Turkish JMBB

invasion, local angiogenesis and recurrence after resection. A fully developed pterygium formed than "apex", "body" and "neck'. The exact pathogenesis and etiology of pterygium remains unclear, although it is generally considered to be caused by ultraviolet (UV) radiation, epithelial-mesenchymal transition (EMT), immunologic and anti-apoptotic mechanisms, angiogenic and lymphangiogenic stimulation, deregulation of extracellular matrix modulators and growth factors. EMT is critical in both developmental processes, wound healing and tissue remodeling, and tumor metastasis. E-cadherin is epithelial-mesenchymal transition (EMT)-related molecules. Ecadherin and β-catenin localised with at the sites of cell-to-cell contact. Connexins oligomerise into hexameric channels that form gap junctions and connect the cytoplasm of adjacent cells. Many connexin that have been identified, appear in different cells and tissues. One of them is connexin 43 (CX43). Connexin 43 have been shown that, it play an important role in carcinogenesis and tumor metastasis. In this context, we intend to find that, whether there is a function of CX43 gene expression, in the development of the pterygium disease. **Materials and Methods:** This study, the 11 pterygium and normal conjuctive tissues received surgical excisions. The CX43 gene expression were examined with reverse-transcription polymerase chain reaction (RT-PCR) method. SPSS16.0 program was performed using for statistical analysis. The CX43 gene was normalized to the actin gene and the 2-ΔΔCt formula was calculated. **Results (quantitative and / or statistical data):** CX43 gene expression was higher than in the compared to actin in the 2^-ΔΔCT method. But, statistical evaluation of the data results showed that, expression levels of CX43 gene were not significantly different between pterygium tissue and normal conjunctiva (p> 0.05).**Conclusions:** According to our data, CX43 gene expression don't play a role in determining susceptibility to pterygium tissue. Thiş work was acceptanced by Gaziosmanpaşa University the Ethics Committee for Clinical Investigations. Project numbers: 14-KAEK-229.

Key Words: Connexin 43, Gene Expression, Pterygium

Note to Science Committee :This work was supported by Gaziosmanpasa University Scien-tific Research Projects Fund. Project numbers: 2015/26.

Abstract no.: PP-9

Expression Profiles of Spermatoza Surface Proteins Thought to be Responsible For Fertility

Gül İpek GÜNDOĞAN[1] , Abit AKTAŞ[2] , M. Başak Ulkay[2]

[1]Istanbul Yeni Yuzyıl University, Faculty of Medicine, Department of Histology and Embryology, Zeytinburnu, Istanbul - TURKEY

[2]Istanbul University, Faculty of Veterinary Medicine, Department of Histology and Embryology,TR-34320 Avcılar, Istanbul - TURKEY

Abstract: Spermatozoas at developing stages obtained from testis and 3 different regions of epididymis. Determination of existence and localisation of Fertilin-β, Calmegin, Izumo-1, P34H, ACE and Fibronectin were analyzed quantatively via their protein expression profiles by western blotting technique and indirect immunofluorescence technique. Localisation changes of ram spermatozoa during development and maturation have been determined and also ejaculate and structural features of freezed-thawed ram spermatozoas with and without in vitro capacitation/acrosome reaction also been evaluated. Fertilin-β, Calmegin, P34H proteins in caput, corpus, cauda and mature spermatozoas showed marking in different density and distrubition with. Freezed-thawed samples had lower density and marking than both ejaculate and cauda samples. Marking was not obtained except Izumo-1 protein from the samples undergo in vitro capatitation/acrosome reaction. Marking of Izumo-1 protein was seen as increasing band formation through equatorial region on acrosome, after in vitro capacitation, however after acrosome reaction, the band formation was only equatorial region. In contrast to expected marking on spermatozoa head, non specific marking was obtained on different localization changing with the region in fibronectin antibody and samples. ACE antibody did not mark the samples. Region specific differences of proteins at kDa level were obtained with western blotting and possible isoforms specific to ram spermatozoa or proteins with similar epitops were marked.

Keywords: Surface protein, Spematozoa, Ram

Istanbul University Animal Experiments Local Ethics Committee's approval number: 2015/43

Note to the Scientific Committee: *The present work was supported by the Research Fund of Istanbul University. Project No. 47033*

Abstract no.: PP-10

Development of Theranostic PNIPAM/SPION Nanoparticles for Cancer Treatment

Yunus Akkoc[1],Yasemin Yar[2], Rouhollah Khodadust[2], Devrim Gozuacik[1,3], H. Yagci Acar[2,3]

[1]Department of Molecular Biology Genetics and Bioengineering, Faculty of Engineering and Natural Science, Sabanci University, İstanbul, Turkey

[2]Koc University, Graduate School of Materials Science and Engineering, Rumelifeneri Yolu, Sarıyer, Istanbul, Turkey

[3]Sabanci University, Center of Excellence for Functional Surfaces and Interfaces for Nano Diagnostics (EFSUN), Istanbul 34956, Turkey

Backround/Aim: Stimuli-responsive nanoparticles are being investigated for controlled delivery of toxic drugs to the disease site, especially in cancer. Tumors are known as more acidic and hypertermic in comparison with healthy body parts. Thus, pH and/or temperature-responsive drug delivery vehicles have a tremendous importance in achieving secure delivery and secretion of the cargo chemotherapeutic drug only to the tumor site to enhance the efficacy and reduce side effects. **Materials & Methods:** In this study, Poly (N-isopropylacrylamide) (PNIPAM) bound Fe3O4 nanoparticles (SPION-PNIPAM) were synthesized via surface initiated ATRP (atom transfer radical polymerization) and loaded with chemotherapeutic drug Doxorubicin (Dox). We performed MTT and Trypan Blue Exclusion Assay to evaluate dose and temperature dependent cell viability exposed to Dox, nanoparticles and Dox loaded nanoparticles. Confocal analysis was carried out to observe cellular uptake and intracellular trafficking of NPs. Gamma-H2AX phosphorylation, p53 and Caspase activation were examined through