## Accepted Manuscript

Title: Morpholine triflate promoted one-pot, four-component synthesis of dihydropyrano[2,3-c]pyrazoles

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### ACCEPTED MANUSCRIPT

#### **Graphical Abstract**

Morpholine triflate promoted one-pot, four-component synthesis of dihydropyrano[2,3-c]pyrazoles Chen-Feng Zhou<sup>a,b</sup>, Jian-Jun Li<sup>a,b,\*</sup>, Wei-Ke Su<sup>a,\*</sup>

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$$\begin{array}{c} O \\ + R^2 \cdot NHNH_2 + R^1CHO + \\ CN \end{array} \begin{array}{c} CN \\ EtOH-H_2O, reflux \\ R^2 \end{array} \begin{array}{c} R^1 \\ N \\ NH_2 \end{array}$$

A one-pot, four-component reaction of ethyl acetoacetate, hydrazine hydrate, aldehydes, and malononitrile was discussed using Lewis acid catalyst morpholine triflate (MorT) to afford a series of dihydropyrano[2,3-c]pyrazoles, which were generally catalyzed by organic alkalis. Moderate to excellent yields, no chromatographic purification, and evasion of environmentally hazardous solvents in the reaction process make this protocol very useful for academia and industry.

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