

ORAL PRESENTATIONS

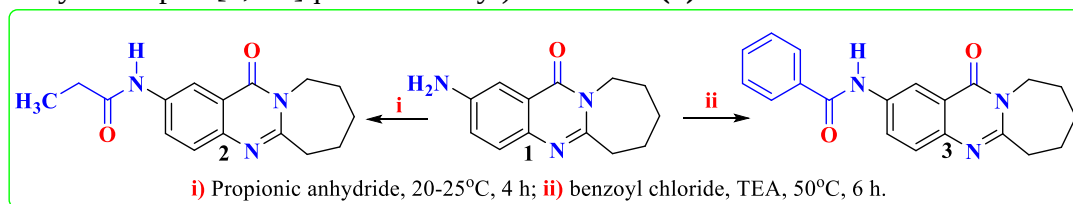
SYNTHESIS AND ACYLATION OF 2-AMINO-7,8,9,10-TETRAHYDROAZEPINO[2,1-B]QUINAZOLIN-12(6H)-ONE

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Alkaloids are an important class of naturally occurring nitrogen-containing compounds that exhibit a wide range of biological and pharmacological activities. Among them, tricyclic quinazolinone alkaloids have attracted considerable interest because of their unique fused heterocyclic structure and diverse biological properties. These alkaloids occur naturally in several medicinal plants, including *Peganum harmala*, *Galega officinalis*, *Adhatoda vasica*, and *Nitraria komarovii*. Numerous studies have demonstrated that quinazolinone derivatives possess antimicrobial, anti-inflammatory, antiviral, anticancer, and central nervous system activities, making them promising scaffolds for the development of new pharmaceutical agents [1-3].

In this study, the synthesis and acylation of 2-amino-7,8,9,10-tetrahydroazepino[2,1-b]quinazolin-12(6H)-one (**1**) was carried out through using two different acylating agents. In the first reaction, propionic anhydride was employed to introduce a propionyl group, yielding the corresponding N-(12-oxo-6,7,8,9,10,12-hexahydroazepino[2,1-b]quinazolin-2-yl)propionamide (**2**). In the second reaction, benzoyl chloride was used as the acylating reagent to synthesize the corresponding N-(12-oxo-6,7,8,9,10,12-hexahydroazepino[2,1-b]quinazolin-2-yl)benzamide (**3**):



These acylation reactions represent a straightforward and efficient approach for preparing homologous tricyclic quinazolinone derivatives. The introduction of aliphatic (propionyl) and aromatic (benzoyl) substituents is expected to modify the physicochemical properties of the parent molecule and may influence its biological activity, providing new compounds for future structure–activity relationship investigations.

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References

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