

intracytoplasmic sperm injection (ICSI) after rehydration. Several studies have shown the beneficial effect of antioxidant therapy on oxidative stress in mammalian spermatozoa. The rosemary, and in particular the rosmarinic acid (RA) has a beneficial effect on post-thaw sperm parameters providing protection against oxidative stress during cryopreservation. The aim of this study was to evaluate the effect of RA added to rehydration solution on sperm DNA integrity and the in vitro development of IVM ovine oocytes after ICSI using freeze-dried (FD) ram sperm. Ejaculated sperm from three ram of Rasa Aragonesa were FD in a medium containing: NaCl 50 mM + TRIS-HCl 10 mM + EGTA 50 mM and stored for 1 year at 4°C. Samples were rehydrated by adding 150 µl of Milli-Q water (control) or 150 µl of RA solution (105 µM) and subjected to DNA damage detection using the Sperm Halomax kit. All data obtained from this study were compared by a chi-square test by using SSPS version 17.0 for Windows. It was found that the level of DNA integrity was significantly ($p = 0.02$) higher when samples were rehydrated with AR solution (99.7%) than those with water (97.4%). There were no significant differences between FD sperm and frozen-thawed sperm (control) on the blastocyst formation rates when ICSI was performed. These results suggest that the rehydration of FD ram sperm with RA solution improves sperm DNA integrity and embryos can be obtained by ICSI from these sperm samples. (Supported by DGA (Fondo Social Europeo))

P 180 | Corpus luteum of the European elk *Alces alces*

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In order to assess the state of the Polish population of elk, a limited hunting has been carried out in the program „Strategy of preservation and management of the elk population in Poland”. Obtained animals have been examined and among others information regarding their reproduction abilities has been collected. Corpus luteum from 16 pregnant elk females (age 4–18 years) have been analyzed. Analysis included shape, size, vascularization and localization of large luteal cells (LLC) small luteal cells (SLC) and connective tissue. LLC cells were the majority of the cells of the corpus luteum. These cells are large, oval or polygonal with foamy cytoplasm. The nucleus is large and oval, is located in the cell marginally, nucleoli are usually several (2–3). SLC cells are localized mainly on the edges of corpus luteum, under the connective tissue capsule. SLC are also located near the connective tissue straps that penetrates deep into the corpus luteum. SLC cells are smaller than LLC cells and its shape is irregular. The nucleus is oval or cup-shaped, have a few nucleoli arranged on the edge of the nucleus. Clusters of connective tissue in the middle of the corpus luteum are not very clear. LLC cells are arranged randomly in relation to the clusters. Larger vessels, mainly veins are located subcapsular, on the edges of the corpus luteum. Such studies

are pioneering and in the future may help in more accurate assessment of the reproductive capacity of wild animals threatened with extinction.

P 181 | Effect of ovarian status at the beginning of 17β-estradiol plus progesterone protocol on follicular dynamic in ewes

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This study was designed to evaluate the effect of ovarian status at the beginning of the 17β-estradiol plus progesterone (P4) protocol on follicular dynamic in ewes. In a random day of the estrous cycle (D0), twenty-four Santa Ines ewes received a P4 device (CIDR[®]) and an injection of 17β-estradiol (Sincrodiol[®]) in different doses (350, 500 or 1000 µg). The transrectal ultrasound examinations were performed daily during the CIDR permanence (10 days) using MyLab 30Vet equipment (Esaote, Italy). Data were analyzed by ANOVA with Tukey test (mean ± SEM; $p < 0.05$) using SAS software. Half of the animals (G1) had corpus luteum and large follicles (LF: 4.0–5.75 mm of diameter) in the ovaries while other half had no CL and had LF (G2). Initially, the largest follicles present in the ovaries showed a growing period (G1: 24.0 ± 0.0 and G2: 44.0 ± 7.4 h, $p = 0.06$) and then an atresia period (G1: 84.0 ± 10.4 and G2: 96.2 ± 6.5 h, $p = 0.34$). There was no difference ($p > 0.05$) for emergence day of the new follicular wave (G1: 4.0 ± 0.4 and G2: 4.1 ± 0.6 day), maximum diameter of the largest follicle of this wave (G1: 5.6 ± 0.2 and G2: 5.3 ± 0.2 mm), maximum diameter day (G1: 9.3 ± 0.4 and G2: 9.0 ± 0.4 day) and growth duration (G1: 128.0 ± 8.0 and G2: 116.6 ± 9.7 h). In conclusion, it was possible to confirm that regardless of the presence or absence of the CL at the beginning of the 17β-estradiol plus P4 protocol the ewes showed similar follicular dynamics. (Financial support: CNPq and FAPESP)

P 182 | Effect of a late pregnancy diet supplemented with hydrolyzed yeast on sow colostrum yield and its composition

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The aim of this study was to examine whether yeast derivative (YD) based on brewery yeast hydrolysate added to a late pregnancy diet affected colostrum composition and yield (CY) in sows. 37 sows were randomly allocated to two groups as follows: a negative control diet ($n = 19$) and the same diet supplemented with 3.5 g YD/kg ($n = 18$) during the last 3 weeks of pregnancy. The YD used was Progut[®]