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Review Article

Comprehensive review on pharmacological activities of *Adansonia digitata*

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ABSTRACT

Adansonia digitata, commonly known as the baobab tree, founded mainly in Africa and is also found in Indiana region. It associates to the kapok tree group and this tree hold record of highest wood tree in the world. The baobab is an adaptable plant that provides protection, food, clothing, medicament and raw materials for multiple products. All eatable section including seeds, leaves, roots, flowers, pulp and bark, are shared to be beneficial. Baobab trees are over 4,000 years old. *Adansonia digitata* contains many phytochemicals such as vitamin C, steroids, flavonoids, epicatechin, campestral and amino acids. This large tree can growth a height of 20-25 meters and a cyclize of up to 9 meters and has been in place for centuries. It is called the "Queen of Carbon Storage" because it can absorb so much carbon from the air. The tree is known for its size, unique shape and long-life expectancy, often surviving for thousands of years. Baobab has a variety of biological properties, including antibacterial, antimalarial, antidiarrheal, antianemic, antiasthmatic, antiviral, antioxidant. Phytochemical analysis has revealed the presence of flavonoids, phytosterols, amino acids, fatty acids, vitamins, and minerals. Parts of the plant are used for treating bronchial asthma, dermatitis, sickle cell anemia, diuretic, antidiabetic, antidiarrheal, antidysenteric, laxative, and hiccups in children. This article summarizes the pharmacological, phytochemical, and pharmacological properties of the baobab tree.

1. Introduction

In nature, numerous plant species offer substantial nutritional and medicinal benefits. Among these, *Adansonia digitata* commonly known as the baobab or 'Kalpvriksha' stands out. The term 'Kalpvriksha' is derived from Sanskrit, meaning "vital force" or "long-lived tree."[1] This is also called by baobab; lemonade tree and it belongs to the family of Bombacaceae.[2] Its fruit hangs singly on a long stalk, and both the leaves and fruit are edible. Adored in ancient Ayurveda texts for its remarkable medicinal properties, the baobab is a majestic tree known for its extensive pharmacological benefits.[3] The baobab is an unusually long-living and versatile African tree.[4] It has a huge trunk, up to 10 meters in diameter, reaching a height of approximately 25 meters, and might live for lots of years. This plant mainly found in
suitable areas of Africa.[5,6]

2. History

The scientific classification of the baobab tree is Adansonia, origin to Africa, Madagascar, and Australia.[1] In the genus of Adansonia, there is a total of eight species: six in Madagascar, single in Australia, and single in Africa. According to the estimation of French naturalist Michel Adanson, some of these baobabs were believed to be more than 4,000 years old. The unique thing about these trees

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Figure 1: *Adansonia digitata* African and Indian Species

is their flowers.[2] The number of front-handed flowers, the petals of which coil to the left, and right-handed blooms, whose petals coil to the right while remaining in the bud, are equal.[3] However, it has been observed that front-handed flowers have more male reproductive parts than left-handed flowers, and can have as many as 1,600 stamens per flower.[4] Some of these baobabs manage to increases in size even once reclining supine over the asphalt. Reports even exist of baobabs catching on fire due to spontaneous combustion and thereby gaining the sad nickname of "dead rat trees".[5,6]

Table 1: Taxonomic classification of *Adansonia digitata*[2]

Kingdom	Planate
Subkingdom	Viridiplantae
Division	Tacheophyta
Class	Magnoliopsida
Order	Malvaless
Family	Bombacaceae
Genus	Adansonia
Species	*Adansonia digitata*- Baobab
Bionomical Name	*Adansonia digitata* (Baobab)
Common Name	Kalpvriksha

2.1. Synonyms

1. *Adansonia baobab* L
2. *Adansonia baobab* Gaertn.
3. *Adansonia integrifolia* Raf.
4. *Adansonia kilima* Pettigrew, K.L. Bell, Bhagw, Grinan, Jillani, Jean Mey, Wab
5. *Adansonia scutula* Steud Syno
6. *Adansonia situla* (Lour.) Spreng.
7. *Adansonia somalensis* Chiov.
8. *Adansonia sphaerocarpa* A. Chev.
9. *Adansonia sulcata* A. Chev.
10. *Baobabus digitata* (L.) Kuntze.
11. *Ophelus sitularius* Lour.

2.2. Vernacular Names[7]

Synonym of Baobab

1. English: Baobab
2. Tamil: Papparapuli, anaipuliyamaram
3. Bengali: Gorakamali
4. Gujarati: Gorak ambli
5. Hindi: Gorak amli
6. Kannada: Anehunese, bhramlica
7. Marathi: Gorakh sheng
8. Telagu: Brahmaamlika, seemaichinthakaaya
9. Sanskrit: Kuchandana
10. Malyalam: Manjeti
11. Ayurvedic: Sheet–phala, Ravanaam-likaa, Gorakshi, Panchparni
12. Unanai: Gorakh imli

3. Origin and Distribution

The 'kalpvriksha' scientifically known as *Adansonia digitata*, thrives in the hot and humid as in the tropics Africa. There are eight species of the baobab tree; one of these species is adapted to the harsh, arid environments of Africa. 18] Adansonia gibbosa, occurs in northwestern Australia; the remaining six species are all endemic to discrete areas. Many of the larger *Adansonia digitata* have hollow centers. It is a condition arising from natural processes and partly from human activities.[8]

4. Constituents

1. *Leaves* **:** Proteins, oils, sugars, cinder, water soluble vitamins and sources of calcium and orthophosphate can be discovered in foliage. Mucilage exists in leaves. and when it dissolves, generates glucuronic and galacturonic acids alongside small quantities of glucose, rhamnose, glucose, and arabinose.[9]
2. *Fruit*: Furfural can be discovered in fruit, lipids, calcium, ash, protein, and B1 vitamin.
3. *Seed:* Rich in fatty acids (oleic with palmitic acid), calcium, fats, protein, ash, with vitamin B1. Linoleic as well as stearic acid). Once a young shoot gets injured, the stem bark, containing ß sitosterol, releases significant quantities of semi-fluid white gum which interacts with acids.[10]

5. Morphology

The massive, deciduous tree *Adansonia digitata* get larger up to 82-85 foot in rise and 29-30 foot in circumference when it reaches maturity. Usually bulbous and enlarged, its trunk has a barrel-like shape. With its striking appearance, the baobab tree has a lot of branches. A reddish-brown, smooth, soft bark with longitudinal fibers covering it is the characteristic of *Adansonia digitata*. Trees in their youth have simple leaves. It is possible to eat the sensitive roots, seeds, leaves, and flowers of the plant. Sitting alone or in pairs at the leaf axils, the huge, pendulous, white blooms bloom.[2]

6. Parts of *Adansonia digitata*

6.1. Leaves

Early in the season, the leaves are foliate, early deciduous, and frequently simple; as the leaves grow, they become 5-7(-9)-foliate. According to (Arowora KA et al. (2019), leaves are hand-shaped and alternate of the direction of branches. Leaflets vary greatly in size and are sessile to briefly petiolulate.[11] A mature leaf's overall diameter may reach 20 cm, and its medial leaflet, The leaf shape is elliptic to ovate-elliptic, with a pointed tip and a base that extends downwards can measure 5–15X2–7 cm.[2]

Figure 2: Indian *Adansonia digitata* leaves

Under the starry sky, the sides are all incorrect, and the leaves appear juvenile, either glistening or glistening when they are young. Primary caduceus stipules are smaller or narrowly triangular, measuring 2-5 mm long, and have no margin except for a ciliated margin. The leaves of the baobab tree are a fundamental source of sustenance for large communities in Africa and its central region.[12] In the wet season, the baobab leaves become soft, and individuals collect the fresh leaves. During the final month of the rainy season, there is a large-scale harvest of the leaves, which are then dried for both household and commercial use in the dry season. The leaves are sun-dried and can be kept whole or processed by pounding and grinding into a fine powder. The tender leaves are commonly utilized, prepared in a similar manner to spinach, and are frequently dried, ground, and utilized as a condiment for porridge, raw grains, or cooked rice.[13]

6.2. Seeds

Adansonia digitata's seeds are uniform, complete, and filled with pulp. The outer mature color is dark brown to reddish black. It is used in large quantities in seeds. It is eaten fresh, dried, or ground to cook. Baobab seeds are rich in

Figure 3: *Adansonia digitata* leaves - African and Indian Tree

the following minerals: phosphorus, calcium, magnesium, sodium and zinc. Edible oil, which is valuable for both industrial and medicinal purposes, is derived from seeds of the *Adansonia digitata*.[5]

Figure 4: *Adansonia digitata* seeds

Table 2: Mineral contain of *Adansonia digitata* seeds (ug/g dry weight)[14]

Mineral	Content (ug/g dry weight)
Phosphorus (P)	6140.0
Ca	3950
Mg	3520
Zn	25.7
Na	19.6
Fe	18.3
Mn	10.6

6.3. Flower

The flowers of the baobab tree are a sight to behold. These large, white flowers have an intricate design made up of numerous delicate petals, forming a radiant appearance. The flowers typically bloom at night and last for only about 24 hours before they start to wilt.[12] Thescent sways and attracts various predators, such as bats and moths that are crucial to the growth of trees. When in bloom, they create a stunning contrast against the backdrop of sturdy tree trunks, creating a visual feast for those lucky enough to witness this natural phenomenon.[15]

Figure 5: *Adansonia digitata* flower's - African and Indian Tree

6.4. Fruit

Depending on the species, baobab fruits vary greatly in size, shape, and external appearance and are suspended from long, thick stalks.[13] The fruits are typically enormous, with an average length of 10 to 45 centimeters and a diameter of 7 to 17 centimeters.[16] Their shapes range from pyriform to oval to football- to egg-like. The fruit's outer layer varies in hardness; some may be cracked open with a palm hammer, while others need a hammer to break through the thick, protective shell.[17] When a Baobab tree bears fruit, the pods hang on the tree until they ripen and are either picked by people or animals, or they are blown off by high winds.[18] The presence of calcium in baobab fruits, potassium in the bloodstream, and vitamin C in cabbage is important for bone health and immunity.[15]

Figure 6: *Adansonia digitata* fruit Indian and African species

6.5. Fruit pulp

It's clear that baobab pulp is an excellent provider of vitamin Improving it will increase its value. Quality control and maintenance durability using proper procedures. This can increase the attractiveness of mass applications, Enhancing the organization of food chains in emerging locales. Mass maintenance is currently not possible. population, will suffer a severe decline.[5] It is very important to address the problems associated with increasing the length of the dough to overcome the problems of maintaining its nutritional content and psychological characteristics.[2] Availability of a substance for absorption and use by the body. Research is needed to gain a deeper understanding of the impact. A person's health may be affected because the body is not properly utilizing the ingested food. Human body shape. The pulp has about ten times more vitamin C. It is made from oranges It has a lot of sugar, but no starch.[1]

Figure 7: African *Adansonia digitata* fruit pulp

Table 3: Analysis of baobab fruit pulp (mg/100 g)[14]

Constituent	Content (mg/100g)
Ascorbic acid	280.00-300.00
Ca	293.00
P	96.00-118.00
CHO	75.60
Dietary fibers (soluble and insoluble)	52.00
K	2.31
Protein	2.30
Fats	0.27

6.6. Red fiber/Funicles

The fruits of the baobab tree, especially the red fiber, have been recognized for their health benefits and uses. Red cabbage is rich in dietary fiber, especially soluble fiber, which acts as a prebiotic to feed good gut bacteria and promote a healthy gut microbiome. Moreover, red baobab fibers have anti-inflammatory properties and antioxidants that shield the body from oxidative stress and free radicals.

By slowing the absorption of sugar, it supports healthy blood sugar levels, promotes healthy gut bacteria and supports healthy cholesterol levels. In addition, red baobab fiber promotes healthy digestion, regulates bowel movements, and prevents constipation. As a vegan and gluten-free diet, there are many foods, drinks and nutritional supplements that are meant to add nutrition and function to a healthy lifestyle.

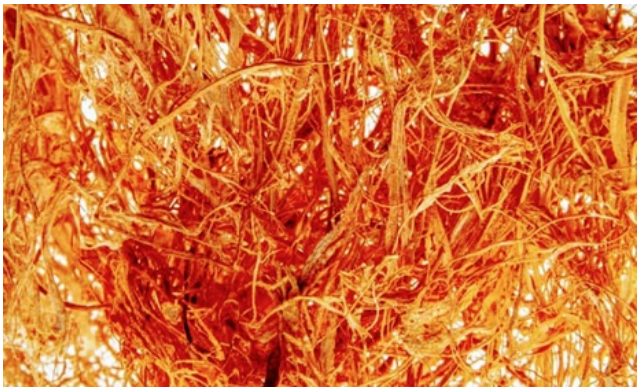

Figure 8: *Adansonia digitata* red fiber/funicles

7. Fertilization of *Adansonia digitata*

The Baobab tree has a unique way of making seeds. At night, its big, fragrant flowers bloom and release a sweet smell that attracts bats, moths, and other nocturnal animals. These animals are drawn to the flowers' nectar, a sweet, energy-rich liquid that gives them a tasty treat. As they feed on the nectar, they accidentally pick up pollen from one flower and transfer it to another. This pollen transfer is crucial for the tree's reproduction, as it allows the tree to make seeds. The Baobab tree's nocturnal blooming is a special adaptation that helps it take advantage of the night-time animals that are active during this time. The tree's big, white flowers are like beacons in the dark, guiding the animals to the nectar. As the animals move from flower to flower, they help the tree make seeds. Many animals depend on seeds as a primary source of food, which also assists in the spreading and growth of new branches from the tree's roots. Without the help of these nocturnal animals, the Baobab tree wouldn't be able to make seeds and reproduce. It's a remarkable example of how plants and animals work together in nature.[1]

8. Traditional Information About *Adansonia digitata*

Various diseases can be treated with *Adansonia digitata*, which is found in the bark and seeds of various plants. Various sicknesses, counting intestinal sickness, TB, fever, microbial contamination, loose bowels, iron deficiency, loose bowels, toothaches, and so forward, can be treated with it (Kumar G et al., 2022).[19] The natural product mash and clears out of utilized as a safe booster and so lighten loose bowels. The major calculates driving the commercialization of different baobab items is the amazingly tall levels of ascorbic corrosive and dietary fiber found within the natural product of the *Adanasonia digitata* plant.[20]

9. Phytochemicals in *Adansonia digitata*

All of *Adansonia digitata*'s parts, including the seed, leaves, and fruit pulp, contain a variety of phytochemical constituents that include carbon, nitrogen, oxygen, and a few trace elements combined.[21] The powdered dried Plant extracts including flavonoids, saponins, terpenoids, tannins, alkaloids, phenols, and steroids are rich in phytochemicals. It was known that these compounds had physiological activity and the potential to be used medicinally.[22] Ascorbic acid (280–300 mg/100 gm) and calcium (293 mg/100 gm) are found in baobab fruit pulp analysis. *Adansonia digitata* seed analysis contains multiple minerals, including phosphorus (6140 μg/gm dry weight), calcium (3950 μg/gm), magnesium (3520 μg/gm), sodium, and iron (19 μg/gm).[23]

10. Pharmacological Uses

A variety of bioactive compounds found in the African *Adansonia digitata* L, have investigated for medicinal effects. Here are some of the main medicinal uses associated with *Adansonia digitata*:

10.1. Antioxidant activity

According to Ngimbo Richard Marcel et al. (2020), baobab fruits are rich in vitamin C and other antioxidants that help to eliminate free radicals and reduce air pollution. Carotenoids, polyphenolic compounds and vitamins E and C are beneficial in refuse diseases linked to oxidative stress-related conditions, including cancer, heart disease, inflammation and related conditions. to old age.[24]*Adansonia digitata* (baobab) products exhibit high antioxidant capacity, highlighting their potential in therapeutic, nutraceutical, and cosmeceutical applications.[25] Additionally, red fiber from baobab has been identified as a valuable component for food preparation and nutraceutical use, promoting health due to its strong antioxidant properties.[26] Research comparing baobab products to orange and kiwi fruit has underscored these benefits.[27]

10.2. Anti-inflammatory activity

As a result of their demonstrated anti-inflammatory qualities, fruit pulp, bark, and leaf extracts may be useful in the treatment of inflammatory diseases such as arthritis. This study focuses on the inhibition of NO production due

Table 4: Traditional usage of the *Adanasonia digitata* tree [1,9]

Plant part	Use	Preparation
Bark	Treating Fever/Anemia	Powdered mixed with porridge
Dried fruit pulp	Asthma	Powder Form
Soft juicy part of fruits	Dysentery, microbial disease	With figs made to syrup
Seed pulp	Diarrhea & dysentery	Mixed with butter milk
Seeds	Worms, diarrhea	Powder of raw seeds mixed with water
Flesh with peel	Tonic, hypogalactia, refreshing	Decoction
Stem bark	Wound healing	Decoction
Bark fiber	Making ropes, musical instruments	-
White matrix of baobab fruit	Source cream of tartar	-
Leaves	Malaria, diarrhea, kidney bladder diseases, asthma etc.	Infusion and decoction.

to high polyphenol concentrations. The methanol extract of *Adansonia digitata* leaves demonstrated considerable anti-inflammatory properties.[24] Significantly, the extract prevented NF-kB activation, which lowered NO production by suppressing the expression of the pro-inflammatory iNOS gene. According to (Quadey AK et al.2021) This report provides the first evidence of the anti-inflammatory properties linked to the methanol extract obtained from *Adansonia digitata* (MEAD).

10.3. Anti-microbial activity

Several parts of the baobab tree have shown antimicrobial activity against many pathogens, including bacteria, fungi and viruses. Phytochemical analyses indicate that the root bark of *Adansonia digitata* contains only terpenoids, tannins, phlobatannins and saponins. In addition, cardiac glycosides were found in the bark of the stems.[28] Pink saponins derived from the plant have demonstrated antibacterial properties in vitro. Additionally, saponin extracts from the leaves of Gymnema sylvestre and Eclipta prostrata exhibit antimicrobial effects against a range of microorganisms, including Pseudomonas aeruginosa, Escherichia coli, Salmonella typhi, Klebsiella pneumoniae, and Proteus mirabilis, encompassing both gram-negative bacteria and mycobacteria.(Hershit Rana et al., 2022). It is essential to compare the effectiveness of ASBE and ESBE against E. coli, a bacterial strain that exhibits resistance to the commonly used antibiotic gentamicin (10 μg), with the performance of gentamicin (10 μg) against the bacteria it has been evaluated. Additionally, Staphylococcus aureus, Streptococcus faecalis, Bacillus subtilis, Escherichia coli, and Mycobacterium have also demonstrated antibiotic activity.[24]

10.4. Anti-diabetic activity

Some studies have suggested that baobab extracts may help in lowering blood sugar levels, making it potentially beneficial for managing diabetes.[29] The stem bark, pulp, and extract of *Adansonia digitata* were evaluated for their hypoglycemic effects in rats suffering from diabetes. (induced on streptozotocin) Methanol was used as a solvent. Both fruit pulp and chlorpropamide have comparable efficacy in lowering blood sugar at 300 mg/kg.[30]

10.5. Hepatoprotective activity

The liver's health can be improved by consuming baobab, which has been shown to have protective effects against harmful substances and toxins.[31] The aqueous extract of *Adansonia digitata* pulp exhibited a significant protective effect against liver injury induced by acetaminophen in rat models. The treatment with this extract resulted in a notable reduction in liver pathology among the subjects.[23] A measure of liver function was taken by analyzing total protein, overall bi- and triglycerides (Bl) levels, as well as ALP, fasting enzymes, amino acids, statins added to the water mass index (AST), and liquid oxygen ion (ALT).

10.6. Analgesic activity

This research examined the analgesic properties of the aqueous extract derived from the bark of *Adansonia digitata*, utilizing Wistar rats as the experimental subjects.[22] The initial phase of the study employed a formalin paw licking test, which revealed a significant decrease in the duration of paw licking among the animals treated with the aqueous extract of *Adansonia digitata* bark.[19]

10.7. Antiviral activity

A commercially standardized preparation comprising the leaves, pulp, and seeds of *Adansonia digitata* was subjected to extraction utilizing three distinct solvents: water, methanol, and DMSO. The resulting extracts were evaluated for their minimum antiviral inhibitory concentration (MIC100) against influenza, herpes simplex virus, and respiratory syncytial virus.[23] Furthermore, the study examined the secretion of cytokines (IL-6 and IL-8) in human epithelial cell cultures. Among the various

extracts, the leaf extract exhibited the most pronounced antiviral activity, whereas the DMSO extract demonstrated the greatest efficacy. Notably, the influenza virus displayed the highest sensitivity to these extracts. Although the extracts from fruit pulp and seeds were found to be less effective, they still retained significant antiviral properties.[7]

10.8. Immune-modulatory activity

This topic investigated the immunomodulatory properties of various extracts derived from *Adansonia digitata* L. using a delayed hypersensitivity mouse model. T cells may be activated for the extracts, as evidenced by a significant increase in delayed immune responses. In addition, the extracts significantly Improved the phagocytic index in immunosuppressed mice by rapidly removing organic particles from the circulation and increased the antibody titer induced by sheep red blood cells (SRBC). The findings indicate that the methanol extract from the fruit pulp, leaves, and root bark of *Adansonia digitata* can serve as an agent to modulate the immune system.16]

10.9. Diuretic activity

The diuretic activity of methanolic and aqueous extracts from the leaves of *Adansonia digitata* was examined in a rat model. The study involved measuring body weight prior to and following the testing period, as well as assessing total urine output and the concentrations of sodium (Na+), potassium (K), and chloride (Cl) ions in the urine.[23] Administration of both methanolic and aqueous extracts at a dosage of 100 mg/kg body weight resulted in an increase in urinary volume and elevated levels of various ions and anions. The reference diuretic used in this study was furosemide.[1]

10.10. Antibacterial activity

Using the disk distribution method and microbroth analysis, (Singh Sugandha et al.2013) discovered that *Adansonia digitata* stem bark was effective in killing various clinical strains of Escherichia coli (Escherich I) and KlebSiella, as well as Proteus mirabilis, Mirabilisaurus, and Staphylococcus species (201). The results of the photochemical analysis verified the existence of potassium, flavonoids, reducing sugars, and steroids. They are also antibacterial because of their flavonoids e.g.[32]

10.11. Anti-rheumatoid arthritis activity

The use of Freund's immunoassay method was used the study aimed to assess the antirheumatoid properties of *Adansonia digitata* seeds, with dosages of 200 mg/kg and 400 mg/kg administered on days 7, 14, and 21 and inflammation was reduced.[33] Additionally, radiographic findings indicated the presence of arthritis.[9]

10.12. Anti-sickling activity

The incubation of 2% sodium metabisulfite on Hbss sickle blood samples revealed that the characteristics of sickles cell cells were altered by different dosages of anhydrous methanolic extract from *Adansonia digitata* bark, as observed by.[1] Incubation of the extract with Hbss blood samples was not followed by pre-washing with sodium metabisulfite, resulting in no immunosuppressive activity.[2]

10.13. Antidepressant activity

This topic study aimed to assess the antidepressant effects of the methanolic extract derived from the stem bark of *Adansonia digitata*. Standard methods were employed for phytochemical analysis and to conduct an oral toxicity test (LD50). The antidepressant potential of the extract, administered at doses ranging from 250 to 1000 mg/kg, was examined through the tail suspension test (TST) and the forced swim test (FST) in rats. To evaluate motor coordination and function, the beam walking method (BWA) and the open field test (OFT) were utilized. Additionally, the impact of the methanolic extract on cognitive abilities was assessed using the novel object recognition task (NORT). Phytochemical analysis identified the presence of steroids, tannins, flavonoids, alkaloids, and saponins. The estimated LD50 was found to exceed 5000 mg/kg when administered orally. The extract significantly reduced the duration of immobility in both TST and FST ($P < 0.01$) in a dose-dependent manner. No notable changes were observed in the number of crossings or footfalls during the OFT and BWA. Furthermore, the extract did not significantly affect cognitive performance in the NORT. In summary, the methanolic extract of Adansonia digitata's stem bark exhibits notable antidepressant properties.[7]

10.14. Ameliorative activity

Type 2 diabetes and stroke consists of a collection of lead to oxidative stress, impairing cellular function and causing problems for various organs. After three weeks of treatment, the results of *Adansonia digitata* significantly improved hyperglycemia and reduced dyslipidemia ($P \leq 0.001$), and significantly reduced the atherogenic index in plasma ($P \leq 0.000$). The results compare to the highest levels of liver biomarkers, circulation and urea. The severity of liver damage was reduced with higher doses, while the heart and kidneys usually recovered. The inflammation was removed. Both higher doses showed positive results. Compared to the positive control, the treatment with *Adansonia digitata* products resulted in lower levels of all investigated biomarkers, indicating protective effects. Total body weight decreased from 4 to 11%. Successfully induced metabolic syndrome in male Wistar rats using a large quantity sugar. By encouraging weight loss and showing anti-inflammatory, lipid-lowering, hypoglycemic,

kidney, liver, and cardioprotective effects, the *Adansonia digitata* blueberry treatment showed promise for metabolic syndrome.[34]

10.15. Anti-trypanosomel activity

Trypanosoma Congolese is inhibited by baobab root extracts within 60 minutes and Trypanosoma brucei is significantly reduced in the mouse.[1]

10.16. Vitamin C healing effect

Vitamin C is a vital antioxidant and a crucial element of human nutrition. Research has demonstrated that Vitamin C is associated with lower blood pressure, enhanced immune response against various tropical diseases, reduced risk of cataracts, and decreased incidence of coronary heart disease for healthy, Vitamin C is essential for our health, and the recommended daily intake varies depending on our lifestyle. Non-smokers need 65 mg, but smokers require more. To fully nourish our bodies, around 140 mg per day is ideal.[23] Those recovering from illnesses or nursing mothers may benefit from even higher amounts, up to 250 mg. The good news is that baobab fruit is an incredible source of Vitamin C, containing an average of 2800 mg per kilogram. To meet the daily requirement, you'd only need 23 grams of baobab powder. And for the healing phase, 90 grams is recommended, with 50 grams being the minimum. So, if you're looking to boost your Vitamin C intake, reach for some baobab powder and feel the difference it can make in your overall well-being. It's a simple and delicious way to support your health![22]

10.17. Antidote to poison

Certain plant parts, like the bark, pulp, and seeds, have been discovered to be effective in protecting against poisoning by Strophanthus plants. Isn't that fascinating? These natural defenses could be a game-changer for those seeking to safeguard themselves against these potentially harmful species. (Sidibe and Williams,Wickens .1979) proposed that these components are "adansonein", which is an alkaloid similar to strophanthus.[5] "In the past, especially in East Africa, the sap from these plants has been used as a potent ingredient in arrow poison, adding a deadly edge to ancient hunting techniques. This natural toxin has long fascinated explorers and historians, showcasing the ingenuity of our ancestors in harnessing the power of the natural world..The animals that were poisoned in Malawi were given baobab extract to neutralize the poison before consuming the food, as per their practice.[9]

11. Health Advantages of *Adansonia digitata*

Below advantages are seen:

1. *Vitamins and polyphenol*: These substances can reduce inflammation.
2. *High fiber*: Promotes a healthy and balanced digestive system.
3. *Food*: A useful addition to your diet, whether raw or powdered.
4. Stabilizing blood sugar: This intervention can maintain blood sugar levels
5. *Rich in vitamins and minerals*: Provides essential nutrients for overall health.
6. *Helps in weight loss*: It can make you fuller for longer and helps you control your weight.[1]

12. Conclusion

Whether it is for food, non-food products, or medicine (Baobab), the most common name for this plant is *Adansonia digitata*.The baobab leaf, seed, and pulp are all nutrient-rich and can be eaten raw. Many studies have shown that baobab has good biological functions. Leaf, bark, root, pulp and seeds have a number of uses in medicine across Africa and are known to have significant, anti-inflammatory, pain relieving, antioxidant and anti-viral activities. far-flung exploration on *Adansonia digitata* (baobab) shows that this factory contains remedial and remedial plats like as alkaloids, saponins, flavonoids, tannins, and terpenoids. All corridor ofthis factory has been narrated to be friendly

for earthborn sap, commercially feasible. Bioactive baobab extracts have shown a wide range of health-promoting effects in laboratory studies. Baobab has been a popular ingredient in Ayurvedic medicine for centuries. It requires further scientific research before additional clinical trials can be performed to verify its medicinal and therapeutic benefits. In addition, the development of agricultural and biotechnological methods is very important to protect this endangered and healthy tree species of Africa and to increase the population, which is very low in the Indian continent. The world's demand for baobab phytochemicals, such as saponins, tannins, alkaloids, phenols, and steroids, is due to the use of tissue culture technology to preserve them. The increasing global demand for baobab, especially in the cosmetic and pharmaceutical industries due to its beneficial fatty acids, increases the need for sustainable and conservation practices. This review highlights the need for further research and development to better understand and utilize *Adansonia digitata*.

13. Source of Funding

None.

14. Conflict of Interest

None.

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