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## One pot synthesis of dihydropyrano[3,2-c]chromenes and their evaluation of antimicrobial and *in vitro* anticancer activity

Amit S Waghmare<sup>1</sup> and Dayanand M Suryawanshi<sup>2</sup><sup>1</sup>Padmashri Vikhe Patil College, India<sup>2</sup>Annasaheb Awate College, India

The three-component of one-pot synthesis of dihydropyrano[3,2-c]chromene derivatives are obtained in good to excellent yields within short reaction time by condensing 4-hydroxycoumarin, aldehydes and malononitrile or ethyl cyanoacetate with a catalytic amount of (diacetoxyiodo)benzene (DIB) as hypervalent iodine in aqueous ethanol under reflux condition has been reported. Some of the newly synthesized compounds were screened against two Gram negative, two Gram positive bacteria and two fungi using broth micro dilution MIC method. Compounds 4n, 4q, and 4o showed good activity and compounds 4g, 4k and 4n showed moderate activity against bacteria. Selected compounds were tasted for anticancer activity. Compound 4k and 4n showed activity against human astrocytoma-glioblastoma cell line (U373MG).

asw6807@gmail.com

## Spectral studies, antimicrobial and antioxidant screening of (Z)-1-(5-bromo-2-hydroxyphenyl)-3-(4-fluorophenyl)-3-hydroxyprop-2-en-1-one

Dayanand M Suryawanshi<sup>1</sup>, Suresh T Gaikwad<sup>2</sup>, Anjali S Rajbhoj<sup>2</sup> and Amit S Waghmare<sup>3</sup><sup>1</sup>Rayat Shikshan Sanstha's Annasaheb Awate College, India<sup>2</sup>Dr. Babasaheb Ambedkar Marathwada University, India<sup>3</sup>PVP College and Research Center, India

The synthesis of (Z)-1-(5-bromo-2-hydroxyphenyl)-3-(4-fluorophenyl)-3-hydroxyprop-2-en-1-one is of biological importance. It has been synthesized by conventional as well as ultrasound irradiation method using substituted aromatic acids and substituted ortho-hydroxyl acetophenones employing Baker-Vankataraman transformation. Utilization of ultrasound irradiation, simple reaction conditions, isolation and purification make this manipulation very interesting from an economic and environmental perspective. The antibacterial, antifungal *in vitro* anti-oxidant screenings shows good results of its activities. The characterization of formed compounds was carried out by <sup>1</sup>H-NMR, mass spectroscopy, <sup>13</sup>C-NMR, UV/Visible spectroscopy, FTIR spectroscopy.

sdayanand77@gmail.com