# CHAPTER 35

# MEDICAL SCIENCES
# PHYSIOLOGY

## Doctoral Theses

312. BANSAL (Vishal)
**Mechanism of Action of Estrogen on Haemodynamic Parameters in Rabbits.**
Supervisors : Dr. M. Fahim and Dr. Rashmi Babbar
Th 15397

*Abstract*

Demonstrates that unlike chronic estrogen treatment, acute administration 17 - β Estradiol did not produce any significant effects under normal conditions and during myocardial ischemia produced by LAD occulusion suggesting that acute estrogen treatment does not provide any beneficial effects in male rabbits under present experimental conditions. Acute exposure of isolated aortic smooth muscles by 17 - β Estradiol produced a concentration dependent contractile response probably through prostaglandins. The results demonstrated that this contractile response is attenuated through $K_{ATP}$ channel.

*Contents*

1. Introduction and objectives. 2. Review of literature. 3. Materials and methods. 4. Results. 5. Discussion. 6. Summary and Conclusion. Bibliography.

313. DIANAT (Mahin)
**Effect Morphine on Neural Regulation of Blood Pressure and Behaviour in Animals.**
Supervisor : Prof. Mohammad Fahim
Th 15398

*Abstract*

Demonstrates that epidural morphine produces significant fall in SBP, DBP, MAP and HR. This fall was not observed with

epidural morphine in atropinized rats suggesting that effect of morphine might be modulated through cholinergic receptors. A fall in BRS by epidural morphine suggests that opioidergic system influences the baroreflex regulatory system. Absence of fall in BRS by epidural morphine in atrophinized rats suggests that this effect may be mediated through cholinergic system. Memory and tail flick tests demonstrated that the memory and tail flick latency was significantly changed after epidural morphine. Pre-test morphine significantly restored the retention latency in rats treated under the influence of morphine. $\beta_1$ and $\beta_2$ agonists reversed the impaired memory induced by morphine. However, the tail flick latency didn't change after injection of $\beta_1$ and $\beta_2$ agonists. The present study demonstrated that $\beta_1$ - adrenergic agonist as well as $\beta_2$ - adrenergic agonist reversed the impaired memory induced by morphine in rats and restored the retention latency. This suggests that interation of morphine and β - adrenergic system. This effect could be attributed to the training of rats by administration of morphine a day before the experiment. The other possibility could be that the β - adrenergic system has no effect on the tail flick latency under these experimental conditions.

*Contents*