

## Ultrasound assisted synthesis and pharmacological evaluation of some (*E*)-1,2,3-triphenylprop-2-en-1-ones

Veerendiran MALA,<sup>1</sup> Inbasekaran MUTHUVEL,<sup>2,3</sup> Ganesamoorthy THIRUNARAYANAN\*,<sup>2</sup> Saravanan Palavanivel SAKTHINATHAN,<sup>4</sup> Ranganathan ARULKUMARAN,<sup>4</sup> Venkatesan MANI,<sup>4</sup> Rajasekaran SUNDARARAJAN,<sup>4</sup> Dakshnamoorthy KAMALAKKANNAN,<sup>4</sup> Ramamurthy SURESH,<sup>4</sup> and Veeramalai USHA<sup>5</sup>

<sup>1</sup>Department of Chemistry, Annai Arts & Science College, Kovilacheri, Kumbakonam-612 503, India

<sup>2</sup>Department of Chemistry, Annamalai University, Annamalinagar-608 002, India

<sup>3</sup>Department of Chemistry, MR Government Arts College, Mannargudi-614 001, India

<sup>4</sup>Postgraduate and Research Department of Chemistry, Government Arts College, C-Mutlur-608102, Chidambaram, India

<sup>5</sup>Department of Chemistry, University College of Engineering, Panruti-607 106, India

**Abstract.** More than 85% yield of (*E*)-1,2,3-triphenylprop-2-en-1-ones were synthesized using disodium hydrogen phosphate (Na<sub>2</sub>HPO<sub>4</sub>) catalyzed ultrasound assisted aldol condensation of 1,2-diphenylethanone and various substituted benzaldehydes. Synthesized (*E*)-1,2,3-triphenylprop-2-en-1-ones were examined by their spectroscopic data, yield, micro analysis and physical constants. The effect of solvent on the yield was investigated. The pharmacological effects such as antibacterial and antifungal activities of synthesized enones were evaluated with Bauer-Kirby disc diffusion method.

**Keywords:** triphenyl enones; ultrasonication; disodium hydrogen phosphate; aldol condensation; solvent effect; antimicrobial activity.

\* Corresponding author. E-mail address: drgtnarayanan@gmail.com (G. Thirunarayanan)