CLEARIFY™ PROCESSED OFFICE BASED AMNIOTIC MEMBRANE GRAFTS

SOLUTIONS TO SUPPORT THE TREATMENT OF OCULAR SURFACE DISEASES AND DISORDERS

Clinical applications:
- Corneal ulcers
- Neurotrophic ulcers
- Recurrent corneal erosions
- Chemical and thermal burns
- Conditions associated with excessive dry eye

MORE ROBUST BIOSTRUCTURE WITH HIGH PROTEIN CONTENT AND EXCELLENT HANDLING CHARACTERISTICS
- Five-year shelf life with ambient, room-temperature storage
- Clearify™ process now retains the intermediate layer of amniotic membrane
- Multi-layer Ambio grafts retain more hyaluronic acid (HA) than previous generations

PREVIOUS GENERATION AMNIOTIC MEMBRANE LAYERS
AmbioDisk® Multi-layer AmbioDisk®
Amnion Amnion & intermediate layer
Chorion

CLEARIFY™ PROCESSED NEXT GEN. AMNIOTIC MEMBRANE LAYERS
AmbioDisk® Multi-layer AmbioDisk®
Amnion Amnion & intermediate layer
Intermediate
Chorion

Ordering Information
- AD-5090 9mm AmbioDisk amnion & intermediate layer
- AD-5012 12mm AmbioDisk amnion & intermediate layer
- AD-5150 15mm AmbioDisk amnion & intermediate layer
- AF-1150 15mm AmbioDisk amnion, intermediate & chorion layer
The Clearify™ process now retains the intermediate layer of the amniotic membrane. Multi-layer, Ambio5® grafts retain more hyaluronic acid (HA) than previous generations.

**ESSENTIAL ELEMENTS PRESENT IN THE INTERMEDIATE LAYER**

*The intermediate layer of amniotic membrane tissue contains detectable levels of the following essential elements*

<table>
<thead>
<tr>
<th>HA</th>
<th>EGF</th>
<th>IL-4</th>
<th>IL-10</th>
<th>TGF-β</th>
<th>TGF-α</th>
<th>PDGF-AA</th>
<th>PDGF-BB</th>
<th>VEGF</th>
<th>TIMP-1</th>
<th>TIMP-2</th>
<th>TIMP-4</th>
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Description of the regulatory components found in the intermediate layer and the function these components perform in utero.

**Hyaluronic acid (HA)**
Involved in cell migration and the proliferation of fibroblasts. Plays a role in the regulation of the inflammatory response and assists in tissue hydration.
- HA is naturally found in the eyes and often used during eye surgery to reduce inflammation and speed wound healing.¹ ² ³

**Epidermal Growth Factor (EGF)**
Plays an important role in epithelialization, attracts endothelial cells and fibroblasts and helps regulate angiogenesis and tissue integrity.

**Interleukin-4 (IL-4)**
Involved in regulating and decreasing inflammation. Plays a role in the synthesis of new extracellular matrix.

**Interleukin-10 (IL-10)**
Plays a role in downregulating the inflammatory response and the expression of inflammatory cytokines, such as IL-6 and TNFa.

**Transforming Growth Factor β (TGF-β)**
Active in epithelialization, matrix formation and tissue remodeling. Involved in angiogenesis and the maintenance of the normal phenotype of corneal keratinocytes.

**Transforming Growth Factor α (TGF-α)**
Stimulates migration and proliferation of epithelial cells and keratinocytes and helps maintain epithelialization of a wound.

**Platelet Derived Growth Factor AA (PDGF-AA)/Platelet Derived Growth Factor BB (PDGF-BB)**
Have been shown to stimulate the production of collagen and glycosaminoglycans by fibroblasts, and thereby may play an important role in the wound repair process. Attract neutrophils to wound site to remove contaminating bacteria.

**Vascular endothelial growth factor (VEGF)**
Assists wound healing by stimulating the process of forming new blood vessels known as angiogenesis.

**Basic Fibroblast Growth Factor (bFGF)**
Regulator of fibroblast and epithelial cell migration and assists in angiogenesis.

**Tissue Inhibitors of Metalloproteinases 1, 2, 4 (TIMP-1, TIMP-2, and TIMP-4)**
Help reulate extracellular matrix integrity and inhibit angiogenesis. Inhibits matrix metalloproteinases which are elevated in patients with dry eye and have been found in the tears of those patients with recurrent corneal erosions.

1.https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1772195/#r4