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Effect of IVM Medium and Protein Source on *In Vitro* Maturation of Canine Oocytes

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This study was conducted to determine the ability of nuclear development of canine oocytes depend on the kind of maturation media and addition of serum sources. Ovaries were collected from a bitches at various stages of estrus cycle by an ovariohysterectomy. Oocytes were collected of cumulus oocytes complexes after slicing of ovaries with blade. The maturation medium was containing 0.6 mM/ml cysteine, 0.2 mM pyruvic acid, 20 ng/ml E_2 and 1 ㎍/ml /bST. Exp. 1, the oocytes were matured in four different maturation medium as follows: 1) TCM-199, 2) DMEM, 3) NCSU37 and 4) modified-NCSU37 with 10% FBS. Exp. 2: the oocytes were matured in mNCSU37 supplemented with different protein sources (10% FBS, 10% EDS, 0.3% BSA and 0.1% PVA) to select the optimal one. Oocytes were matured in a humidified atmosphere containing 5% CO_2 at 39℃ for 72 hrs. The maturation rate were analyzed by Duncan's multiple range test using General Linear Models procedure in SAS.

The rates of meiotic resumption to MI-MII depend on different culture media were achieved with TCM-199 (5.2%), DMEM (5.0%), NCSU37 (7.2%) and m-NCSU37 (5.9%), respectively. The rates of meiotic resumption to MI-MII according to addition of protein source were 10% FBS (13.3%), 10% EDS (25.0%), 0.3% BSA (25.0%) and 0.1% PVA (15.4%), respectively. In conclusion, the results obtained showed that *in vitro* maturation media and protein supplement to m-NCSU37 culture medium tested did not promote the final steps of IVM in canine oocytes.

Key words) *Canine, Oocyte, In vitro maturation Medium*