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Formulation and Evalution of Antifungal Cream Using Butea Monosperma.

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ABSTRACT:

The plant of Butea Monosperma is a wounderful medicinal plant with lots of uses. It have been employed for therapeutic benefits i.e anti-fungal, anti-inflammatory, antimicrobial, anti-cancer, anti-diabetic etc. and it's natural resistance to fungal attack. In the present work ,the antifungal effect of various extract from Butea Monosperma were evaluated against the Cladosporium Cladosporioide fungus.

INTRODUCTION:

Butea Monosperma is a very wonderful plant. It is commonly known as Palash (in Hindi and Marathi). It comes under the family of Fabaceae. It is native to Bangladesh, India, Nepal,Bhutan, Pakistan, Thailand, Sri Lanka, Western Indonesia and Myanmar.Is mostly absent in arid regions, mostly found in the greater parts of India and in the greater parts of the India up to 1000 MSL (minimum sea level) and greater in the outer Himalaya. Butea Monosperma grows well in the waterlogged conditions, saline soil,alkaline soil, black cotton soil , and barren land. Palash is described in Upanishads, Vedas, Susrirta Samhita, Charaka Samhita, Astanga Sangraha, Ashtanga Hrdaya and any other Ayurveda books. It is called as Flame of the forest.

BOTANICAL CLASSIFICATION OF BUTEA MONOSPERMA:

Kingdom: Plantae.

Sub-Kingdom: Tracheobionta (Vascular plants).

Division: Magnoliophyta (Flowering plant).

Class: Magnoliopsida (Dicotyledons).

Order: Fabales.

Family: Fabaceae.

Genus: Butea.

Species: Monosperma.

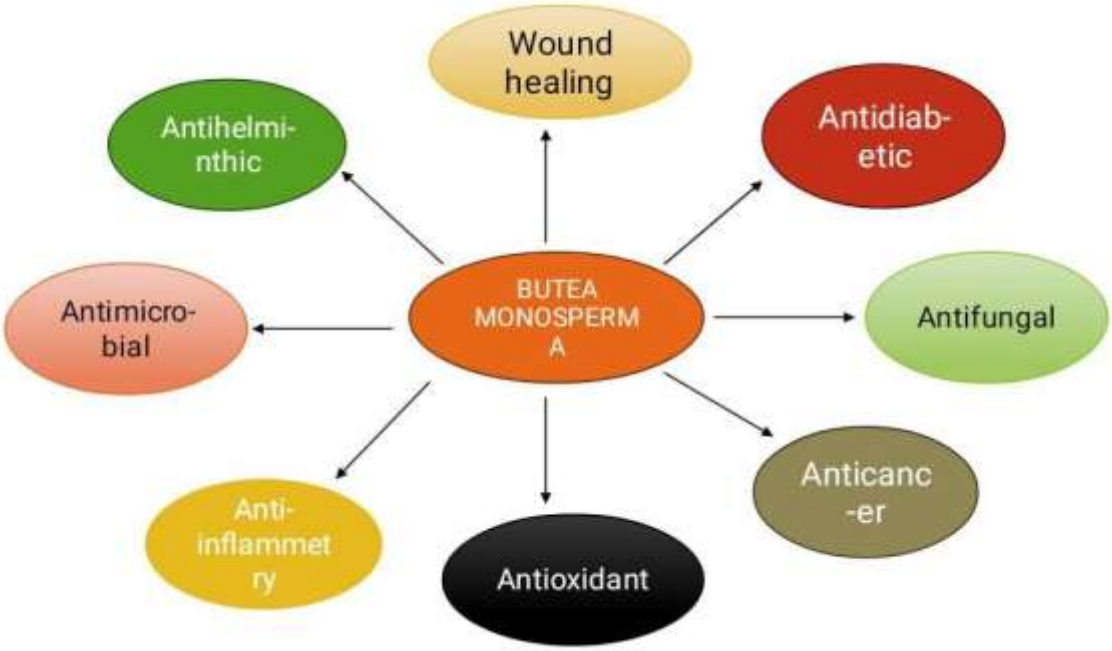

Fig. THERAPEUTIC USES OF BUTEA MONOSPERMA.

ACTIVE CHEMICAL CONSTITUENT:

1.Medicarpin:

An isoflavonoid phytoalexin with antioxidant and antifungal properties, is produced by leguminous plants mainly in response to biotic or abiotic elicitation. Is mainly used as antifungal agent.

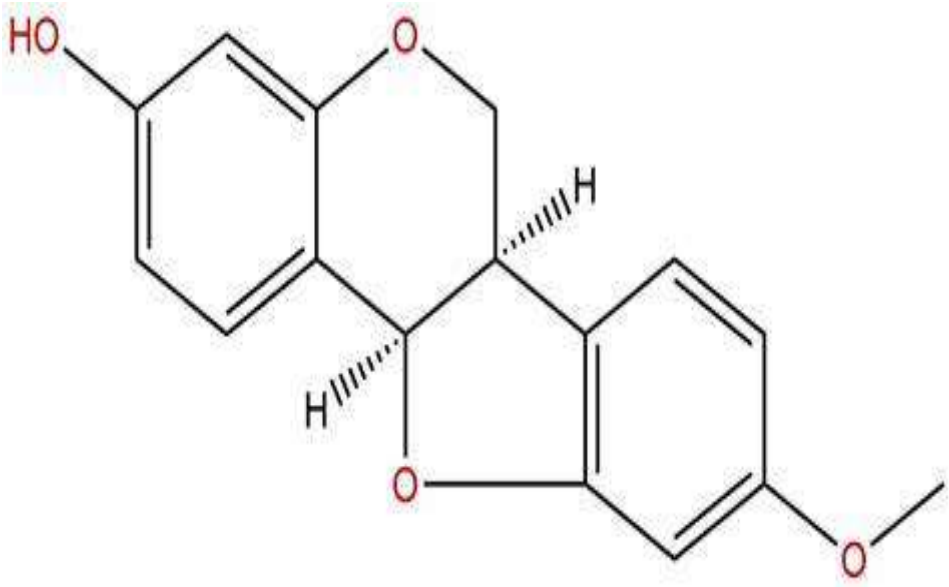

Fig. Structure of Medicarpin.

MATERIALS USED IN ANTIFUNGAL CREAM :

1.Chemicals: 1.Stearic acid : 8.0 gm

2.Glycerin. : 3.5 gm

3.Water:21.5 ml

4.Potassium Hydroxide : 0.33 gm

5.Medicarpin. : 4 gm

2.Active ingredient:

1. Medicarpin.

3.Equpiments:

1.Viscometer.

2. Hot air oven.

3. Griender.

4. Mortar and Pestle.

PLAN OF WORK:

1. The purpose of the present study was to formulate and evalute antifungal cream to give fungicidal or fungistatic effect.
2. The powder was prepared by using the API, chemicals like, Straric acid, Glucerin,Water, Potassium hydroxide and medicarpin was utilised as a base.
3. The cream was prepared by homogenous mixing of all the excipient.

CREAM MAKING METHODS:

•Steps:

- Firstly 8g Stearic Acid and in beaker .
- Heated it properly.
- Stir it properly.(melted) (Formation .1)
- Add 0.33 gm of potassium hydroxide in heated aqueous soln.
- Add 3.5gm glycerin in heated aqueous soln. (Formation.2)
- Add Fomration .1in Formation .2 (Dropwise Adding)
- Add 4gm of active ingredient (Medicarpin) in this soln.Add Flavouring agents in the solution if needed. (optional)

EVALUTION OF CREAM \EVALUTION PARAMETERS:

1. **Viscocity:**

The viscosity of gel was determined using viscometer at 25° C with a speed of 12rpm. The viscosity was recorded after 2 minutes.

2. **PH measurement:**

Potential of hydrogen (pH) measurement of the gel was carried out using a digital pH meter by dipping the glass electrode completely into the gel system. The potential of hydrogen was recorded and the average was recorded.

3. **Visual test:**

The prepared gel were inspected visually for their color, separation and syneresis, the complete preparation was much clear and transparent. These gels show good homogeneity.

4. **Thermal test:**

These thermal test was studied the against the heat, after 48h, of the preparation. Three samples of these preparation were placed different temperature at different room temperature like 40°C, 25°C and 45°C at 24h,1 week and 1 month and 1 year.

5. **Spreadability Test:**

The gel was weighed to be as high as 0.5 g and then placed on graph paper coated with glass. Then, we put another or next glass above the gel mass. The gel diameter was calculated by measuring the diameter length of several\all sides.

EVALUTION PARAMETERS:	**OBSERVATION:**
1.Viscosity	2000-4000 cps.
2. PH	7-8
3. Visual test	Brown colour.
4. Thermal test	2-8°C
5. Spreadability	5-7 cm

CONCLUSION:

The purpose of the present investigation was to formulated and evaluated the anti-fungal gel so a topical delivery system for the treatment of fungal allergy. Hence it can concluded that the anti- fungal gel was prepared by using Carbopol, Triethanolamine, Disodium edetate, Propylene glycol, Distilled water and Active ingredient (Medicarpin) which having smoothening, softening, Cleaning property during formulation.

RESULT:

•The anti-fungal cream were prepared with the combination of Potassium Hydroxide,Water, Glycerine,Stearic Acid and medicarpin. The anti-fungal gel was prepared successfully.

•The result indicates that the studies of formulation and evaluation for topical antifungal cream of Cladosporium Cladosporioides using Butea-Monosperma stem bark.

REFERENCE:

1. A REVIEW ON PHARMACOGNOSTIC STUDY OF BUTEA MONOSPERMA Aditya Gupta 1*, Shubham Singh 2, Khushboo Gaur 3, Abhishek Singh 4, Lalit Kumar 5,1PG Student, Department of Pharmaceutics, Swami Vivekanand Subharti University, Meerut, U.P., India 2PG Student, Department of Pharmaceutics, Lloyd College of Pharmaceutical Sciences and Research, Greater Noida, U.P., India.
2. Systemic Review on Palash – Butea Monosperma Lam. Kuntez Shivani Sharma1*, Harisha CR2,1*PhD scholar, 2 Head Pharmacognosy Department, ITRA, Jamnagar.
3. REVIEW ON BUTEA MONOSPERMA Firdaus Rana and Mazumder Avijit.
4. A COMPREHENSIVE REVIEW: BUTEA MONOSPERMA (LAM.) KUNTZE SATISH A BHALERAO1, DEEPA R VERMA2, NIKHIL C TELI2 AND ROHAN V GAVANKAR2.
5. Butea Monosperma : Sheena Nain, Pooja and Sonia Rani Palash Chaudhary Charan Singh Haryana Agricultural University, Hisar, Haryana Palash flower which is also known as Dhak.