Accepted Manuscript

Lewis Acid-catalyzed Reaction between Tertiary Enamides and Imines of Salicylaldehydes: Expedient Synthesis of Novel 4-Chromanamine Derivatives

Ling He, Han-Bin Liu, Liang Zhao, De-Xian Wang, Mei-Xiang Wang

PII: S0040-4020(14)01754-2

DOI: 10.1016/j.tet.2014.12.050

Reference: TET 26271

To appear in: *Tetrahedron*

Received Date: 31 October 2014

Revised Date: 9 December 2014

Accepted Date: 15 December 2014

Please cite this article as: He L, Liu H-B, Zhao L, Wang D-X, Wang M-X, Lewis Acid-catalyzed Reaction between Tertiary Enamides and Imines of Salicylaldehydes: Expedient Synthesis of Novel 4-Chromanamine Derivatives, *Tetrahedron* (2015), doi: 10.1016/j.tet.2014.12.050.

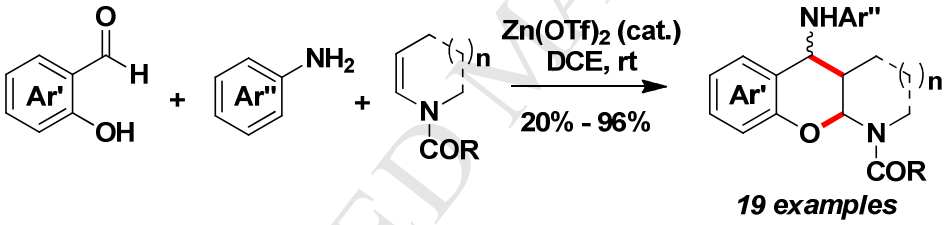
Lewis Acid-catalyzed Reaction between Tertiary Enamides and Imines of Salicylaldehydes: Expedient Synthesis of Novel 4-Chromanamine Derivatives

Ling He,[a] Han-Bin Liu,[b] Liang Zhao,[b] De-Xian Wang,[a] Mei-Xiang Wang*[,b]

[a] National Laboratory for Molecular Sciences, CAS Key Laboratory of Molecular Recognition and Function, Institute of Chemistry, Chinese Academy of Sciences, Beijing, 100190, China

[b] MOE Key Laboratory of Bioorganic Phosphorus Chemistry and Chemistry Biology, Department of Chemistry, Tsinghua University, Beijing 100084, China

wangmx@mail.tsinghua.edu.cn



Abstract. In the presence of a catalytic amount of $Zn(OTf)_2$ in DCE at ambient temperature, a number of tertiary enamides underwent highly efficient reaction with imines of salicylaldehydes to afford diverse functionalized 4-chromanamine derivatives in high yields. The reaction proceeds most probably through an enaminic addition of tertiary enamides to imine functionality followed by the intramolecular interception of the resulting iminium intermediate by the phenolic hydroxy group. The synthesis was also practically implemented by means of a three-component reaction starting from salicylaldehyde, *para*-nitroaniline and a tertiary enamide.

Keywords: tertiary enamide; imine; salicylaldehyde: 4-chromanamine; tandem reaction; multi-component reaction