

REVIEW ARTICLE

Hibiscus rosa-sinensis: A Comprehensive Review of Its Pharmacognostic Features, Phytochemistry, Pharmacological Activities, and Cosmetic Applications

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ABSTRACT

This plant received a great deal of attention as drugs got attention in the focus of many, especially in the early decades. If you see the Shoe flower or *Hibiscus rosa sinensis*, you may not just use it as your Decoration plant In Restoration plants in some other parts of the world, this plant is also an indispensable decor. It has been traditionally used in cosmetics, foods, and medications. Active ingredients are flavonoids, terpenoids, glycosides, and saponins. Plant offers many remedial actions like anti-inflammatory, anti-diabetic, anti-microbial, anti-pyretic, anti-fertility, and more. Toxicological studies confirm that super animal safe with higher dosages of plant extract. In the present review, these plants are presented with the aim of evaluating the preference and exploring their future pharmacological use through clinical trials, by providing their distribution, chemical composition, and major purpose.

Keywords: *Hibiscus rosa-sinensis*, Pharmacological potential, Traditional medicine, Toxicological studies, Clinical trials.

Received 24.12.2025

Revised 09.02.2026

Accepted 11.04.2025

How to cite this article:

Neeraj B. L. and Daksha L. A. *Hibiscus rosa-sinensis*: A Comprehensive Review of Its Pharmacognostic Features, Phytochemistry, Pharmacological Activities, and Cosmetic Applications. Adv. Biores. Vol 17 [4] April 2026. 297-302

INTRODUCTION

Hibiscus rosa-sinensis, the China rose or shoe flower is a common decorative and medicinal plant in the Malvaceae family. It is a yearly plant to tropical and subtropical locales and employments in cosmetic, social, and therapeutic applications in most conventional therapeutic frameworks including Ayurvedic, Conventional Chinese medicine (TCM), and Unani medicine. This has been widely used for the management of bacterial and fungal infections, wounds, fever, cough, inflammation, stomach ulcers, and diabetes. (1). *Hibiscus rosa-sinensis* has been cited in ancient medical books because it has so many uses. The petals of the plant are utilized in the preparation of herbal medications and characteristic colors in China and moreover, they have wide applications in devout ceremonies in India (2). The plant is famously associated with its application in managing cardiovascular diseases, skin health, and hair growth. The plant has been applied in traditional formulations and the scope of its potential in modern pharmacognostic studies is also boosted by its application. (3). *Hibiscus rosa-sinensis* is a quickly developing evergreen shrub that has expansive garish trumpet flowers, shiny leaves, and a bushy growth habit as per botanical definitions. This is a profitable crop for warm regions and finds extensive cultivation as it has numerous medicinal as well as ornamental applications. Pharmacognostical studies such as macro, micro, and physicochemical examinations are essential to adopt because of the heavy adulteration of this crop with allied crops. (4). According to phytochemical studies, hibiscus is a huge store of bioactive molecules like flavonoids, anthocyanins, tannins, phenolic acids, saponins, and terpenoids which offer it wide pharmacological actions (5). Studies confirmed its antioxidant, anti-inflammatory, antibacterial, hepatoprotective, and cardioprotective activities, which substantiate its use in traditional medicine and drug discovery (6). Along with a comprehensive introduction to taxonomy, geographical distribution, culture, herbal features, phytochemicals, traditional and contemporary medicinal applications, and pharmacological activities, this article provides a wide overview of hibiscus. It

explains the significance of hibiscus both in conventional and scientific terms by integrating present information to open avenues towards further phytomedicine research and development.

HISTORY

Herbal medicine has been used throughout history for various purposes. Because of their ability to generate chemical compounds that are essential in the prevention of many diseases, they are categorized as therapeutic plants. Diseases like diabetes, cancer, etc. Many distinct types of chemical compounds play essential biological roles, as well as defend themselves from predators like herbivores, fungi, and insects. Thus far, these chemicals have been isolated in a quantity estimated to be less than greater than ten percent of the total.

Medicinal plants can thus be grouped into three major categories:

- a) Modern medicine or modern medical systems (which use 30 to 35 species of medicinal plants)
- b) Traditional medicine or organized and codified traditional medicine with written treatises such as Ayurveda, Siddha, Unani, Amchi, Tibetan systems of medicine which use 1200 to 2000 species of medicinal plants. They primarily employ more than 8,000 types of therapeutic herbs.

Hibiscus rosa-sinensis is the name applied to the whole group of ornamentals, tropical hibiscus so common in the southern United States, so this one can get to be a little confusing. Hibiscus is a hybrid cross of any one of these eight wild species, so not quite true. So modern hibiscus forms are hybrids of many species, even if they are still labeled *Hibiscus rosa-sinensis* cultivars. But one of the original species of plants goes by the name *Hibiscus rosa-sinensis*. *Hibiscus rosa-sinensis* is believed to have originated in China, possibly in India. No wild stands of *Hibiscus rosa-sinensis* are known to exist anywhere, so botanists can't be certain. It came from somewhere explorers in the 1700s brought it back to Europe. One specimen of the species *Hibiscus rosa-sinensis* was collected by Carl Linnaeus, who went on to develop the Latin-based taxonomy of plants that would become a standard. He gave it that name when he published his famous books in 1753. He gave the hibiscus its original name by describing a crimson double blossom. Since then, private collectors and botanical gardens around Europe have been cultivating *Hibiscus rosa-sinensis*. A few years ago, HVH imported it from Europe, and we currently sell it in our online store. This plant is gorgeous, robust, glossy-leafed, and has double, vivid red blooms. For contemporary hibiscus enthusiasts, it is highly recommended because it is enjoyable and simple to grow, even as a houseplant. (7)

Taxonomical Classification:(8)

Kingdom: Plantae - Plants

Subkingdom: Tracheobionta - Vascular plants

Super division: Spermatophyta - Seed plants

Division: Magnoliophyta - Flowering plants

Class: Magnoliopsida - Dicotyledons

Family: Malvaceae

Genus: Hibiscus

Species: *Hibiscus rosa-sinensis*

GEOGRAPHICAL DISTRIBUTION AND CULTIVATION:

Distribution: *Hibiscus rosa-sinensis*, broadly named China Rose or Shoe Flower, is endemic to the Southeast Asia region. India, China, Malaysia, Indonesia, the Philippines, Thailand, and indeed Sri Lanka are all domestic to expansive populations of this flower. It is found in Egypt, Kenya, Nigeria, and Madagascar in Africa. Along with Brazil, Colombia, and Argentina, it is also found in the southern states of Florida, Texas, and Hawaii. It can also be found in some Pacific islands including Fiji and Tahiti and Jamaica, Cuba, and Puerto Rico. It is widespread in parts of the city, on the sides of roads, and in gardens. It grows in warm moist places with well-drained soil, commonly found in subtropical and tropical regions of the world.

Cultivation: Warm temperatures along with high relative humidity promote the best development of *Hibiscus rosa sinensis*. It's most healthy in well-drained rich loamy soil. Propagation is generally done through cuttings from last year's mature wood. Other techniques such as layering, budding, and grafting as well as air layering are also successful. Plants that are air or earth layered show better growth and flowering. The shoe flower suffers considerable damage from insects such as the mites and red spider which causes curling of the leaves and stunts growth and flowering. Used Flowers, Roots, Leaves Plant, and Tissue Parts. (9)

MICROSCOPY

Flower: The pedicel: The pedicel has a transverse part that resembles a rounded form. The cortex, which is made up of 1-2 rows of hypodermal chlorenchymatous cells, 1-2 rows of collenchymatous cells, and 3–4 rows of parenchymatous cells, is visible after the outer, hairy epidermis. Intermittent clusters of lignified fibers serve as a representation of the pericycle. The vascular tissue is made up of small clusters of per medullary phloem inside a broad parenchymatous pith that is surrounded by a continuous ring of collateral vascular bundles. Parenchymatous cells contain calcium oxalate cluster crystals, secretory glands, and mucilage cells.

The Petal: A transverse section of the petal reveals homogenous mesophyll enclosed by inner and outer epidermis. Large mucilage canals alternate with tiny collateral vascular bundles to penetrate the parenchymatous cortex. The nearly spherical parenchymatous cells with thin walls and little intercellular space make up the homogeneous mesophyll. The parenchymatous cells that make up the cortex have almost spherical walls and tiny intercellular gaps.

The gynoecium: Five locules, each containing two ovules, are visible in a transverse section of the pentacarpellary ovary that has an almost spherical contour. The ovary displays a parenchymatous mesophyll enclosed by an outer and inner epidermis. The spherical, somewhat thin-walled parenchyma with tiny intercellular gaps makes up the mesophyll. It is crossed by mucilage cavities and five vascular strands. Every vascular strand is made up of a phloem made up of cells with thin walls and a xylem with a few spiral arteries.

Root: The roots exhibit phelloderm, cork, and secondary phloem, which is stratified because it alternates with parenchyma in eight to ten tangential bands of phloem fibers. There are tyloses in several of the vessels within the large xylem zone. The phelloderm contains calcium oxalate clusters.

Stem: Microscopically, the stem has a thin outer layer of cork, with a considerably thickened center area caused by a heavy lignin deposition. A broad zone of secondary phloem follows a narrow zone of phelloderm. There are mucilage cells in the pith. When exposed to UV light, powder mounted in nitrocellulose fluoresces green.

Leaf: A dorsiventral structure is present in the leaf. There are trichomes of the glandular and stellate varieties. On the underside are stomata of the ranunculaceous or rubiaceous type. There are a few mucilage cells in the midrib zone. There are crystal clusters of calcium oxalate and grains of starch. When powdered leaf is treated with 1 N NaOH in methanol, it fluoresces dark green when exposed to UV light 4.44 is the palisade ratio. Vein islet number: 23–97 per sq. mm; stomatal index: 20.38. (10,11)

MACROSCOPY (12)

Colour: Purple

Taste: Slightly sweet and mucilaginous

Odor: Faint or nearly odorless

Calyx: Persistent, green, 5-lobed, with an additional epicalyx of 5 segments

Corolla: Polypetalous (separate petals), large, showy, and funnel-shape

Petals: Usually five, broad, delicate, and slightly wrinkled

Pistil and Stamen: Monadelphous (stamens fused into a single column surrounding the style)

Leaves: Simple, alternate, ovate to lanceolate, glossy green with serrated margins

Stem: Woody or semi-woody, branched, with a rough texture

Roots: Fibrous, with a slightly brownish exterior

Adulterant: In the market, dried flowers from *Rhododendron arboreum* Sm. (Fam. Ericaceae) are employed as adulterants since they physically resemble *Hibiscus rosa-sinensis*.

Allied species: Numerous of them are hybrids of related species, such *Hibiscus schizopetalus* and *Hibiscus tiliaceus*. (13)

PHYTOCONSTITUENTS:

Table 1: Phytoconstituents of *hibiscus rosa sinensis*

Plant parts	Phytochemical compounds	References
Flowers	Thiamine, Riboflavin, Niacin, Ascorbic acid, pelargonidin, Apigenidin, fructose, oxalic acid, Citric acid, glucose, vitamins, anthocyanins, flavonoids, cyaniding diglucoside, 3,7-diglucoside, cyanidin-3-sophoroside-5- glycosides, cyanidin-3, 5-diglucoside and Quercetin39-3-diglucoside.	(14,15)
Leaves	β-sitosterol, taraxeryl acetate, alkaloids, sterols, fatty alcohol, fatty acids, hydrocarbon content, glycosides, reducing sugars, fatty materials, resin and sterols, sterculic and malvalic acid, gentisic acid	
Stem	β-sitosterol, sterculic acid, Teraxeryl acetate, cyclicacids and malvalic acids.	
Roots	Mucilage, Glycosides, gums, tannins, Saponins, phytosterols, flavonoids, fixed oils, amino acids, fats and proteins.	
Petals	Quercetin-3 di-0-beta-D-glucoside, quercetin-3-7-di-0-beta-D-glucoside, quercetin-3-0-beta-D-sophorotrioside, kaempferol-3-0-beta-D-xylosyl-glucoside19, cholesterol, campesterol, β-sitosterol, catalase.	

PHARMACOLOGICAL ACTIVITIES

Flavonoids and polyphenols, such as quercetin and kaempferol, which neutralize free radicals and decrease oxidative stress, are capable for this plant's high antioxidant action. Bioactive substances including flavonoids and saponins found in hibiscus have anti-inflammatory impacts by impacting the proinflammatory mediator. It is successful in controlling diabetes since it can improve affront affectability and lower blood sugar levels. The high antioxidant action of this plant stems from flavonoids and polyphenols including quercetin and kaempferol that neutralize free radicals and decrease oxidative stress. Hibiscus's anti-inflammatory properties come from its bioactive compounds like flavonoids and saponins, which affect proinflammatory mediators. It can lower blood sugar levels and improve insulin sensitivity, making it effective for managing diabetes. For centuries, this herb has been utilized to diminish fever and relieve pain due to its pain-relieving and fever-reducing properties. Also, an investigation has found that hibiscus extricates has liver-protecting qualities that boost detoxification processes and protect the liver from harm caused by toxins. The plant's antibacterial and anti-inflammatory properties enhance its capacity to cure wounds by speeding up tissue regeneration and halting diseases. It has moreover been utilized for the most part because of its impacts on regenerative hormones and menstrual control, which can impact abundance. Later it is proposed that hibiscus extricates may boost memory and considering capacities, advancing brain wellbeing and conceivably warding off infections that cause mental decline. The pharmacological effects of *Hibiscus rosa-sinensis* are attributed to its different chemical compounds, such as flavonoids, tannins, alkaloids, saponins, terpenoids, and phenolic compounds. These bioactive components are shown in different concentrations depending on the portion of the plant utilized, which in turn influences the helpful qualities of the substance. Due to its wide range of medicinal applications, hibiscus is a well-known herbal remedy that holds potential for integration into modern medicine. All things considered, advanced studies and clinical trials are necessary to gain a comprehensive understanding of its mechanisms and ensure its safe and effective usage. (15,16,17,18,19,20)

COSMETIC USES

Skin Care Benefits of Hibiscus:

The skincare industry values hibiscus because its properties protect skin and provide nutrients while revitalizing the complexion. Mellow natural acids derived from hibiscus gently exfoliate skin which leads to smoother skin texture by reducing age spots, blemishes, and hyperpigmentation while promoting even skin tone. The abundant vitamin C content stimulates collagen generation that enhances skin immovability and elasticity as well as minimizes wrinkles and fine lines. Hibiscus has capacities as a characteristic treatment against maturing much appreciated for its strong antioxidants that simultaneously reduce irritation and redness while protecting skin from natural stressors such as pollution and UV rays. Hibiscus serves as a viable arrangement for dry skin since it gives profound hydration which makes a difference in moisture maintenance. Hibiscus helps diminish dull circles and puffiness while smoothing out drooping skin around the eyes. Utilizing Hibiscus in high-quality cleansers and body shines changes skin care into a lavish spa-like treatment which clears out skin delicate and revitalized. The normal skin toner properties of Hibiscus brighten complexions and refine skin surface through its delicate exfoliating impacts. (21)

Hair Care Benefits of Hibiscus:

Hibiscus is a critical ingredient of hair care products for its capacity to fortify, feed, and restore the hair strands. Its amino corrosive composition is capable of keratin generation which advances solid hair growth and diminishes breakage. Hibiscus moreover helps protect hair from turning gray rashly — it advances the generation of melanin which helps to keep up characteristic hair color. It is commonly utilized in normal drugs to remedy hair loss and hair loss, empowering hair development without the adverse impacts of manufactured medications. Hibiscus added to conditioners and hair oils makes hair more manageable and sparkle, whereas too profound hydration of the strands to avoid part closes frizz. The mucilage of hibiscus works as a characteristic conditioner to impart delicate quality and smoothness. It is a characteristic color enhancer for hair when blended with coffee powder or henna, resulting in a chemical-free hair color. Hibiscus is too great for hair volume, which shows up more solid and thicker. (22,23,24)

Aromatherapy & Wellness Uses of Hibiscus:

In addition to its tasteful points of interest, hibiscus is critical for generally wellbeing. Making utilizes of its delicate smell, aromatherapy empowers unwinding, diminishes push, and makes a difference with considering. In addition to hydrating the body, hibiscus tea has effective cancer prevention agents that help in keeping the skin healthy from the inside out. In addition, hibiscus is antifungal and antibacterial, serving as a characteristic cure for relieving skin irritation and avoiding superficial contaminations. With such a wide cluster of benefits for skincare, haircare, and common wellness, hibiscus is genuinely a surprising and multifunctional common ingredient. Standard self-care schedules with a mixture of hibiscus can result in solid hair, brilliant skin, and overall prosperity. (25,26,27,28)

CONCLUSION

Hibiscus is a characteristic cure that may be useful to one's wellbeing, skincare, and hair care. Hibiscus is a major mending plant in each perspective of excellence and self-care; it makes a difference advance hair development whereas decreasing untimely gray hair, increases collagen generation, and makes a difference to decreases maturing signs. Its anti-inflammatory, moisturizing, and antioxidant impacts make it a great addition to hair care items, skincare items, and indeed aromatherapy medicines. As with creams, serums, shampoos, and indeed herbal teas, hibiscus does not fall flat in being one of the most dependable natural cures for one's wellbeing and excellence.

CONFLICT OF INTEREST

The Authors Declare that there is no conflict of interest.

AUTHOR CONTRIBUTIONS:

All authors contributed equally to the research, writing, and review of this manuscript.

REFERENCES

1. Jadhav VM, Thorat RM, Kadam VJ, Sathe NS. (2009): Hibiscus rosa sinensis Linn—"Rudrapuspa": a review. J Pharm Res. Jul; 2(7): 1168-73
2. Geeganage, J., & Gunathilaka, M. (2024). Mechanistic Insight into Anti-inflammatory Potential of *Hibiscus rosa-sinensis* Flower Extract as a Herbal Remedy: A Systematic Review. Journal of Herbal Medicine, 45, 100884. <https://doi.org/10.1016/j.hermed.2024.100884>
3. Amtaghri, S., Qabouche, A., Slaoui, M., & Eddouks, M. (2023). A Comprehensive Overview of Hibiscus rosa-sinensis L.: Its Ethnobotanical Uses, Phytochemistry, Therapeutic Uses, Pharmacological Activities, and Toxicology. Endocrine Metabolic & Immune Disorders - Drug Targets, 24(1), 86–115. <https://doi.org/10.2174/1871530323666230522113405>
4. Goswami, S., Yadav, S., Kumar, P., (2023). A review on the pharmacological activities of hibiscus Rosa-Sinensis. In International Journal of Pharmaceutical Research and Applications Vol. 8, Issue 3, pp. 3161–3172. <https://doi.org/10.35629/7781-080331613172>
5. Pearline, D., Kamat, N., Thiagarajan, P., (2015). Rosa sinensis (Hibiscus) -a versatile Indian origin plant. Journal of Chemical and Pharmaceutical Sciences, 8(4), 970–971.
6. Ghadiya, V. (2024). *Hibiscus Rosa-Sinensis* and *Azadirachta Indica* Healing For Getting Skin Inflammation Naturally: A Review. Journal of Population Therapeutics and Clinical Pharmacology, 1046–1058. <https://doi.org/10.53555/4rvj1z80>
7. Hidden Valley Hibiscus-Hibiscus history. (n.d.-b). <https://www.hiddenvalleyhibiscus.com/history/earlyhistory.htm>
8. Khristi, V., & Patel, V. H. (2017). Therapeutic Potential of Hibiscus Rosa Sinensis: A REVIEW. *International Journal of Nutrition and Dietetics*, 4(2), 105–123.

9. Missoum, A. (2018). An update review on *Hibiscus rosa sinensis* phytochemistry and medicinal uses. *Journal of Ayurvedic and Herbal Medicine*, 4(3), 135–146. <https://doi.org/10.31254/jahm.2018.4308>
10. Zahid H, Rizwani GH, Khalid L, Shareef H. (2016): Comparative profile of *Hibiscus schizopetalus* (Mast) hook and *Hibiscus rosa-sinensis* L.(Malvaceae). *Journal of Pharmacognosy and Phytochemistry*. 2016;5(1):131-6.
11. Kokate CK, Purohit AP and Gokhale SB, (2005): *Pharmacognosy*, Nirali Prakashan, Pune, 2005. Nadkarni AK, *Indian Meteria Medica*. Bombay Popular Prakashan, India, 2005.
12. Govindarajan, N., Sundharamoorthy, S., Kannan, N., & Raju, I. (2019). Macro-Microscopic Identification of Dried Flowers of *Hibiscus rosa-sinensis* L. and its Differentiation from Adulterant *Rhododendron arboreum* Sm. *Pharmacognosy Journal*, 11(3), 613–616.
13. Gupta RK. (1981): *Text Book of Systematic Botany*, 5th Edition, Atma Ram and Sons, Delhi, Lucknow, 1981, 224.
14. Khan, I. M., et al, (2017). *Hibiscus rosa-sinensis* L. (Malvaceae): Distribution, Chemistry and Uses. In *International Journal of Chemical and Biochemical Sciences* (Vols. 12–12, pp. 147–151).
15. Al-Snafi, A. E. (2018). Chemical constituents, pharmacological effects and therapeutic importance of *Hibiscus rosa-sinensis*- A review. In *IOSR Journal Of Pharmacy*, *IOSR Journal of Pharmacy* (pp. 101–119). <https://www.iosrphr.org/papers/vol8-issue7/Version-2/K080702101119.pdf>
16. Shandilya, S., & Pathak, V. (2021). Chemical Constituents & Pharmacological Effects of *Hibiscus Rosa- Sinensis* (China Rose) – A Review. In *World Journal of Pharmaceutical Research*, *World Journal of Pharmaceutical Research*, Vol. 10, Issue 1, pp. 858–869. <https://doi.org/10.20959/wjpr20211-19535>
17. Kumar, A., Kumar, S., Pharmacy College, & L.N Pharmacy college. (2022). Pharmacological Review on *Hibiscus Rosa Sinensis*. *International Journal of Novel Research and Development*, 7(11), a244–a246. <https://www.ijnrd.org/papers/IJNRD2211025.pdf>
18. Goswami, S., Yadav, S., Kumar, P., (2023): Naraina vidhya peeth, Group of institutions, Faculty of pharmacy, Kanpur U.P, & Radharaman institute of pharmaceutical Sciences, Ratibhad Bhopal M.P. A review on the pharmacological activities of *hibiscus Rosa-Sinensis*. In *International Journal of Pharmaceutical Research and Applications* (Vol. 8, Issue 3, pp. 3161–3172). <https://doi.org/10.35629/7781-080331613172>
19. Zulkurnain, E. I., Ramli, S., Ali, A. A., James, R. J., Kamarazaman, I. S., & Halim, H. (2023). The Phytochemical and Pharmacological Effects of *Hibiscus rosa-sinensis*: A Review. *International Journal of Pharmaceutical Investigation*, 13(3), 422–431. <https://doi.org/10.5530/ijpi.13.3.053>
20. Hemarana K, Jeyashree KV, Babu M, Kannan M. (2014): Preliminary bioactive compounds screening and antibacterial activity of methanolic extract of *Hibiscus rosa sinensis* against selected skin pathogens. *Research Journal of Pharmaceutical, Biological and Chemical Sciences*;5(2):1210–1218.
21. Hibiscus benefits: The impressive benefits of hibiscus for your skin. (n.d.-c). Spongellé. <https://spongelle.com/blogs/blog/hibiscus-benefits>
22. Hibiscus for hair growth: Benefits + how to use. (2022). SkinKraft. <https://skinkraft.com /blogs/articles/how-to-use-hibiscus-for-hair-growth>
23. St.Botanica. (2024). Hibiscus Powder for hair: 14 amazing benefits that unlock gorgeous hair! St Botanica Blog. <https://www.stbotanica.com/blog/hibiscus-powder-for-hair>
24. Jain, M. (2023, May 24). 5 DIY ways to use hibiscus will make your dream for healthy hair come true! Health shots. <https://www.healthshots.com/how-to/5-ways-to-use-hibiscus-for-hair/>
25. Montalvo-González, E., Villagrán, Z., González-Torres, S., Iñiguez-Muñoz, L., Isiordia-Espinoza, M., Ruvalcaba-Gómez, J., Arteaga-Garibay, R., Acosta, J., González-Silva, N., & Anaya-Esparza, L. (2022). Physiological Effects and Human Health Benefits of *Hibiscus sabdariffa*: A Review of Clinical Trials. *Pharmaceuticals*, 15(4), 464. <https://doi.org/10.3390/ph15040464>
26. Reis, M., & Reis, M. (2024). Hibiscus: 8 health benefits, how to make tea & side effects. Tua Saúde. <https://www.tuasauade.com/en/hibiscus/>
27. 1.Amtaghri, S., Qabouche, A., Slaoui, M., & Eddouks, M. (2023). A Comprehensive Overview of *Hibiscus rosa-sinensis* L.: Its Ethnobotanical Uses, Phytochemistry, Therapeutic Uses, Pharmacological Activities, and Toxicology. *Endocrine Metabolic & Immune Disorders - Drug Targets*, 24(1), 86–115. <https://doi.org/10.2174/1871530323666230522113405>
28. Prasad MP. (2014): In vitro phytochemical analysis and antioxidant studies of *Hibiscus* species. *International Journal of Pure & Applied Bioscience*; 2(3):83-8.

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