

EXPERIMENT NO.: 22

DATE: \_\_\_\_\_

**AIM: TO STUDY THE DRUG INDUCED (HALOPERIDOL) CATATONIA IN RATS OR TO STUDY THE ANTI-PARKINSONISM DRUGS IN RATS**

**REQUIREMENTS:**

Animal: Rat

Drug: Haloperidol (1 mg/Kg, Stoke solution 1 mg/mL)

Equipments: Two wooden blocks – one is 3 cm long and other is 9 cm long.

**PRINCIPLE:**

Phenothiazine and butyrophenone types of antipsychotic drugs are known to produce extrapyramidal side effects in man. These effects such as akinesia, rigidity, tremors are called Parkinson like because in Parkinson disease the major clinical symptoms include difficulty to move and change posture and tremors. These effects of antipsychotic drugs are due to excessive blockage of dopamine receptors in the extrapyramidal motor system. Therefore phenothiazines are commonly used to produce Parkinson like extrapyramidal symptoms in laboratory animal and to study anti- Parkinsonism drugs like levodopa, atropine, and scopolamine.

**PROCEDURE:**

Divide the animal in to two groups.

Group – I received haloperidol while Group - II were inject with levodopa than after 30 minutes it receive haloperidol.

Observed severity of catatonia response as follow:

Stages	Description	Score
Stage – I	Rat moves normally when placed on table	0
Stage – II	Rat moves only when touched or pushed	1
Stage – III	Rat placed on the table with front paws set alternatively on a 3 cm long block fail to correct the posture in 10 seconds	0.5 (for each paw – total score 1)
Stage – IV	Rat placed on the table with front paws set alternatively on a 9 cm long block fail to correct the posture in 10 seconds	1 (for each paw – total score 2)

## PHARMACOLOGY AND TOXICOLOGY PRACTICAL

### OBSERVATION TABLE:

Animal group	No. of animals	Body weight	Drug treatment	Volume injected in mL	Cumulative Score of all stages
Control	1	250	Haloperidol (1 mg/Kg, i.p)	0.25	3
	2	320		0.32	3
	3	302		0.3	2.5
	4	340		0.34	2
	5	278		0.27	2.5
Test	1	260	Levodopa (15 mg/Kg, i.p)	0.26	1
	2	334		0.33	1
	3	315		0.31	0.5
	4	325		0.32	0.5
	5	345		0.34	0.5

### DISCUSSION:

Anticatatonic drugs like levodopa, atropine and scopolamine treatment half an hour before haloperidol were reduced the catatonic score/intensity.

TEACHER'S SIGNATURE