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A104
EXPRESSION OF GIP RECEPTOR IN THE BOVINE CUMULUS OOCYTE COMPLEX.

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The glucose-dependent insulinotropic polypeptide (GIP) is a hormone released by the duodenum. In ruminants, GIP concentration increases when the energy balance changes from negative to positive. In cattle, GIP decreases the rate of lipolysis in subcutaneous adipose tissue and plays an important role in the regulation of the energy use (energy partition). So far, there are not studies linking GIP with reproductive function. Until now, it has not been demonstrated the presence of GIP receptor in bovine reproductive tissues. The aim of this study was to investigate the mRNA expression of GIP receptor in bovine cumulus oocyte complex (COC). Oocyte-cumulus complex were aspirated from bovine ovaries. The presence of GIP receptor in the bovine COC was evaluated by PCR. We demonstrated that GIP receptor was expressed in the immature COCs bovine.These data strongly suggest that GIP may have a potential regulatory action in the control of oocyte maturation.

A105
A PROANGIOGENIC FACTOR IMPROVES GAMMA-SECRETASE INHIBITOR ANTITUMORAL EFFECT IN OVARIAN CANCER XENOGRAFTS.

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Notch and PDGF systems are involved in angiogenic process in physiological and pathological conditions. Here, we developed tumours in nude mice injecting an epithelial ovarian tumour cell line. SKOV3 cells (1.10^6cells in 100 µl) were inoculated subcutaneously into one flank of 6-10 week-old female nude mice. When the tumours were palpable, the mice were divided in three groups that received 1. Control, 2. DAPT (5mg/kg gamma-secretasa inhibitor), and 3. DAPT+PDGFB (0,1mg/kg). The treatments were administered during four consecutive days (day 1-4). At day 8, the animals were sacrificed and we determined: a. mice and tumour weight, b. tumour area, c. pericyte area and d. phosphor-AKT and PCNA (cell proliferation marker). Mice weight did not change between treatments. Tumour weight significantly decreased when PDGFB was co-administered with DAPT compared to Control group, but no differences were found between Control and DAPT treatments. Tumour area decreased with DAPT but not statistically different respect to Control. Interestingly, the co-treatment completely abolished the tumour growth, being the difference highly significant on days 7 and 8 post treatment. Similarly, the periendothelial area increased with PDGFB and DAPT administration. PCNA levels were significantly decreased in DAPT+PDGF group, but phosphorylated AKT did not change between groups. We conclude that PDGFB improves the antitumoral effect of gamma secretasa inhibitor, in part, recruiting periendothelial cells, stabilizing tumour vasculture, and thus, allowing the inhibitor to better reach the tumour and exert its antiproliferative effect.

A106
PARTICIPATION OF LDH IN CAPACITATION AND ACROSOME REACTION IN PORCINE SPERM.

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The aim of this study was to determine the activity of lactate dehydrogenase (LDH; 1.1.1.27) and evaluate its participation in capacitation and acrosome reaction (AR) in porcine spermatozoa. The activity of LDH was determined spectrophotometrically at 340 nm, during 3 minutes, at 37°C. Enzyme unit (U) was defined as the amount of LDH that catalyzes the oxidation of 1 µmol of NADH/min. Capacitation and AR were determined, in the presence or absence of oxamate (competitive inhibitor of LDH; 10, 25 and 50 mM), by CTC technique and trypan blue combined with DIC,

respectively. Sperm viability was evaluated by the eosin-nigrosin technique and motility was evaluated by optic microscopy, with a thermal stage. Enzyme activity and capacitation and AR percentages were analysed by ANOVA and Bonferroni test. The activity of LDH was 3,40±1,21 $U/10^{10}$ sperrmatozoa and the specific activity was 5,02±1,66 U per mg protein. Capacitation and AR were significantly diminished by the addition of 50 mM and 25mM of oxamate, respectively without affecting sperm viability. Our results demonstrate the activity of LDH and its participation in capacitation and AR in porcine spermatozoa, indicating the importance of the fermentative pathway in these processes.