2007 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 sullied to review your abstract
RS

3. PRESENTATION PREFERENCE (REQUIRED) Check one (1)
(a) Paper
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4. The signature of the First (Presenting) Author, (REQUIRED) acting as the authorized agent for all authors, her eby certifies.
That any research reported was conducted in compliance with the Declaration of Heisinki and the 'UNIFESP Ethical Committee"

Hailton Barreiros Oliveira
Signature of First

Scientific Section Descriptions

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

Deadline: 29/10/2007

FORMAT:
Abstract should contain:
Title, Name of A uthors, Name of other authors (maximum 6), Purpose, Methods, Results, Conclusions.
Example: ARVO (1.10 x 1.70)
Abstract Book

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

( ) R1 ( ) R2 ( ) R3
(X) PG0 ( ) PG1 ( ) Estagiário ( ) Tecnólogo ( ) PIBIC

Oliveira_____Hailton_____Barreiros_____
Last Name First Middle

_____Refractive Surgery____ 937/04_____
Service (sector) Nº CEP

5. ABSTRACT (REQUIRED)

VEGF is Involved in bFGF-Induced Corneal Neovascularization

Hailton B. Oliveira, MD, Joel A. D. Javier , MD, Elias Jarade, MD, Jae Bum Lee, MD, PhD, Jin-Hong Chang, PhD, Dimitri T. Azar, MD

PURPOSE: To characterize bFGF induced VEGF production in corneal keratocytes in vivo and in vitro.

METHODS: Uniformly sized hydron pellets containing 80ng of bFGF, an d control pellets were surgically implanted into wild type (C57BL/6) mice corneas. The corneas were observed and photographed at 4 hours, 1, 4, 7, 10, 14 & 21 days post implantation, and the percentage of corneal surface occupied by new vessels was calcula ted using NIH image program. Wild - type mouse corneas implanted with control and bFGF containing pellets were harvested at 4 hours, 1, 4, 7, 10, 14, and 21 days after pellet implantation. The harvested wild type corneas were evaluated for the localization of CD-31 and VEGF using immuno -confocal microscopy. Immunolocalization of bFGF receptors on immortalized keratocytes cell line was visualized using immuno-confocal microscopy.

RESULTS: Neovascularization of the corneal stroma began on day 4 and was sust ained through day 21 following bFGF pellet implantation. In the corneal area adjacent to the limbus, the onset of VEGF stromal immunolocalization occurred 24 hours after bFGF pellet implantation and was maintained throughout the 21 day period. CD -31 localization lagged behind VEGF expression by approximately 4 day. In the more central zone (adjacent to the pellet), the onset of VEGF stromal immunolocalization occured at day 1 and peaked at days 4-7. The lag period of CD-31 expression in this zone was 2-5 days. bFGFreceptors expression were visualized in immortalized keratocytes cell line.

CONCLUSIONS: bFGF-induced corneal neovascularization mediated via a VEGF - dependent pathway. Keratocytes express VEGF via bFGF stimulation.