

**PHYTO-REMEDICATION OF SUNBURN BY THE
BIOCHEMICAL COMBINATION OF THE MEDICINAL
PLANTS**

**Final Progress Report
(2012 to 2015)
Major Research Project**



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By

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SUMMARY OF THE PROJECT:

1. UGC Reference No.F. **No.41-466/2012 (SR)**
2. Title of research project **Phyto-Remediation of sunburn by the biochemical combination of the medicinal plants.**
3. (a) Name of the Principal Investigator **Dr. Madhulika Singh**
(b) College where work has progressed **Sadhu Vaswani College, Bairagarh, Bhopal, MP**

The plants studied here may prove potential source of useful drugs. It also justifies the traditional uses of these plants as medicines and the claims about its therapeutic values. The plant material contains various bioactive components specially Alkaloids, tannins, phenols, flavonoids etc. which have known ROS/hydroxyl radical scavenger and strong antioxidant potential. These antioxidants protect our skin from sunburn and skin cancer. Polyphenols are one of the most powerful botanical antioxidants known today. They offer unrivalled action against free radical exposure which is responsible for 80% of skin aging and can boost your skin's antioxidant protection from the inside out. Therefore Herbal Remedy was formulated through the combination of different plant extracts at different Concentrations (Hydroalcoholic extract of *Berberis aristata* root, 30% ethanolic extract of *Ficus benghalensis* bark, Alcoholic extract of *Asparagus recemosus* root, Aqueous extract of *Asparagus recemosus* root, 30% methanolic extract of *Butea monosperma* flowers, Gel extract of *Aloe vera*, 80% alcoholic extract of *Terminalia arjuna* bark, 80% ethanolic extract of *Cyperus rotundus* root, 80% ethanolic extract of *Rubia cordifolia* root and Hydroalcoholic extract of *Hibiscus-rosa-sinensis* flowers). The herbal extracts selected for the formulation of herbal remedy were decided on the basis of the presence of phytochemicals and inhibitory concentration values. This Combination was screened for Sun Protection Factor determination activity and Photoprotective activity which revealed that, this combination has significant potential to protect from UVR (UVA+UVB) induced Photodamages. This combination needs more attention and evaluation after that it may be included in the formation of Sunscreen lotion with good quality and proper SPF. Hence, may also be useful in the formation of anti-burning ointments.



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