**Sun Pharma Science Foundation Research Awards 2021**

**Excellence in research work for which the Sun Pharma Research Award is claimed:**

The title of paper is **“Fabrication and Characterization of Self micro-emulsifying Mouth Dissolving Film for Effective Delivery of Piroxicam.”** This is novel research work as well as dosage form in our country. I am the first one who works on this novel **“Self micro-emulsifying Mouth Dissolving Film”** in India. This was very challenging for me as this work is for the first time in India. The topic was vast, very large or wide. I have gone through lots of difficulties in terms of evaluation of dosage form, some economic factors. But still I have completed the said project.

**Abstract:**

Self-microemulsifying drug delivery systems are widely used to address water-solubility issues of drug candidates, but with these systems, there is a chance of drug precipitation due to migration of the surfactant in the shell of capsule. Piroxicam is a class II drug that exhibits poor solubility and high permeability. Efforts were made to develop piroxicam self-microemusifying mouth dissolving fi lm using a polymer such as hydroxylpropyl methylcellulose as a fi lm-forming polymer and optimized using response surface methodology of Design-Expert® software version 10. A sublingual self-microemusifying mouth dissolving fi lm was prepared that disintegrated in 26 seconds. The *in vitro* drug release of self-microemusifying mouth dissolving film was 98.04±0.016% in 5 min. The newly developed sublingual self-microemusifying mouth dissolving fi lm provided rapid absorption of piroxicam (tmax ~2 h) and suitable for providing a rapid onset of analgesic action.

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