



SIGMA<sup>®</sup>  
UNIVERSITY

# EUPHORBIA



# Synonym

- Gujarati: દૂધિયા પૌધા
- Hindi: दूधिया पौधा
- English: Mexican fireplant, Painted euphorbia

# Botanical name

- *Euphorbia serrata*

# Family

- Euphorbiaceae

# Chemical Constituents

- Diterpenoids: These are a primary and characteristic class of compounds found in the *Euphorbia* genus and serve as important taxonomic markers.
- Triterpenoids: Compounds such as cycloartenol, euphol, beta-amyrin, and lupeol are often found in *Euphorbia* species.
- Steroids: Sterols, like stigmasterol and cycloartenol, are also common constituents.

# Therapeutic Uses

- Anticancer: Extracts from various *Euphorbia* species have demonstrated activity against several cancer cell lines in laboratory studies. The latex is a primary focus for its potent cytotoxic diterpenoids.
- Anti-inflammatory: Active compounds like triterpenes have shown significant anti-inflammatory effects.
- Antimicrobial: Many species have demonstrated antibacterial and antifungal properties against a range of human pathogens.
- Antiviral: Some *Euphorbia* species have shown promise against viruses like HIV and dengue.
- Antioxidant: Flavonoids and other phenolic compounds contribute to the plant's potent free-radical scavenging activity.

# Marketed Preparations

- Herbal and traditional medicine: Unregulated preparations are available online and through traditional medicine practitioners, primarily as dried extracts or powders. Given the known risks, self-treating with these products is not advisable.

- Ornamental plants: The largest commercial market for *Euphorbia* is for decorative purposes. Many species, like the pencil cactus (*E. tirucalli*), are popular as ornamental plants, which poses a risk of accidental exposure to their toxic sap.