

# Synthesis and Analgesic Activity of New Heterocyclic Cyanothioacetamide Derivatives

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Received December 16, 2020; revised December 16, 2020; accepted December 28, 2020

**Abstract**—The reaction of cyanothioacetamide with aromatic aldehydes and 1,3-dicarbonyl compounds followed by aminomethylation or *S*-alkylation gave a series of heterocyclic derivatives with a 1,2,3,4-tetrahydropyridine or 1,4,5,6,7,8-hexahydroquinoline fragment. The resulting compounds were tested for analgesic activity *in vivo*. Some of the prepared compounds showed an antinociceptive effect superior to that of ketorolac in dynamics.

**Keywords:** cyanothioacetamide, Mannich reaction, pyrido[2,1-*b*][1,3,5]thiadiazines, 2-oxo-3-cyano-1,4,5,6-tetrahydropyridine-2-thiolates, analgesics

**DOI:** 10.1134/S107036322102002X