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ABSTRACTS BOOK

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EFFECTS OF A HIGH FAT DIET ON MALE NEW ZEALAND RABBITS PRO/PROSTATE

Colombo R[1], Funes A[1], Boarelli P [1 3], Monclus M [1 2 4], Conte MI [1 2], Crescitelli J [4], Cortese L[4], Saez Lancelotti T [1 2 4], Fornes M [1]. 1 Laboratorio de Investigaciones Andrológicas de Mendoza (LIAM), IHEM, CCT CONICET- Mendoza; 2Área de Histología y Embriología, Fc. Cs. Médicas, Universidad Nacional de Cuyo. 3 Laboratorio de Enfermedades Metabólicas (LEM), Universidad Maza. 4 Consejo de Investigaciones de la Universidad del Aconcagua (CIUDA), Universidad del Aconcagua. e-mail: abikarenina@yahoo.com.ar

The addition of fat to the normal diet of adult male rabbits leads to hypercholesterolemia (HC) with multi organ / systemic consequences and it is associated with seminal and spermatic changes. HC was related to decrease seminal volume and morphological and functional sperm disorders. The first could be attributed to changes in sexual glands physiology. The aim of this study was to analyze prostatic histology and quantify the content of prostatic acid phosphatase in seminal plasma of male rabbits - under different diets - and their testosterone levels. New Zealand White rabbits were fed commercial rabbit pellet (normocholesterolemic rabbits: NCR), plus 14% bovine fat (HCR) or 7% bovine fat plus 7% olive oil (OO) (½HCR + ½OO). In HCR, prostate epithelium height and pro prostate villi length significant decreased ($p<0.05$) compared to NCR. Only pro prostate villi length was recovered in ½HCR + ½OO. Therefore, cholesterol intake affects mainly pro prostate villi and prostate epithelium. Prostatic acid phosphatase and testosterone did not show changes in their levels at three months of experimental diets. In conclusion, high fat diet promotes prostatic epithelial modifications at three months of fat diet but this impact at the functional level has not been detected yet as a fall in phosphatase or testosterone levels.

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CHARACTERIZATION OF MEPC5 CELLS (MOUSE EPIDIDYMIS PROXIMAL CAPUT 5) AS A MODEL FOR THE STUDY OF EPIDIDYMAL EXPRESSION OF PEDF (PIGMENT EPITHELIUM DERIVED FACTOR)

Conte MI[1], Funes A[1], Colombo R[1], Saez Lancellotti TE[1,2,3], López ME[2], Tagle Delgado M[3], Vincenti AE[1], Fornes MW[1,2,3], Monclus MA[1,2,3] IHEM, Universidad Nacional de CUYO, CONICET[1], Área de Histología y Embriología, Fac. de Cs. Médicas, UNCUYO, CIUDA, Universidad del Aconcagua[3].Email: marinesconte@gmail.com

Serpine 1F, also known as pigment epithelium-derived factor (PEDF), is a glycoprotein that belongs to the serine proteases family initially found in retina. PEDF is widely spread in different mammalian tissues. It has functions in cell survival and repair, as an antioxidant, antiapoptotic and antiangiogenic factor antagonizing VEGF (Vascular Endothelial Growth Factor). There are many antecedents regarding PEDF role in female reproductive tract as an antioxidant and anti-apoptotic factor protecting the ovarian granulosa cells. Recently, it has begun its study in physiological and pathological situations in male reproductive system. Our laboratory recently described PEDF expression and androgen-dependency in the male tract of Wistar rats. In this species, PEDF is expressed mainly in epididymis, seminal vesicles and prostate, but notably, not in testes. We extended the study to an in vivo model (C57bl/6 wild type mice) and also in a cell culture model (MEPC5 cells obtained and immortalized from C57bl/6 mice). MEPC5 cells showed PEDF, P21 and Estrogen receptor alpha (ER α) expression by immunocytochemistry. Androgen receptor (AR), VEGF (a known PEDF antagonist), were also detected by western blot and indirect immunofluorescence (IFI). In mouse tissues, we observed PEDF expression over testicular peritubular cells as it was described previously in human and primates but no in rats. These results will foster the development of new lines of research to characterize the functional role of PEDF in the reproductive tract of rodents.

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DEXAMETHASONE MODIFIES OVARIAN STEROIDOGENESIS RESPONSE IN RATS WITH POLYCYSTIC OVARY

Figueroa MF, Mendoza GV, Marchini ML, Navarro P, Forneris ML.
Lab. Biol. Reprod (LABIR). Fac. Qca. Bqca y Fcia (UNSL). Ejército de los Andes 950. San Luis, Argentina.
E-mail: mfigueroa@unsl.edu.ar

Polycystic ovary syndrome (PCOS) is a common endocrine disorder of women, characterized by an heterogeneous presentation of hyperandrogenism and ovulatory dysfunction. Several lines of evidence indicate that the systemic low-grade inflammation compromises multiple aspects of fertility in PCOS. In vitro studies suggest that pro-inflammatory stimuli may be capable of directly inducing hyperandrogenism in PCOS. Treatment options include dexamethasone (Dexa). Despite their therapeutic efficacy in modulating pain and inflammation, their influence on reproductive disturbance associated with PCOS is still under discussion. The study was carried out to investigate, in a PCOS-induced rat model, if Dexa affects ovarian progesterone (P), estradiol (E2) and nitric oxide (NO) release, and its relationship with enzymes and cytokines involved in ovarian steroidogenesis. Polycystic ovary condition (PCO) was induced in adult female Holtzman rats via i.m injection of estradiol valerate (2 mg/rat). PCO ovaries were incubated with RPMI medium (basal value), dex (10^{-6}M), androstenediona (A2; 10^{-6}M) or Dexa+A2, for 6h in metabolic bath. The P and E2 release were measured by electrochemiluminescence (Cobas e411), while NO (as nitrites) were