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Cairo University
Faculty of Veterinary Medicine
Department of Theriogenology

*In Vitro Maturation and fertilization
of Camel oocytes*

Thesis presented
by
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(B.V. Sc. 2000; Cairo University)

for
M.V. Sc.
(Theriogenology)

Under Supervision

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قَالُوا سُبْحَنَكَ لَا عِلْمَ لَنَا إِلَّا مَا عَلَّمْتَنَا إِنَّكَ

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صدق الله العظيم

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To Whom I Love

FATHER, MOTHER,

BROTHER, SISTER

Cairo University

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Abstract

A total number of 1225 ovaries of pregnant and non-pregnant dromedary camels slaughtered at Cairo and Giza slaughter houses were collected during the period between March 2003 and April 2004. The oocytes were aspirated from 2-6 mm follicles. The oocytes were classified into 4 grades, then cultured in TCM-199 + 10% FCS for 24, 30, 36 or 48 hours. Mature oocytes were inseminated with caffeine (5mM) capacitated epididymal spermatozoa at concentration of 1, 2, 3 or 4×10^6 sperm cell / ml. Presumptive zygotes were cultured in H-TCM-199 at 39°C in 5% CO_2 for 9 days. The results indicated that, gravid organs resulted in significantly lower ($P < 0.05$) oocyte yield, quality and maturation rate than non-gravid organs. Collection of oocytes during autumn and winter significantly increase the percentage of selected oocytes and maturation rate than spring and summer. Maturation rate of camel oocytes was highest (72.30%) for 36 hours culture period. The fertilization rate was highest (29.68%) for oocytes inseminated with caffeine capacitated camel epididymal spermatozoa at 2×10^6 sperm cell /ml in BSA containing F-TALP medium. The cleavage of camel oocytes up to 16 cell stage was noted 18 to 24 hours after IVF, while the morula and blastocyst stages began to appear after 4 and 5 days, respectively.

Key words : Camel, Oocyte, IVM, Epididymis, IVF, IVC

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