

17<sup>th</sup> Annual

# MEDICINAL & PHARMACEUTICAL SCIENCES CONGRESS

July 05-06, 2018 Bangkok, Thailand

## A novel approach for the use of arterolane maleate in treatment of malaria

Ankit S Parulkar and A R Shabaraya  
Srinivas College of Pharmacy, India

Malaria is one of the most prominent lives threatening disease in spite of many efforts made to fight against it. Many drugs are available such as chloroquine, sulphadoxine, pyrimethamine, artemisinin derivatives to counteract this disease but over a period of time they are now facing resistance problem therefore a novel approach is required to fight against this disease. Multi-particulate drug delivery systems includes nanoparticles, pellets, mini-tablets, granules has proved to be more effective in minimum dose than conventional dosage form by using suitable wide range of polymers. The aim of the study is to formulate nanoparticles of the drug arterolane maleate to increase its bioavailability. Nanoparticles were prepared by emulsion solvent evaporation method with the help of polymers ethyl cellulose, Eudragit RS 100 and Eudragit RL 100 in different ratios. The nanoparticles were obtained in the size range of 100-200 nm. Further particle size distribution and zeta potential of nanoparticles were studied and indicated that the combination product with the highest polymer ratio gave the best result of 3.70 mV. Dissolution studies were carried out using a twin buffer system showed a minimal drug release during the initial stages for all the formulations and gradual increase during the later stages of the process. The formulation F9 having the highest polymer ratio on combination showed the best release profile with a cumulative release of  $90.95 \pm 0.12\%$ .

### Biography

Ankit S Parulkar has completed his Bpharm in 2012, M.Pharm in 2015 and is pursuing his PhD under Rajiv Gandhi University under the guidance of Dr. Ramakrishna Shabaraya. He has presented more than five research papers in national conferences.

ankit.sparulkar@gmail.com

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