

***In vitro* production of embryos in South American Camelids**

Marcelo Miragaya DVM, M.Sc., Ph.D.

In vitro production of embryos demands a large quantity of oocytes capable of being fertilized. The methods used to obtain COC's are: aspiration or dissection of follicles from slaughterhouse ovaries, aspiration of follicles surgically exposed during a laparotomy or ultrasound-guided transvaginal aspiration of follicles after ovarian superstimulation. Using slaughterhouse ovaries has the advantage of providing a large quantity of oocytes, but the main disadvantage is that it requires them to be *in vitro* matured (IVM) and the results with this technique are still very variable. The techniques for IVP include: IVF and ICSI. Our group has obtained for the first time embryos produced *in vitro* that developed to the expanded blastocyst stage. The techniques for preparing semen for use in *in vitro* embryo production need to recover a high percentage of motile spermatozoa, with normal morphology, free from cell debris and dead spermatozoa. In our laboratory, embryos have been produced by IVF and ICSI using ejaculates incubated in a solution of 1 mg/ml collagenase in TALP. More studies are necessary to optimize sperm selection techniques in SAC and in defining the optimum media conditions for the *in vitro* culture of the embryos produced and their use in obtaining pregnancies in llamas.