INTRODUCTION AND THE AIM OF WORK

Rheumatism is one of the oldest group of diseases known to man. Millions of the human population suffer now adays from this disease **(Aviado, 1972)**. This puts a great burden on the economics of the world.

Anti-inflammatory drugs are usually prescribed, for rheumatic diseases **(Craig and Stitzel, 1986)**. Non steroidal anti-inflammatory drugs (NSAID) are widely used by physicians. They perform this action through their effect on prostaglandin synthesis **(Craig and Stitzel, 1986)**. Some NSAIDs inhibit migration along with function of monocytes and polymorphonuclear leukocytes **(Goodwin, 1984)**.

Cytogenetic studies on NSAID indicated that their effect on chromosomal aberrations was controversial. While phenylbutazone was reported to induce chromosomal aberrations **(Stevenson et al., 1971; Gebhart and Wissmullr, 1975)**, most NSAIDS did not induce any aberrations **(Jensen, 1971; Rathenberg and Muller, 1972; Walker et al., 1975; Smith et al., 1979, Kullich & Klein, 1986)**.

Some authors reported that NSAIDS increase ejaculate volume and sperm motility **(Losher et al., 1988)**. They exert their effect on spermeation through inhibition of prostaglandin synthesis **(Graig and Stitzel, 1986)**.

The aim of the present study is to investigate the effect of therapeutic dose of non steroidal anti-inflammatory drugs (indocid, voltaren, curazolidine and profenid) for a period of 32 days to study its effect on the chromosomes and sperm head abnormality using the classical methods of cytogenetics. Also the present work is to elucidate any possible cumulative effect of non steroidal anti-inflammatory drugs during a period near to that taken by human and to throw light on the differential effect of the four non steroidal anti-inflammatory drugs on male and female rats.