



FROZEN HAM FOR A WIDE RANGE OF MEDICAL INDICATIONS

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SUMMARY

The amniotic membrane (AM) is a relatively simply constructed tissue consisting of epithelium and stroma. However, it possesses unique characteristics and properties, which can be efficiently applied in many medical fields. For example, it does not express the HLA antigen, therefore being non-immunogenic and not rejected by recipient. Antimicrobial, anti-inflammatory, and antiangiogenic properties of AM have been demonstrated. The antifibroblastic activity helps to prevent scarring, an important property that has made the application of the AM so valuable in ophthalmology. In addition, AM stimulates cell migration and cell proliferation, contributing greatly to the wound healing processes. Growth promotion is mainly mediated by growth factors. The transplantation of amniotic membranes to the surface of the eye has been used in ophthalmology since 1940s (de Röth). Since then, the indications for amnion membrane transplantation (AMT) have been constantly expanded in ophthalmology.

Besides ophthalmology, distinctive properties of AM determine its application in a wide range of therapeutic approaches. As early as 1910, AM was described by Davis as skin transplant, shortly followed by works of Sabella and Stern (1913) with successful application for the treatment of burns. Since then, the use of AM has been described in numerous publications for the treatment of various pathologies, including gynecological, as well as oral and maxillofacial surgery.

Lately, amnion membranes can also be obtained from the DGFG in several sizes, suitable for various fields of application. For a consistent supply, the changes in biochemical and biomechanical properties of the AM are examined after multiple cryopreservation cycles.