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(57) Abstract :
The present invention relates to design and synthesize novel phenothiazine derivatives in two series (4a-4j and P1-P5). The synthetic process involved chloroacetylation of phenothiazine, followed by sequential reactions with 4-amino acetophenone, substituted anilines, and substituted benzaldehydes. The compounds (4a-4j and P1-P5) were characterized using various techniques, and molecular docking studies indicated promising interactions with potential target receptors. Anxiolytic activity screening using the elevated plus maze model revealed compounds 4f, 4h, and P3 as having maximum anti-anxiety potency. The findings suggest that the designed phenothiazine derivatives hold potential as CNS-targeted therapeutic agents, with favorable chemical properties and docking scores.

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