ਫਾਰਮਾਸਿਊਟੀਕਲ ਸਾਇੰਸਜ਼ ਵਿਭਾਗ
ਗੁਰੂ ਨਾਨਕ ਦੇਵ ਯੂਨੀਵਰਸਿਟੀ, ਅੰਮ੍ਰਿਤਸਰ-143 005
DEPARTMENT OF PHARMACEUTICAL SCIENCES
GURU NANAK DEV UNIVERSITY, AMRITSAR-143 005, Punjab (India)
(Established by the State Legislature Act No. 21 of 1969)
(Accredited at "A++" grade (highest level as per modified criteria) by NAAC and conferred "University with Potential for Excellence" and category-I status by UGC)

No. _____/Pharma.Sci

Dated _____

Subject: Brief summary of submitted project work

AChE is an enzyme responsible for the hydrolysis of liberated Acetylcholine into choline. Tacrine was the first drug introduced in the market for the treatment of Alzheimer's disease, known primarily for its strong inhibition towards AChE. But unfortunately, it was withdrawn from the market in 2013 due to its acute hepatotoxicity after regular dosage. Project work entitled "**Design, Synthesis, Biological Investigations and Molecular Interactions of Triazole linked Tacrine Glycoconjugates as Acetylcholinesterase Inhibitors with Reduced Hepatotoxicity**" aims at reducing its hepatotoxicity by synthesizing Tacrine linked triazole glycoconjugates via Huisgen's [3+2] cycloaddition of anomeric azides and terminal acetylenes derived from Tacrine. Biological evaluation of these molecules has been carried out by using different pharmacological procedures and results have been further rationalized by molecular modeling studies. Thus, most potent compound can be used as principle template to further explore the mechanism of action of different targets involved in Alzheimer's disease (AD) which stands as an adequate chemical probe to be launched in an AD drug discovery program. This piece of work can give new dimensions in this research area and can thus be extremely beneficial for the alzheimer's patients.

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Dr. (Prof) Preet Mohinder Singh Bedi

(Supervisor)

Dr. Balbir Singh

(Head of Department)

Head,
Deptt. of Pharmaceutical Sciences,
Guru Nanak Dev University,
Amritsar-143 005.

Phones : (O)+91-183-2258802-09, 2450601-14 Extn. 3539. 3540 Gram : UNIVERSITY, Telex : 384-274 GNDU-IN
Fax : +91-183-2258819, 2258820, Website : www.gndu.ac.in Email : head_pharma@yahoo.in