Major Research Project

Name of the Principal Investigator	Dr. Madhukar Gunwantrao Dhonde
Status of Project	Completed
UGC F. No.	40-90/2011 (SR) dated 05/07/2011
Amount Sanctioned	12,82,867/-
Duration of Project	2011-14 (Three years)
Title of research project	Microwave Assisted Synthesis and Biological studies of Barbituric acid and Thiobarbituric acid.
Brief outline of project work	We have developed cleaner, fast, greener and high yielding microwave induced organic reaction enhanceement method for the synthesis of barbituryl and thiobarbituryl carbamides and or thiocarbamides and their organic transformation into various N, S-substituted heterocyclic compounds. Use of Microwave irradiation for transformation of barbituryl and thiobarbituryl carbamides and or thiocarbamides into substituted barbituratic acids and thiobarbituric acids. Syntheses of substituted barbituric acids and thiobarbituric acids have been carried out by reaction of substituted carbamides and thiocarbamides using simple and greener method. The syntheses of above heterocyclic compounds under microwave irradiation, for the purpose of enhanced selectivity, improved reaction rates, cleaner products and high yields with minimum reaction wastes. The newly synthesized products have been characterized by well and renowned spectral techniques along with their microbial screening using different pathogens.