

# A formulation for the Treatment of Dermal Mycoses in Camel

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Field of Invention: Pharmaceuticals

Inventors

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## BACKGROUND

- Mycotic skin infections are a constant serious problem in camels from various parts of the world.
- Round the year about 20% of the camel population suffers with dermal mycoses.
- Overall, 32 species of various fungi including fungi of zoonotic significance viz. *Candida albicans*, *Alternaria alternata*, *Epidermophyton floccosum*, *Scopulariopsis brevicaulis*, *Microsporum audouinii*, *M. canis*, *M. nanum*, *M. ferrugineum*, *Trichophyton verrucosum*, *T. mentagrophytes*, *T. schoenleinii*, *T. equinum*, *T. concentricum*, *T. tonsurans*, *T. violaceum*, *T. soudanense*, *T. rubrum*, *Sporothrix schenckii*, *Basidiobolus ranarum*, *Coccidioides immitis/ posadasii*, *Penicillium marneffeii*, *Penicillium spp.*, *Curvularia lunata*, *Exserohilum rostratum*, *Absidia corymbifera*, *Rhizopus oryzae*, *Aspergillus flavus*, *A. fumigatus*, *A. niger*, *A. terreus*, *A. versicolor*, *Aspergillus spp.* have been found to cause dermal mycoses in camel.
- These infections are chronic, spread rapidly over the body surface and difficult to treat medically.
- For majority of the fungal skin infections, long application schedules are required which causes much inconvenience.
- Also, some of the existing practices have side effects like irritation, nausea and diarrhoea.
- These existing treatments either may result in failure or do not provide broad spectrum of activity against variety of fungi causing skin infections in camels.
- Today, there is widespread interest in drugs derived from plants, because the drugs derived from plants are safe and dependable, compared with costly synthetic drugs.
- Therefore, in the present invention a standard formulation/ composition was developed involving a synergistic combination of plant extracts for the effective treatment of dermal mycoses in camels.

## OBJECTIVE OF THE INVENTION

- To provide a composition for use in the treatment of dermal mycoses in animals and/or humans, which is safe, economic, eco-friendly, effective against a wide variety of pathogenic fungi and provides effect in much lesser time.

## SUMMARY OF THE INVENTION

- In an embodiment, the present invention provides a composition comprising an extract of Eucalyptus (*Eucalyptus globulus*) leaves, extract of Anar (*Punica granatum*) leaves and juice of Garlic (*Allium sativum*) clove.
- In yet another embodiment, the composition of the present invention can be formulated into suitable formulations such as oil based formulations, powder, granules, tablets, ointments, creams, lotions.

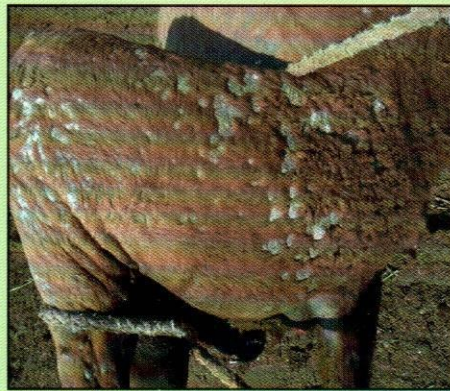
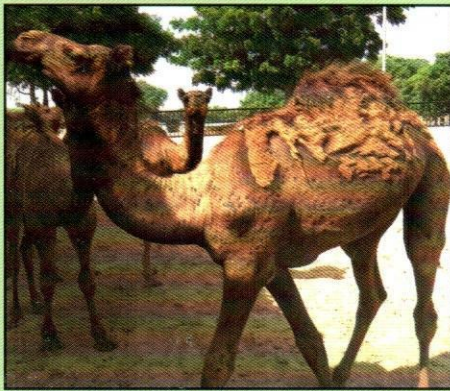
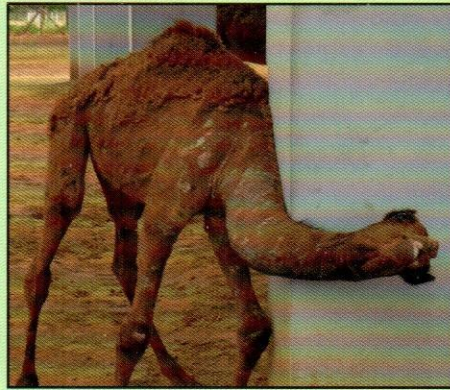
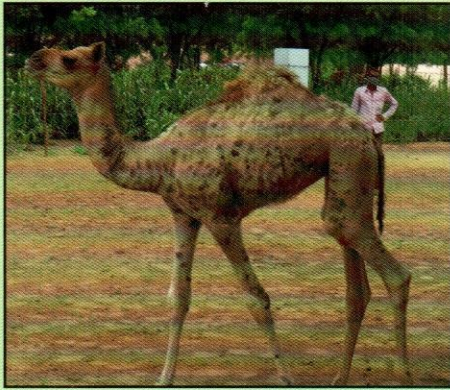


- The dry formulations like powder or granules can be for direct application, or can be reconstituted into suitable water or oil base prior to application.
- After treatment with the composition of the present invention, any sort of abnormal skin, like dry, scaly and bleeding surface occurring due to fungal lesions was found to be indistinguishable from normal skin after two months of application of the drug, including hair growth in all the treated animals.
- The composition can be applied and used in mycoses caused by any of the fungi, or even if caused by a combination of fungi.
- The composition of the present invention is found effective against a variety of fungi, including *Penicillium marneffeii*, *Basidiobolus ranarum*, *Aspergillus flavus*, *Aspergillus versicolor*, *Aspergillus spp.*, *Microsporum canis*, *Aspergillus terreus*, *Trichophyton soudanense*, *Absidia corymbifera*, *Microsporum nanum*, *Scopulariopsis brevicaulis* (dark tan), *Trichophyton tonsurans*, *Paracoccidioides spp.*, *Microsporum audouinii*, *Trichophyton equinum*, and *Scopulariopsis brevicaulis*.

### ADVANTAGES OF PRESENT FORMULATION

- The composition of the present invention is herbal product and its preparation involves economic and environment friendly process.
- The composition has a broad spectrum of activity, against all types of skin fungal infections of camels.
- The duration of treatment is short. Cure or relief is being achieved with only three applications within seven days of total duration of treatment.
- In case where prognosis is grave, the cure or relief can be achieved in only four applications within 11 days of total duration of treatment.
- The composition is also safe and no specific adverse effect on skin has been recorded. The hematology and liver function tests also shown that the composition is safe for use in camels without any toxicity.
- The composition is effective, as no treatment failure was observed in the tested camels.
- The efficacy of the composition of the present invention is also confirmed by symptomatic examination, mycological examination and histopathological examination.
- The formulation of the compositions of the present invention is also convenient and cost effective, because no additional preservative is required.
- The composition itself possesses even broad spectrum of antibacterial activities.
- The composition is also found effective in healing of minor wounds, erythema, oedema, inflammatory changes observed on the skin of infected camels.
- The composition of the present invention is also beneficial in restoring the normal skin texture and colour.





Camels showing multifocal, dry, scaly fungal skin lesions all over body with alopecia, itching and irritation.



Camels after application of herbal formulation showing healing of skin lesions with growth of hairs at affected parts.

Prepared by

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