

SYNTHESIS OF PYRAZOLE AND PYRIMIDINE STRUCTURE

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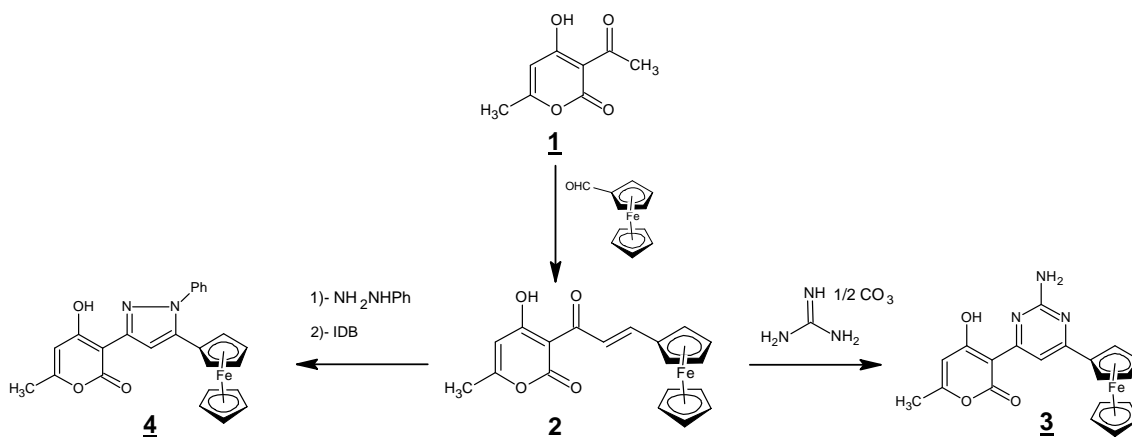
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Pyrazoles and pyrimidines represent an important class of nitrogen heterocycle in organic chemistry, given their large biological potential.^{1,2,3}

We present in this work the synthesis of a pyrimidine derivative 3 and a pyrazole derivative 4 from the intermediate 2 (obtained by condensation of ferrocene carboxaldehyde and dehydroacetic acid 1).

Compound 3 is obtained by the action of guanidine carbonate on chalcone 2. Compound 4 was obtained by the action of phenyl hydrazine on compound 2, the intermediate obtained is oxidized with iodobenzene acetate.



Scheme 1: Synthesis of derivatives 3 and 4

[1] A. Fulp, Y. Zhang, K. Bortoff, H. Seltzman, R. Snyder, R. Wiethe, G. Amato, R. Maitra. *Bioorganic & Medicinal Chemistry* 24 (2016) 1063–1070

[2] A. R. Trivedi, V. R. Bhuvu, B. H. Dholariya, D. K. Dodiya, V. B. Kataria, V. H. Shah. *Bioorganic & Medicinal Chemistry Letters* 20 (2010) 6100–6102

[3] R. V. Antre, A. Cendilkumar, D. Goli, G. S. Andhale, R. J. Oswal. *Saudi Pharmaceutical Journal* (2011) 19, 233–243