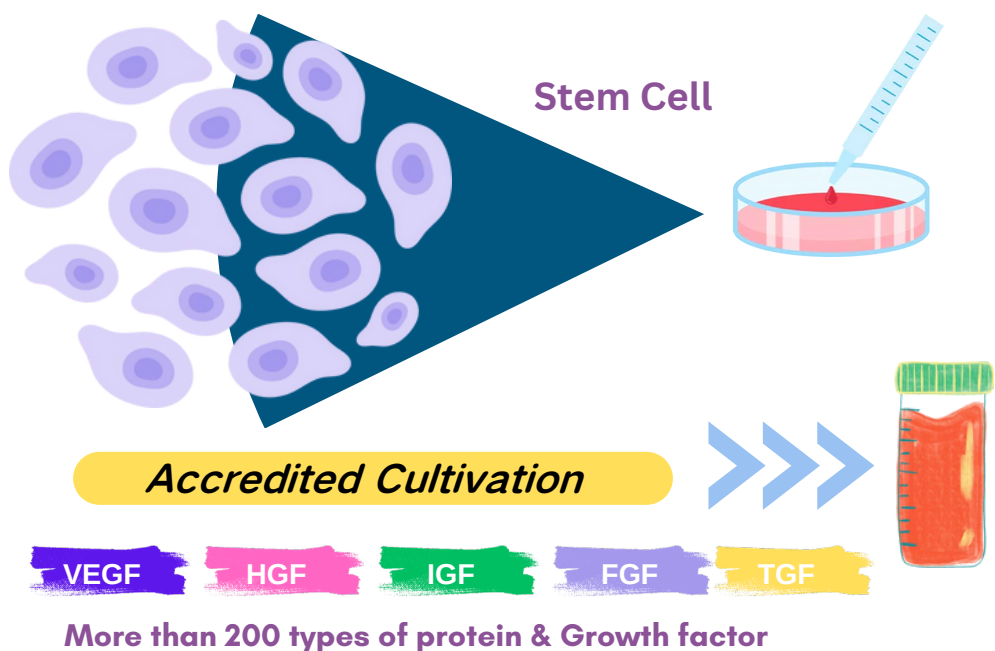
# What cause EYE Diseases?



The body loses it's ability to repair organ damages because the stem cell reserve in our body continues to deplete as we age

## Emerging cell-free approach in Regenerative

I - Exo are **active vesicles secreted by cells**, which contain hundreds of active nutrients and signaling substances needed to regulate cell growth.



In the life activities of cells, the transfer of materials and information has been medically proven to be Extremely effective **growth and repair ingredients**, rich in hundreds of growth factors and peptides, the perfect combination with excellent results.

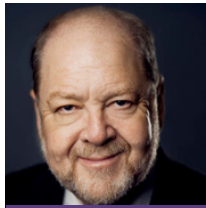


## Various Medical & Biologist experts who have over the years contribute extensively to the research of Exosomes



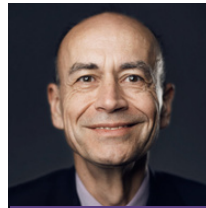
Professor  
Randy W. Schekman

- won the **2013 Nobel Prize** in Physiology or Medicine
- Revealing the machinery that regulates the transport and secretion of proteins in our cells.



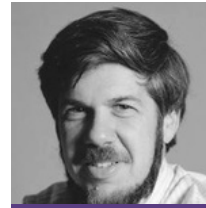
Professor  
James E. Rothman

- won the **2013 Nobel Prize** in Physiology or Medicine
- how vesicles transports arrive at the correct destination.



Professor  
Thomas C. Südhof

- won the **2013 Nobel Prize** in Physiology or Medicine
- how vesicles are held in place, ready to release signal-bearing molecules at the right moment.



Professor  
Stephen Jay Gould

- Most influential and widely read authors of popular science



Professor  
Jan Lötvald

- Swedish scientist
- First Swede of awarded the Lipid Science Prize for his role in Exosomes genetic exchange between cells.



Professor  
Catherine Bowes Rickman

- Professor of Eye Research, Duke Eye Center
- 2014 found Roles of exosomes in the normal and diseased eye

## Exosomes have shown great potential in improving eye disease

### Glaucoma Research Foundation:

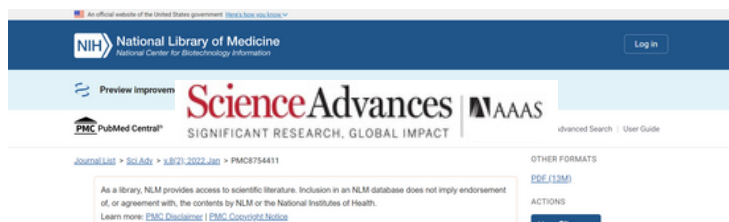
- optic nerve tissue sustained **60% less damage from ethanol** when bolstered with added **exosomes** in comparison to those that weren't.

**GLAUCOMA**  
RESEARCH FOUNDATION

### Exosomes in the Retina Could Be Used To Treat Glaucoma

Recently, the National Eye Institute released an optimistic report stating that exosomes secreted by stem cells are protective to the retina.

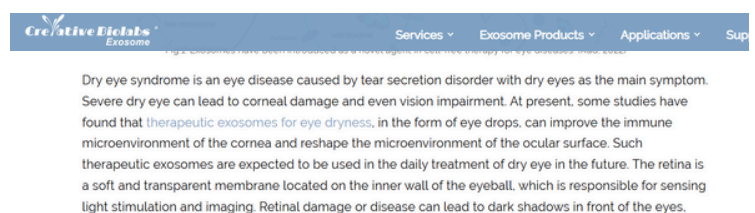
<https://glaucoma.org/articles/exosomes-in-the-retina-could-be-used-to-treat-glaucoma>



Graft-versus-host disease (GVHD)-associated dry eye disease is characterized by extensive inflammatory destruction in the ocular surface and causes unbearable pain and visual impairment. Current treatments provide limited benefits. Here, we report that exosomes from mesenchymal stromal cells (MSC-exo) administered as eye drops notably alleviate GVHD-associated dry eye disease by suppressing inflammation and improving epithelial recovery in mice and humans. In a prospective clinical trial, 28 eyes with refractory GVHD-dry eye disease exhibited substantial relief after MSC-exo treatment, showing reduced fluorescein scores, longer tear-film breakup time, increased tear secretion, and lower OSDI scores. Mechanistically, MSC-exo

### Creative BioLab:

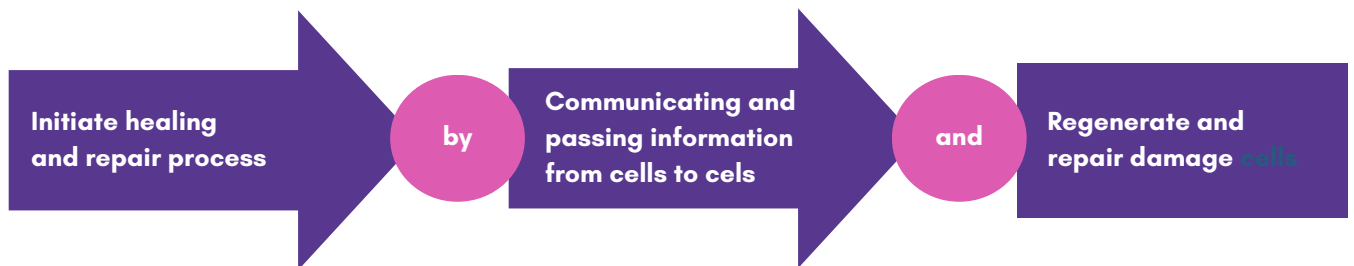
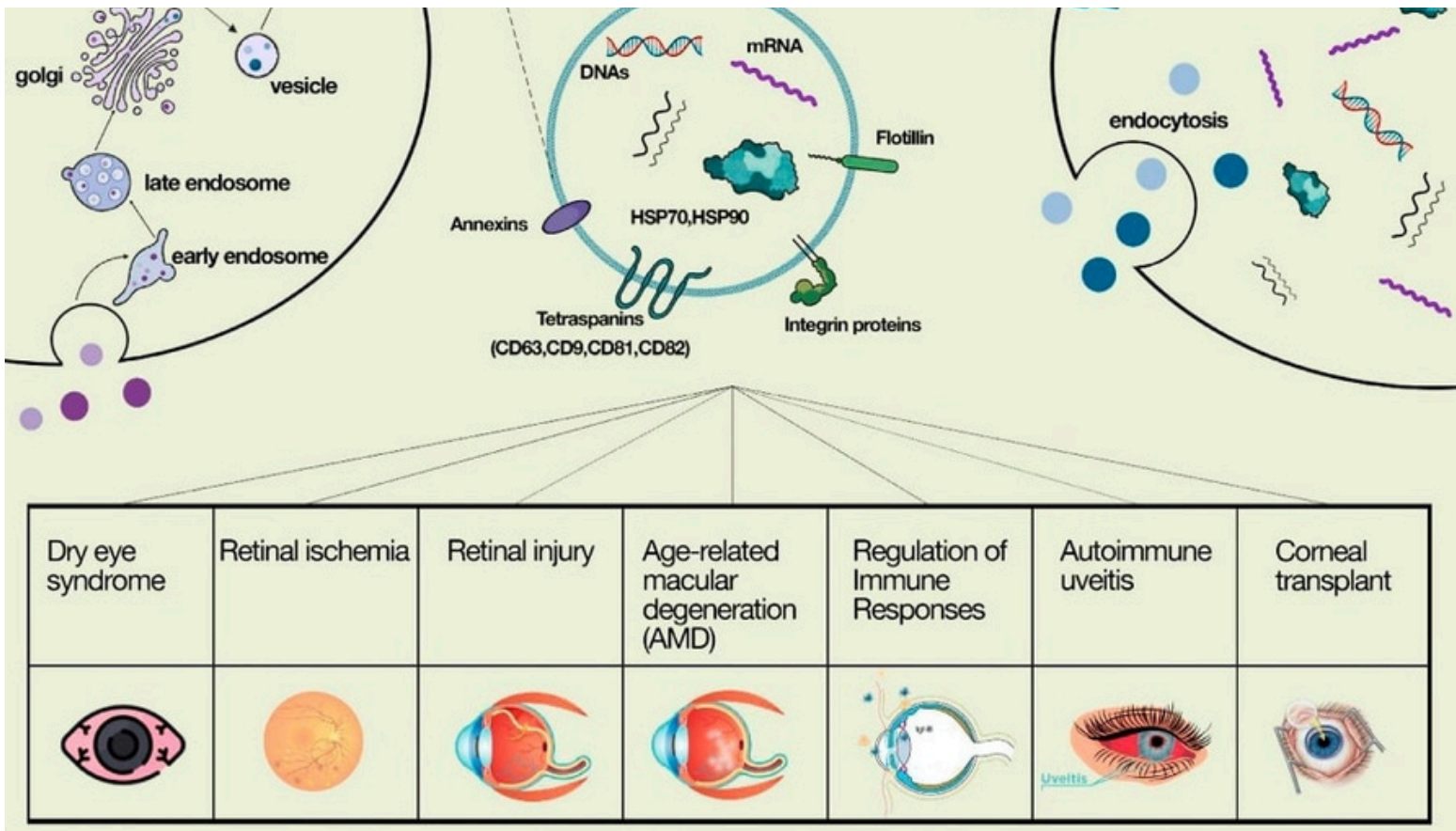
- in the form of **eyedrop**, can improve the **immune microenvironment of the cornea** and **reshape the microenvironment of the ocular surface**.



### National Institute of Health:

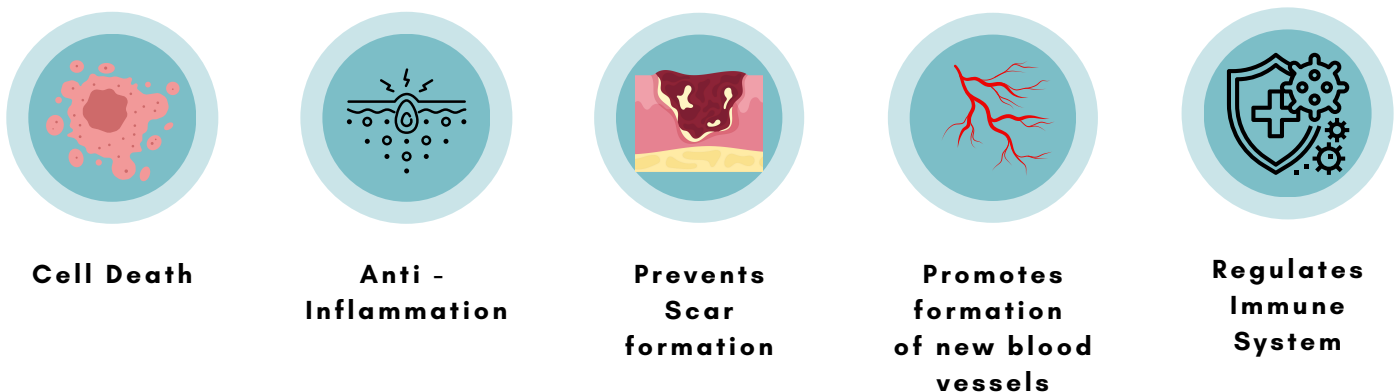
Administered as **eye drops** notably alleviate GVHD-associated dry eye disease by suppressing inflammation and improving epithelial recovery in mice and humans. In a prospective clinical trial, **28 eyes with refractory GVHD-dry eye disease exhibited substantial relief after MSC-exo treatment, showing reduced fluorescein scores, longer tear-film breakup time, increased tear secretion, and lower OSDI scores.**

# Exosomes: Cell begins to regenerate and repair



Exosomes are tiny vesicles secreted by cells, with a diameter between 30-150 nanometers, and are rich in biologically active substances such as proteins, lipids, and nucleic acids. They play an important role in transmitting signals between cells, regulating immune response, and promoting tissue repair.

Reference: [www.researchgate.net/figure/exosomes-have-been-introduced-as-a-novel-agent-in-cell-free-therapy-in-eye-diseases](http://www.researchgate.net/figure/exosomes-have-been-introduced-as-a-novel-agent-in-cell-free-therapy-in-eye-diseases)



**Key to Exosomes** Therapy on anti-inflammation, prevent cell death, promotes formation of new blood vessels, prevent scar formation, regulates immune system





## Sterility safety assurance

Ensure that all products are tested to strict standards and specifications and are produced in a sterile environment to ensure the safety and risk-free of cell products.



### Bacteria

Conduct anaerobic and aerobic bacteria testing to confirm that cell products are free of contamination.



### Mycoplasma

Polymerase chain reaction is used to detect Mycoplasma to eliminate the risk of Mycoplasma infection.



### Endotoxin

Endotoxins are detected by kinetic turbidimetry and spectrophotometer to avoid the risk of endotoxin infection.



### Cryopreservation

Take final product samples and freeze them permanently, as quality control verification traceability tracking.

# POTENTIAL REGENERATE & REPAIR

## Regenerate & Repair Damaged Cells And Tissues

Improve presbyopia  
改善老花眼

Anti blue light  
抵御蓝光

Improve myopia  
避免近视加深

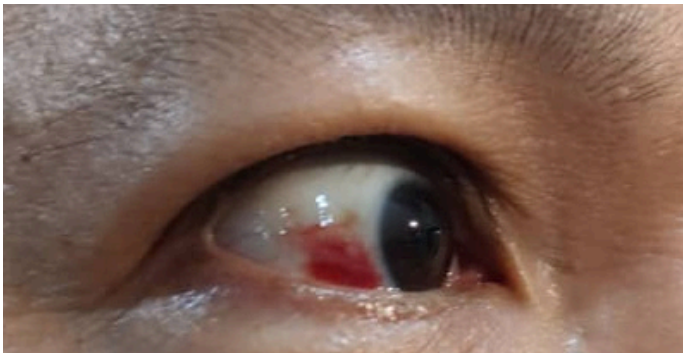
Improve eyesight  
提升眼睛明亮度

Relieve congestion  
缓解发炎

Alleviate eye floaters  
改善飞蚊症

Alleviate  
dry eye symptoms  
改善干眼症

Minimize  
eye fatigue  
减缓眼睛疲劳



Customer's eye had a blood vessel rupture; after 2 days of usage, the eye felt relieved and redness reduced.



Customer's eye was swollen with visible red veins; after 10 minutes of usage, the eye felt soothed and redness subsided.