

## NEW BUILDING BLOCKS FOR DRUG SYNTHESIS: 4-ACYL-5-HYDROXY-1-PHENYL-3-TRIFLUOROMETHYLPYRAZOLES

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The 1-aryl-3-trifluoromethyl-1*H*-pyrazole unit is a substructure of many biologically active compounds including, for instance, the well-known cyclooxygenase-2 (COX-2) inhibitor Celecoxib (Celebrex<sup>TM</sup>). Here we describe a simple synthesis of somewhat related building blocks **3** characterized by a 4-acyl-5-hydroxy-1-phenyl-3-trifluoromethyl-1*H*-pyrazole structure. Thus, condensation of pyrazolone **1** with various ortho esters leads to enol ethers **2** which can be easily cleaved by treatment with ethanolic hydrochloric acid to afford the target ketones **3**. In contrast, reaction of **1** with ethyl orthoformate gives the dimeric product **4**. Detailed NMR spectroscopic investigations with the title compounds, utilizing also through-space <sup>19</sup>F, <sup>13</sup>C couplings, provided far-reaching hints regarding their structure in solution.

