

## CHAPTER 40

### MEDICAL SCIENCES PHYSIOLOGY

#### Doctoral Theses

321. MOATTAR RAZA RIZVI  
**To Study the Vasoactive Responses in Animal Models of Non-Cirrhotic Portal Hypertension (NCPF).**  
Supervisors : Dr. Rashmi Babbar, Dr. S. K. Sarin and Dr. M. Fahim  
Th 16421

#### *Abstract*

This work investigate the effect of vasoactive agents on vasoresponsiveness and the mechanisms underlying the altered responsiveness the role of nitric oxide in the pathophysiology of PHT in a rabbit model of NCPF and a rat model of PPVL (Partial portal vein ligation). The NCPF model is a unique model of PHT produced by chronic splanchnic endotoxemia in rabbit that mimics to other models of PHT as seen in the PPVL model. NCPF model showed hyporesponsiveness to vasoconstrictors (phenylephrine and endothelin-1), endothelial dysfunction, and impaired vasodilatory response to isoproterenol. The smooth muscle function remained intact. Nitric oxide and prostaglandins certainly plays a major role in the hyperdynamic circulatory syndrome.

#### *Contents*

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

322. RIYAZ AHMED BAKSHI  
**Mechanism of Action of Pramipexole in 6-OHDA Lesioned Rat.**  
Supervisors : Dr. Bal Krishana and Dr. Medha Tatke  
Th 14020

*Abstract*

Demonstrates that interperitoneal administration of pramipexole before the intrastriatal 6-OHDA injection was sufficient to provide partial rescue and long lasting survival of the lesioned striatal dopaminergic neurons. Normal distribution of TH-ir, GFAP-ir, Bcl-2, Bcl-x, caspase-3 and p53 are observed with very light brown colour in all slides of control group 1. Immunostains are visualized with the use of avidin-biotin horseradish peroxidase and DAB as brown color appeared. The expressions of pro-apoptotic proteins caspase-3 and p53 are enhanced after infrastriatal injection of 6-OHDA. The over expression of GFAP, caspase-3 and p53 showed L-Dopa neurotoxicity in group 5. Pramipexole stimulates production of an antiapoptotic protein Bcl-2 and Bcl-x. The level of caspase-3, GFAP and p53 are decreased in pramipexole treated rats.

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1. Introduction. 2. Review of literature. 3. Materials and methods. 4. Results. 5. Discussions. 6. Summary and conclusion. Bibliography.