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that it presents a putative LC3II-interacting domain "similar to ATG3", we are interested in determining the cytoplasmic role of c-Fos in regulating autophagy and its importance in the biology of glioblastomas.

A60
EFFECT OF STEROID HORMONES ON THE MIGRATION OF BOVINE OVIDUCTAL EPITHELIAL CELLS

Vella MA[1,2], García DC[1,3], Valdecantos PA[1], Roldán-Olarte M[1,2]
[1]FBQF-UNT. [2]INSIBIO-CONICET-UNT. S.M. de Tucumán. [3]Univ. de Santiago del Estero (UNSE). E-mail: mvella22.mv@gmail.com

Hormonal fluctuations throughout the estrous cycle influence gene expression and morphological changes associated with fertility. The oviduct, an organ the female reproductive system, responds to the action of sex hormones. The oviductal epithelium undergoes changes throughout the estrous cycle, which contribute to the generation of an optimal environment for fertilization and early embryo development. The epithelial cells of the oviduct are exposed to different factors that affect their integrity, such as components of the follicular fluid after ovulation or reactive oxygen species. Nevertheless, their regenerative capacity is important to maintain an adequate oviductal microenvironment. The steroid hormones, estrogen (E_2) and progesterone (P_4) regulate the activities of epithelial cells, such as proliferation, migration, apoptosis, and differentiation. The objective of this work was to evaluate the in vitro effect of E2 and P4 on the migration of bovine oviductal epithelial cells (BOEC) and to analyze the expression level of the focal adhesion kinase (*PTK2*) and paxillin (*PXN*) genes in BOEC cultures under different hormonal conditions. The cells were obtained by mechanical pressure from oviducts of heifers in the preovulatory stage. Monolayers and explants cultures were obtained and stimulated with different combinations of E_2 and P_4: (a) without hormones; (b) ethanol (vehicle); (c) E_2: 290 pg/mL; P_4: 6 ng/mL; (d) E_2: 86 pg/mL; P_4: 120 ng/mL; (e) E_2: 290 pg/mL; and (f) P_4: 120 ng/mL. By means of wound healing assays, the migratory capacity of BOEC was evaluated in the monolayer cultures at 6, 12, and 24 h. The results obtained indicated that high doses of P_4 inhibit the BOEC migration, while no effect on cell migration was observed in BOEC supplemented with a high E_2 concentration. The presence of *PTK2* and *PXN* transcripts was evaluated by semiquantitative RT-PCR in the explants BOEC cultures under the hormonal conditions previously mentioned during 24 h. High concentrations of E_2 did not affect the expression level of both *PTK2* and *PXN* genes, while P_4 inhibited their expression. In conclusion, P_4 affects the BOEC migration in vitro, possibly through the downregulation of *PTK2* and *PXN* genes involved in this biological process.

REPRODUCTIVE AND DEVELOPMENTAL BIOLOGY

A61
CHANGES IN N-ACETYLGLUCOSAMINE CONTENT ASSOCIATED WITH CAPACITATION AND CHEMOTAXIS IN PORCINE SPERMATOZOA

Diana A[3], Buttazzoni A[2], Sosa MA [1,2], Vieira L[3], Aguilera AC [1,2]
[1]Facultad de Ciencias Médicas, Universidad Nacional de Cuyo. CONICET. Mendoza, Argentina. [2]Facultad de Ciencias Exactas y Naturales, Universidad Nacional de Cuyo. Mendoza, Argentina. [3]Departamento de Fisiología, Facultad de Veterinaria, Universidad de Murcia, España.
E-mail: caguilera@mendoza-conicet.gob.ar

In mammals, only a small number of ejaculated spermatozoa (SPZ) reach the region of the oviduct (ampulla) after the copula, where they encounter and fertilize the egg. It has been suggested that a sperm subpopulation is selected during their transit trough the female genital tract, so that only those with high fertilizing capability and the best skills for supporting embryo development can fertilize the egg. Fluids of the female genital tract, such as the follicular (FF), the oviductal fluid (OF), and the secretion of cumulus-oocyte complex (COCs), could promote the SPZ chemotaxis to the fertilization site. Progesterone (P4) is considered as an effective chemoattractant in most mammalian species, though other components of the fluids could attract SPZ even more efficiently. In the present study, we evaluated possible changes in carbohydrate composition of sperm surface after capacitation and chemotaxis. For this, we determined the content of N-acetyl-glucosamine (NAG) in porcine SPZ after the mentioned processes by using WGA-FITC lectin and flow cytometry. We observed that NAG content was significantly higher in the capacitated SPZ (30 min in capacitation media TALP, at 38.5ºC and with 5% CO_2) compared to fresh SPZ or SPZ stored in BTS (diluent media). For the chemotaxis assays, OF and FF collected from prepubertal gilts (OF0 and FF0) and periovulatory phase (OF2 and FF2) were used as chemoattractants. Six wells were filled with fresh spermatozoa (20×10^6/mL) from fertile boars (N = 3) selected in a discontinuous percoll gradient and immediately transferred to TALP, previously equilibrated at 38.5ºC and 5% CO_2. The opposite wells of the chemotaxis chamber (six) were filled with TALP (control group) or TALP supplemented with the chemoattractants as indicated: (1) TALP (control), (2) FF0 (1.25%), (3) FF2 (1.25%), (4) OF0 (1.25%), (5) OF2 (1.25%), (6) P4 (28.3 pM). After 20 min at 38.5ºC and 5% CO_2, the SPZ from the opposite wells were rescued, processed for NAG detection and analyzed by flow cytometry. We observed that NAG content was significantly lower in the SPZ obtained from the groups 3 and 6 compared to the control group or the original SPZ ($P < 0.05$). These preliminary results suggest that FF2 and P4 can selectively attract a SPZ subpopulation with low content of NAG in the plasma membrane under the *in-vitro* conditions.