2009 Research Days Abstract Form – Department of Ophthalmology – UNIFESP/EPM

2. SCIENTIFIC SECTION PREFERENCE (REQUIRED):

Review the Scientific Section Descriptions. Select and enter the two-letter Code for the one (1) Section best suited to review your abstract.

3. PRESENTATION PREFERENCE (REQUIRED) Check one:

☒ Paper
☐ Poster
☐ FAST Paper

4. The signature of the First (Presenting) Author (REQUIRED) acting as the authorized agent for all authors, hereby certifies that any research reported was conducted in compliance with the Declaration of Helsinki and the 'UNIFESP Ethical Committee"

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Scientific Section Descriptions (two-letter code):

(BE) OCULAR BIOENGINEERING
(CO) CORNEA AND EXTERNAL DISEASE
(CA) CATARACT
(EF) ELECTROPHYSIOLOGY
(EP) EPIDEMIOLOGY
(EX) EXPERIMENTAL SURGERY
(GL) GLAUCOMA
(LA) LABORATORY
(LS) LACRIMAL SYSTEM
(LV) LOW VISION
(NO) NEURO-OPHTHALMOLOGY
(OR) ORBIT
(PL) OCULAR PLASTIC SURGERY
(PH) PHARMACOLOGY
(RE) RETINA AND VITREOUS
(RS) REFRACTIVE SURGERY
(RX) REFRACTION-CONTACT LENSES
(ST) STRABISMUS
(TR) TRAUMA
(TU) TUMORS AND PATHOLOGY
(UV) UVEITIS
(US) OCULAR ULTRASOUND

Deadline: Oct 12, 2009

FORMAT:
Abstract should contain:
Title
Author, Co-authors (maximum 6), Purpose, Methods, Results, Conclusion.

Poster guidelines:
ARVO Abstract Book (1.10 x 1.70m)

1. FIRST (PRESENTING) AUTHOR (REQUIRED):
Must be the author listed first in abstract body.

( ) R1 ( ) R2 ( ) R3 ( ) PIBIC
( ) PG0 (X) PG1 ( ) Fellow ( ) Technician

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Service (Sector): CASO

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5. ABSTRACT (REQUIRED):

Growth Factors Dosage in Fresh and Preserved Amniotic Membrane in Different Media and at Different Temperatures

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Luís Vicente Rizzo

Purpose: There are different forms to preserve amniotic membrane. The purpose of this paper is to compare the concentration of different growth factors (EGF, NGF, FGF-b,FGF-4, TGF-B, HGF, IL-4, IL-10) in fresh and preserved amniotic membranes during different periods of storage at different temperatures in order to determine which type of preservation is better.

Methods: Eight amniotic membranes were retrieved from eight placentas of cesarean deliveries at term. Informed consent previously approved by the ethics committee of UNIFESP were obtained from the donors.

Each amniotic membrane was divided in seventeen pieces and preserved at saline solution 0,9% (1), DMSO 12%(8) and modified TC 199 preservation medium / glycerol (Ophthalmos) (8). One sample of each membrane in the saline solution was put in serum free and protein free hybridroma medium for 24 hours. The supernatant was retrieved and submitted to ELISA. After 24 hours preserved at -80º C and 0º C, one sample of each membrane was placed in serum free and protein free hybridroma medium for 24 hours. The supernatant was retrieved and submitted to ELISA. The procedure was repeated after being preserved at -80º C and 0º C for two months and for 6 months.

Results: EGF was undetectable in fresh membrane, so we couldn´t compare with the preserved samples. TGF-beta concentration decreased in 24 hours, 7 days, 2 months and become undetectable after 6 months. IL-4 showed low concentrations in fresh membrane, and concentration below detectable level in the preserved samples, but the ones preserved at Ophthalmos medium at -80º, the larger the interval, the smaller the concentration. HGF concentration decreased in all interval, but it decreased less in the membranes preserved at -80º at both medium (DMSO and Ophthalmos) compared with fresh membrane. IL-10 concentrations decreased throughout time of preservation, but it decreased less in membranes preserved at -80 at both medium, and has better results in the Ophthalmos medium. FGF-4 concentrations decreased in all periods of time but become undetectable after 2 and 6 months only at Ophthalmos medium, both at 0º and -80º. Basic FGF and KGF decreased in all medium in 24 hours, 7days, 2 months and 6 months.

Conclusion: It looks like that both preservation medium and both temperatures preserve well the amniotic membrane for at least two months. At 6 months most of the citokines are in a concentration below detectable level.

It seems that preservation at -80º C at Ophthalmos medium is slightly better that DMSO and at 0º C.