OBSERVATIONS

The analysis of genome has proved without doubt that there is close similarity between rat and human beings, so it is quiet natural that physiology of rat also shows similarities with man. This is the reason that rats are widely used in various biophysical and biochemical studies. For this reason, we also selected albino rat as our experimental animals.

The plant material used during the present study is *Camellia sinensis* commonly known as tea. The green variety of tea is used for the experiments. During the present study, the protective effect of green tea was studied on albino rats against cadmium toxicity. To determine the toxic effects of cadmium and protective effects of green tea experimental animals were given normal food only, different doses of cadmium chloride and *C. sinensis* aqueous extract along with cadmium chloride for different durations.

**Gross examination**

Normal albino rats have shining white fur, bright and pink eyes, pink pinna and paws and a long scaly tail. Experimental animals were weighed and kept in separate cages for a period of two weeks in the laboratory. All rats were active, healthy looking, taking food and water actively. Male rats weighing between 100 to 150 g. were taken for the experiments.

In cadmium control groups of both sets rats gradually became dull, fur became yellowish and brightness of eyes was lost. There was hair loss in cadmium treated rats. The intake of food and water was also reduced gradually. Initial and final body weights of normal control, cadmium control and treated groups are given in tables-1, 2, 3, 4, 5, 6, 7, 8, 57, 58, 59, 60, 61, 62, 63, 64. Increase or decrease in body weight of normal control, cadmium control and *C. sinensis* treated groups are compared in bar diagrams (Fig: 1, 2, 17, 18).
**Observations on organ weight**

The organs selected for study during the present study are liver, kidney, brain, testes and muscles. It was not feasible to take weight of muscles, so muscles weight was not taken. The weight of liver, kidney, brain and testes of normal control, cadmium control and *C. sinensis* treated groups are given in tables- 1, 2, 3, 4, 5, 6, 7, 8, 57, 58, 59, 60, 61, 62, 63, 64.

**Observations on biochemical parameters of body organs**

The level of sugar, total proteins, albumin, globulin, lipids, alkaline phosphatase, acid phosphatase, Both names alanine transminase (ALT) and asparate transaminase (AST) were studied in liver, kidney, brain, testes and muscles. Readings of all these parameters in liver are given in tables - 9, 10, 11, 12, 13, 14, 15, 16, 65, 66, 67, 68, 69, 70, 71, 72. Readings of all these parameters in kidney are given in tables - 17, 18, 19, 20, 21, 22, 23, 24, 73, 74, 75, 76, 77, 78, 79, 80. Readings of above mentioned parameters in brain are given in tables - 25, 26, 27, 28, 29, 30, 31, 32, 81, 82, 83, 84, 85, 86, 87, 88. Readings of same parameters in testes are given in tables - 33, 34, 35, 36, 37, 38, 39, 40, 89, 90, 91, 92, 93, 94, 95, 96. Readings of muscles are given in tables - 41, 42, 43, 44, 45, 46, 47, 48, 97, 98, 99, 100, 101, 102, 103, 104.

For comparison of a particular parameter for different durations, in normal control, cadmium control and *C. sinensis* treated animals, different biochemical parameters are plotted in the form of histograms (Fig:- 3, 4, 5, 6, 7, 8, 9, 10, 19, 20, 21, 22, 23, 24, 25, 26).

**Observations on various parameters of blood**

In blood give full names and short forms in bracket Hb%, TLC, DLC, RBC count, PCV, MCV, MCH, MCHC, sugar, total proteins, lipids, urea, alkaline phosphatase, acid phosphatase, Both names serum alanine transaminase (ALT)
and serum asparate transaminase (AST) were studied in all groups of both sets of experimental animals. These readings are given in tables - 49, 50, 51, 52, 53, 54, 55, 56, 105, 106, 107, 108, 109, 110, 111, 112. Various blood parameters of normal control, cadmium control and *C. sinensis* treated groups of different durations are plotted in the form of histograms (Fig:- 11, 12, 13, 14, 15, 16, 27, 28, 29, 30, 31, 32).