

Synthesis and antimicrobial evaluation of imidazo-[1',5':1,2]pyrimido [4,5-*d*]isoxazolo[2,3-*a*]pyrimidin-10-ones

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A new series of novel imidazo-[1',5':1,2]pyrimido[4,5-*d*]isoxazolo[2,3-*a*]pyrimidin-10-ones **5** has been accomplished by reaction of 3-amino-5-methyl-7-aryl-7*H*-isoxazolo[2,3-*a*]pyrimidin-6-yl cyanides **2**, with choloacetylchloride followed by treatment with aromatic primary amines and, then with formaldehyde. The key intermediate **2**, is obtained by reaction of 3-amino-5-methylisoxazole **1** with aromatic aldehydes, and malononitrile by a three-component one-pot synthesis. The structures of newly synthesized compounds **2-5** have been established on the basis of spectral data, and evaluated for their *in vitro* antimicrobial activity.

Keywords: 3-Amino-5-methyl-7-aryl-7*H*-isoxazolo[2,3-*a*]pyrimidin-6-yl cyanides, One-pot synthesis, Dimorth rearrangement, Imidazo pyrimidoisoxazolo pyrimidines, Antimicrobial activity