3.1 **AIM OF THE STUDY:**

The aim of the present study is to identify novel molecular targets that might potentially be manipulated pharmacologically so as to attenuate the pathophysiological progression of nicotine dependence induced withdrawal syndrome in mice.

3.2 **OBJECTIVES OF THE STUDY:**

To evaluate the effect of the following on nicotine dependence induced withdrawal syndrome in mice:

- SU-6656, a selective Src-kinase inhibitor (Blake et al., 2000).
- Ro 32-0432 Hydrochloride: a selective GRK-5 receptor (G protein-coupled receptor kinase-5 enzyme) Inhibitor (Moore et al. 1998).
- Ammonium Pyrrolidine Dithiocarbamate (APD), a selective Nuclear Factor kappa-B (NF-κB) inhibitor (Schreck et al., 1992).
- RS 102895, a selective CCR-2 Chemokine receptor antagonist (Mirzadegan et al., 2000; Onuffer and Horuk, 2002).
- FTI-276 Trifluoroacetate, a selective inhibitor of Farnesylation transferase subtype I (Lerner et al., 1995).