إستخدام السونار فى دراسة ميكانيزم نمو الجريبات فى الجاموس تحت بعض أنظمة التحكم بالشبق

رسالة علميه

مقدمة إلى الدراسات العليا بكلية الطب البيطرى- جامعة الاسكندريه

إستيفاء للدراسات المقرره للحصول على درجه

ماجستير العلوم الطبيه البيطريه

فى

التوليد والتناسل والتلقيح الاصطناعى

مقدمه من

ط.ب/ وليد رفعت حسن محمود

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Dedication

This work is dedicated to my parents, wife, brother and sisters without their patience, understanding support and most of all love, the completion of this work not have been possible.

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Introduction

Buffaloes in Egypt are considered as one of the most valuable animal species in regards to its milk production of high fat concentration beside the palatability of its meat.

The productivity of female buffaloes is essentially affected by the animal's reproductive efficiency, which is, in turn, impaired by the late maturity of females, poor estrus expression, longer intercalving intervals, and reduced ovarian activity during hot season **(Jainudeen and Hafez, 1993; Madan, Das and Palta, 1996 and Singh, Nanda and Adams, 2000)**. In addition, the poor estrus detection (30-40%) (**Singh, Singh, Sharma and Sharma, 1984 and Barkawi, Bedeir and El Wardani, 1993)**, the variable duration of estrus (4-64 h) and the difficulty encountered in predicting the time of ovulation (**Ohashi, 1994 and Baruselli, Bernandes, Barufi, Braga, Araujo and Tonathi, 2001)**.

The low reproduction potential of the buffalo has been a major concern for decades, but recently protocols have been developed that are able to precisely control the time of ovulation and thus avoid the need of estrus detection. For the successful application of a synchronization protocol, clear knowledge of the hormonal regulation of the estrous cycle and follicular dynamics are required (**De Rensis and Lopez-Gatius, 2007**).

The mechanisms that control follicular dynamics during the estrous cycle need to be better understood in order to optimize buffalo reproduction. Also, the physiological control of recruitment, selection, growth, dominance and atresia of ovarian follicles in buffalo are not well understood and reports are conflicting (**Baruselli, Mucciolo, Visintin, Viana, Arruda, Madureira, Oliveira and Molero-Filho**, **1997)**.

For successful breeding of buffalo using reproductive biotechnology, further study of the physiology of buffalo ovaries is needed to establish successful procedures such as artificial insemination and embryo transfer **(Baruselli *et al*., 1997)**.

The non-invasive nature of ultrasonography makes it an excellent clinical and research tool in bovine reproduction, so that it has been used tremendously in the field of bovine reproduction, and allowed monitoring of individual follicles as they grow and/or regress over time and patterns of follicular development can thus be determined with relative precision **(Abdullahi Y. Ribadu and Toshihiko Nakao, 1999).**

In the early 1990s, application of transrectal ultrasonography for imaging ovarian follicles was helpful for studying folliculogenesis in buffalo (**Manik, Madan, Ambrose, Singla and Chauhan, 1992; Manik, Ambrose, Singla, Chauhan and Madan, 1994a and Manik, Madan and Singla, 1994b)**.