**AIM AND OBJECTIVE:**

The drug, Zolpidem tartarate is a white to off-white crystalline powder. It is a non-benzodiazepine, sedative-hypnotic for the short-term treatment of insomnia. Zolpidem tartarate is used for initiating sleep. Unlike the benzodiazepines, Zolpidem tartarate produces muscle relaxation and anticonvulsant effects only at dose much higher than the hypnotic dose. Hence, at such higher doses, zolpidem tartarate is used in the treatment of antipsychotic induced Parkinsonism and in lower dose is used in the treatment of insomnia.

A lower dose is recommended for the elderly and patients with hepatic impairment. It has a half-life of 2 h, but its hypnotic effect can last up to 6h. It has a rapid onset of action and should only be taken immediately before retiring. It has a short half-life and has no active metabolites, which reduces the possibility of residual next day effects from prolonged or excessive sedation. The strengths of marketed dosage form of Zolpidem tartarate is 6.25 mg and 12.5 mg. Hence it has low dose it should be develope using pelletization technique to avoid drug loss during development of formulation, to reduce dosage frequency, to reduce dose dumping of Zolpidem tartarate and achieve unique release pattern of Zolpidem tartarate pellets. As a consequence, the onset of therapeutic action of zolpidem tablets may be too quick for zolpidem sensitive persons and this could be inconvenient, e.g., such patients may not have had enough time to prepare for and lie down before falling asleep.

Zolpidem is most effective when present in plasma within a certain concentration range. Above this range, there may be a danger that deleterious side effects may become manifest and even when there is not the danger, excess drug in the blood plasma may simply be wasted. Thus, an initial blood plasma concentration that exceeds the minimum effective concentration needed for inducing sleep may not manifest a proportionate therapeutic response and, on the other hand, the excess zolpidem cannot be used later as it is already metabolized or eliminated and thus wasted. As a result, the duration of action of the available zolpidem tablets is sometimes insufficiently short and thus does not accommodate a longer, uninterrupted and deep sleep.

Marketed products of Zolpidem tartarate are Ambien, Ambien CR, Edluar, Intermezzo, Zolpimist. Ambien CR is controlled release tablet and is widely used in USA. The other drugs used for the treatment of insomnia are Lorazeapam, Trazolam, Flurazepam etc.

The aim of this research work was to formulate and evaluate biphasic release of modified release pellets of Zolpidem tartarate, in view to improve patient compliance and therapeutic action.

The present work relates to modified release dosage forms of Zolpidem or salts thereof adapted to release over a predetermined time period, according to biphasic profile of dissolution,
where the first phase is immediate release phase and the second phase is modified release phase and also to improve stability, patient comfort and compliance of drug under investigation.