

## SYNTHESIS OF DISUBSTITUTED QUINAZOLINE-6-SULPHOHYDRAZIDES AS SYNTHONS FOR ORGANIC AND BIOORGANIC CHEMISTRY

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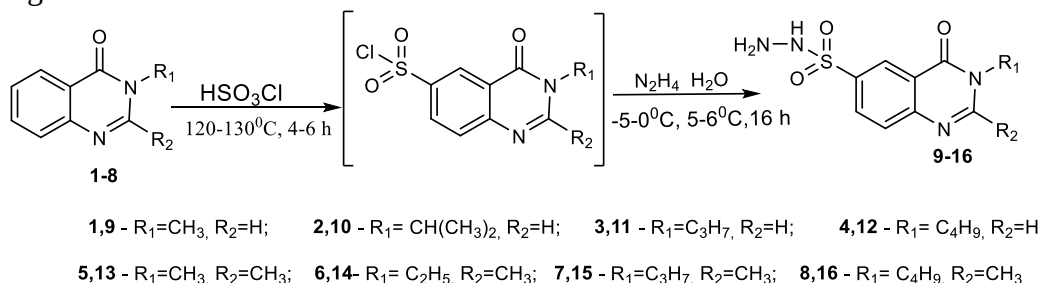
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More than 90 years ago, sulfonamides changed modern medicine. These were some of the first widely used antibiotics. While penicillin soon overshadowed them as an antibiotic, sulfonamides are still very commonly used today to treat dozens of different conditions. In the U.S., there are over 40 sulfonamide drugs still approved for use.

Despite the fact that the structure is similar, sulfohydrazides have been studied less than, sulfo-namides. However, it is possible to synthesize various sulfohydrazones based on sulfohydrazides. The number of sulfohydrazide groups known to science is less than 10, and all of them have anti-fungal activity. The production of sulfohydrazides based on new bases and the study of their biological activities can be a solution to this problem [1].

Based on the above information, we aimed to synthesize and study the biological activity of sulfohydrazide derivatives of the bicyclic alkaloid quinazoline, which contains nitrogen and exhibits a wide range of biological and pharmacological activities [2].

A one-pot method was successfully employed to synthesize sulfonylhydrazide analogues:



3-Alkyl-4-oxo-3,4-dihydroquinazolines were selected as the starting materials. The quinazolinone derivatives were subjected to chlorosulfonation using a 10:1 molar ratio of chlorosulfonic acid to substrate; the reaction was carried out in an oil bath at 120–130°C for 4–6 hours, followed by treatment with 60% an aqueous solution of hydrazine hydrate.

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### References

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