

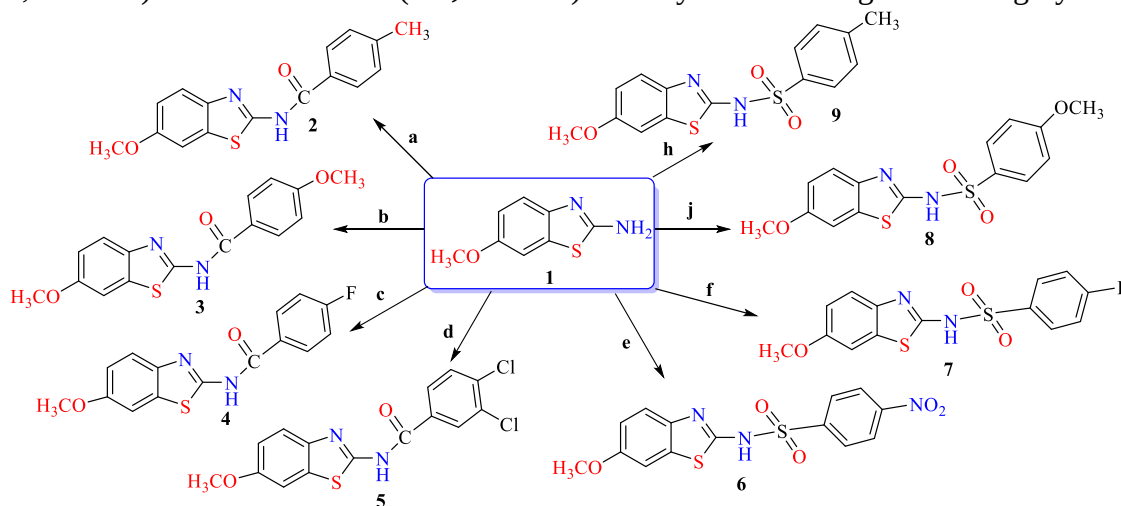
POSTER PRESENTATIONS

TARGETED ACYLATION AND ARYLSULFONYLATION OF 2-AMINO-6-METHOXY-1,3-BENZOTHAZOLE

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Benzothiazoles are important heterocyclic compounds in modern organic synthesis and pharmaceutical chemistry. Numerous biologically active compounds based on the benzothiazole scaffold have been developed, exhibiting anticancer, antimicrobial, anti-inflammatory, antitubercular, antimalarial, anthelmintic, antioxidant, and bactericidal activities [1]. In the present study, targeted acylation and arylsulfonylation of 2-amino-6-methoxy-1,3-benzothiazole (**1**) with substituted aromatic acid chlorides and arylsulfonyl chlorides were investigated. When the reactions were carried out in benzene solution for 2 hours, with the initial compounds taken in the ratio of **1**:acid chlorides:TEA = 1:1.2:1, as well as- **1**: arylsulfonyl chlorides:TEA = 1:1:1, amides (**2-5**, 85-96%) and sulfonamides (**6-9**, 78-96%) were synthesized in good and high yields:



4-methylbenzoyl chloride (**a**), 4-methoxybenzoyl chloride (**b**), 4-fluorobenzoyl chloride (**c**),
3,4-dichlorobenzoyl chloride (**d**); 4-nitrobenzenesulfonyl chloride (**e**), 4-fluorobenzenesulfonyl chloride (**f**),
4-methoxybenzenesulfonyl chloride (**j**), 4-methylbenzenesulfonyl chloride (**h**). **i** = C₆H₆, TEA, 80°C, 2 h.

The structure of the synthesized compound was confirmed by the data of IR-, ¹H NMR spectroscopy and mass spectrometry.

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Reference

1. Larisa V. Zhilitskaya, Nina O. Yarosh, Synthesis of Biologically Active derivatives of 2-Aminobenzothiazole. *Russ. Chem. Rev.*, 2021, Vol. 57, P.369-373.