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Formulation and Evaluation of Argemone Maxicana Linn Leaves as Antifungal Cream

Monika Dnyaneshwar Dange and Prof. Manisha Virkar
Gajanan Maharaj College of Pharmacy, Chh. Sambhajingar

Abstract: *The aim of this study was to evaluate the antifungal activities of Ethanolic leaf extract of Argemone Mexicana then formulate the best extract as topical semisolid preparation (Cream). The extract were subjected to qualitative tests, by screening the phytoconstituents present in extracts, and qualitative tests by evaluation of antimicrobial activity using agar diffusion method. This evaluation of antibacterial were done against standard bacterial strain (E.colli) respectively and standard fungal strain (candida albicans) respectively. Phytochemicals screening shows the presence of Alkaloids (S-scoulerine, Berberine). The present study suggest that ethanolic leaf extract exhibit more potent than the methanolic leaf extract. Also the best formula for cream selected which confirmed all the requirement for quality control tests for product (pH, Colour, Odour, texture, Sensitivity, Homogeneity and assay)...*

Keywords: Argemone Mexicana Linn, Antibacterial Activity, Antifungal Activities, Phytochemical Analysis, Cream Formulation

NEED OF INVESTIGATION:-

The need for investigation into antifungal creams arises from several important considerations:

1. Resistance Development

Fungi, like bacteria, can develop resistance to antifungal agents. Overuse or misuse of creams can lead to treatment failure.

Investigating resistance patterns helps in developing more effective formulations.

2. Safety and Side Effects

Long-term use or improper application can cause skin irritation, thinning, or allergic reactions. Clinical trials and safety studies are needed to ensure products are safe for all skin types.

3. Efficacy Against Different Fungal Species

Not all antifungal creams work equally well against all fungi (e.g., Candida, Tinea, Aspergillus). Research helps in tailoring creams to target specific infections effectively.

4. Formulation Improvements

New delivery systems (e.g., liposomal, nano-formulations) can enhance penetration and reduce side effects.

Investigations help optimize drug absorption and stability.

5. Combination Therapies

Studying the effect of combining antifungal agents with anti-inflammatory or antibacterial ingredients may provide better outcomes.

6. Treatment of Recurrent or Chronic Infections

Some fungal infections are persistent and hard to treat. Investigation can reveal more about recurrence causes and prevention.

OBJECTIVE:

To evaluate the antifungal activity of Argemone Mexicana Linn. Leaf extract and formulate it into a topical cream for the treatment of fungal infections.

The Argemone maxicana leaves is to explore their medicinal properties, particularly their ability to treat various cream including skin condition , infection, and even cancer.

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