



PW1406 - Prediction of bovine embryos survival or death at early cleavage stages

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Embryo in vitro production (IVP) represents an important tool for livestock and genetic breeding. However, studies are still necessary in order to improve in vitro culture systems and increase the prediction of viable embryos. It is expected that embryos with early cleavage would present higher chance to develop into blastocyst. Based on that observation, it is interest to assess development at the early stages and combine data in order to predict their viability, and later support the decision of transferring the embryos or not in commercial sectors. This study aimed to assess the probability of bovine embryos to develop into blastocyst based on their kinetics of development at 48hpi (D2) and 120hpi (D5). Oocytes from slaughterhouse ovaries were matured in vitro using commercial IVM medium (Bioklone®, Animal Reproduction, São Paulo, Brazil), for 24 hours, at 38.5°C, 5% CO₂ in air and maximum humidity. After IVM, oocytes were fertilized in FERT-TALP medium (Bioklone®, Animal Reproduction, São Paulo, Brazil) for 20 hours under the same conditions. The embryos were produced in individual culture system which did not affect embryo development neither blastocyst rate (FAPERJ 211450), in SOF medium at 38,5°C in 5% CO₂ in air and maximum humidity until 168h.p.i. (D7). Each embryo was assessed at D2, D5 and D7 of development. Percentages were compared using Fisher's. Exact test between groups ($p=0.05$), in Instat Graphpad Software. A total of 117 embryos were assessed, obtained from 5 repetitions, with blastocyst rate of 29.6%. In D2 evaluation, we observed that 2-cell embryos (20.6%) had lower chance than 8-cell embryos (48.7%) to reach the blastocysts stage at D7. Also, 2-cell embryos (75.9%) had less chance than the embryos with 4-cell (52.3%) and 8-cell (33.3%). At D5, it was found that the 8-cell embryos (21.2%) had less chance to form blastocysts on Day 7 (53.8%) and morulas (72%) to form blastocysts in D7. Also, 8-cell embryos (54.5%) had an increased chance of arresting. Still in D5 evaluation, no difference was found in chance of arresting at D7 between 16-cell embryos (26.9%) and morulas (20%). Therefore, we conclude that embryos with faster kinetics at D2 and D5 are the most likely to reach the blastocyst stage and survive. So, it is possible to determine the changes of survival or death of bovine embryos produced in vitro at an earlier stages of development (D2).

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Keywords: individual culture; embryo development; bovine; in vitro fertilization

PW1407 - Expression and regulation of calbindin-d9k by steroid hormones in the rat brainstem

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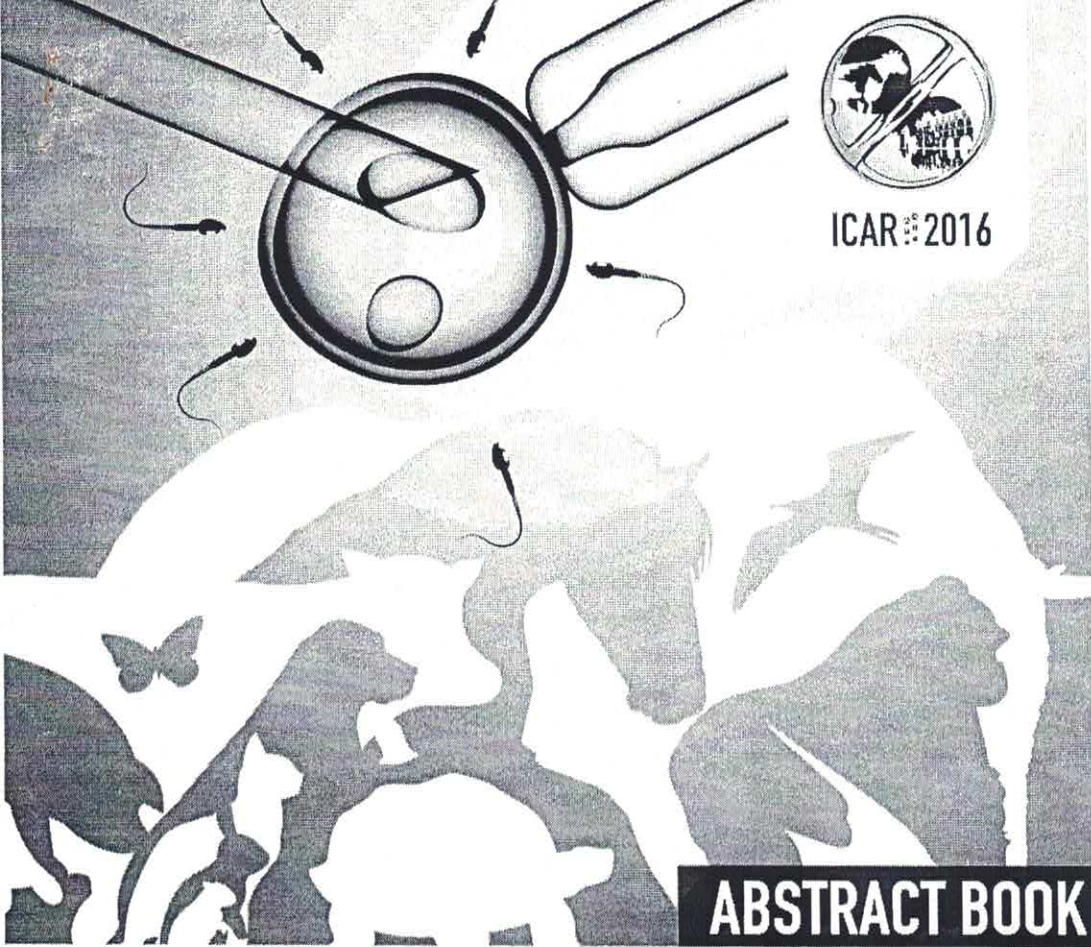
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Calbindin-D9k (CaBP-9k) is a 9-kDa polypeptide that is expressed in the mammalian intestine, uterus, and pituitary gland. The protein increases Ca²⁺ absorption by buffering Ca²⁺ in the cytoplasm. The factors that regulates of the expression of the estrogen receptor (ER) and CaBP-9k in the brainstem are currently unknown. In this study, we investigated the expression of CaBP-9k in brainstem and whether the CaBP-9k were regulated by steroid hormones which known as the regulator of CaBP-9k in other tissues. Induction of CaBP-9k expression may be associated with protection from cell death. CaBP-9k appears to interact with p53, suggesting a possible role for this interaction in cell proliferation and cell cycle progression. Rat CaBP-9k expression in the rat brainstem were increased in an age dependent manner. To investigate the effect of steroid hormone to the brainstem CaBP-9k expression, we performed Ovariectomy and Orchiectomy. By eliminating the steroid producing organ, male and female CaBP-9k expression in brainstem were decreased,



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