Cuscuta reflexa Roxb. (*Aftimoon)*: A traditional miracle plant

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ABSTRACT

Cuscuta reflexa Roxb., is a member of the Cuscutaceae/ Convolvulaceae family with a rich history of traditional use in various cultures across the world. For decades, it has been used in folk medicine for its diverse range of therapeutic properties. Traditional healers have used it as a remedy for liver disorders, jaundice, and spleen enlargement. Additionally, it has been utilized to alleviate headaches, enhance memory, and as a potent aphrodisiac. The plant's use also extends to the management of skin disorders and as a diuretic agent. Its traditional use is rooted in the belief that *Cuscuta reflexa* possesses therapeutic properties due to its unique growth habits and interactions with host plants. The scientific investigations into *Cuscuta reflexa* Roxb. have revealed its diverse phytopharmacological properties. The plant exhibits antioxidant, anti-inflammatory, anti-anxiolytic, antidepressant, and antimicrobial activities ascribed to the presence of flavonoids, alkaloids, and phenolic compounds. Furthermore, studies indicate its potential in regulating blood glucose levels and lipid profiles, suggesting its utility in managing diabetes and related complications. *Cuscuta reflexa* Roxb. also demonstrates hepatoprotective effects, shielding the liver from damage induced by toxins and oxidative stress. These therapeutic properties may be attributed to numerous phytochemicals like cuscutin, cuscutalin, cuscutamine, amarbelin, quercetin, reflexin, luteolin, myricetin and beta-sterol, etc., present in this miracle plant. *Cuscuta reflexa* Roxb. stands as a testament to the amalgamation of traditional wisdom and modern scientific research. Its traditional uses align with its pharmacological properties, making it a promising candidate for the development of novel therapeutic agents. Continued exploration of this plant's chemical constituents and their biological activities can potentially lead to the development of new drugs, thereby bridging the gap between traditional knowledge and contemporary medicine. This chapter provides a description of the traditional, ethnopharmacological, phytopharmacological, and therapeutic aspects of *Cuscuta reflexa* Roxb.

The traditional, ethnopharmacological, phytopharmacological, and therapeutic characteristics of Cuscuta reflexa Roxb are outlined in this chapter.

Keywords: *Cuscuta reflexa* Roxb., *Aftimoon*, Parasitic plant, Phytochemistry, Unani Medicine

I. INTRODUCTION

Cuscuta reflexa Roxb., is a parasitic plant commonly known as *Aftimoon hindi* or *vilayti*, *amarbel*, *akashabela* dodder plant, witch's hair, love vine, devil's hair. *Aftimoon* is an Arabic word taken from Greek, having a meaning of 'growing on thyme.' Dioscorides gave this name to a plant that flourished in Cappidocia and Pamphylis and was employed for purging yellow and black bile (Dymock *et al*., 1891). In the realm of botanical wonders, *Cuscuta reflexa* Roxb., emerges as a fascinating subject of study, captivating the attention of botanists, ethnopharmacologists, and herbal medicine practitioners alike. This intricate plant species, belonging

to the Cuscutaceae/ Convolvulaceae family, has long been revered for its diverse array of traditional, ethnopharmacological, phytopharmacological, and therapeutic applications.

It is a perennial herb with no roots or leaves that climb and sucks nutrients from its host plant through a distinctive organ termed haustorium. The highest quality is seen in the thin and red hue. Ancient Unani physicians like Dioscorides, *Ibn Sina*, and *Jalinoos* reported its medical benefits. Their intimate knowledge of *Cuscuta reflexa* Roxb. and its applications, passed down through generations, provides invaluable clues to its therapeutic potential. It is used to treat variety of ailment arising because of excessive *balgham*, *sauda*, and *safra* (phlegm, black & yellow bile), such as *Malikholia* (Melancholia), *Waswas* (Anxiety), *Kaboos* (Nightmare), *Sara* (Epilepsy), *Khafqan* (Palpitation), *Falij* (Paralysis), *Laqwa* (Facial paralysis), Alopecia, *Yarqan* (Jaundice) and other diseases of liver and spleen. Hence, it is traditionally called as 'Miracle plant' (Ibn Baitar, 1986; Ghani, 2011; Lalchand *et al*., 2017; Khory and Katrak, 1985; Fatima *et al.*, 2023). Understanding the plant's role in indigenous healing practices not only enriches our knowledge but also underscores the importance of preserving and respecting traditional knowledge in the modern scientific landscape.

In the context of contemporary medicine, *C. reflexa* stands as a promising candidate for novel drug formulations, offering a natural source of bioactive compounds like alkaloids, protein, flavonoids, resin, tannin, glycosides and carbohydrates, aluminium, iron, calcium, sodium and potassium (Anonymous, 1992; Fatima, 2022). These compounds hold the key to unlocking new therapeutic avenues, potentially revolutionizing the field of herbal medicine and paving the way for innovative pharmacological applications (Fatima, 2022).

This chapter embarks on a comprehensive exploration of *Cuscuta reflexa* Roxb., delving into its rich historical context and traditional significance. Rooted in ancient herbal remedies and cultural practices, the plant has woven itself into the tapestry of traditional medicine systems across the globe. By unraveling these age-old traditions, we gain profound insights into the profound impact this botanical marvel has had on various cultures and societies.

A. **Taxonomy** (Ibn Sina, 2010; Anonymous, 1950; Anonymous, 2007; Anonymous, 1992)

Kingdom	Plantae
Subkingdom	Tracheophyta
Division	Angiosperm
Class	Eudicots
Order	Solanales
Family	Cuscutaceae/ Convolvulaceae
Genus	*Cuscuta*
Species	*reflexa* (100-170 Species)
Botanical name	*Cuscuta reflexa* Roxb.

Fig (a) *Aftimoon* (*Cuscuta reflexa Roxb.*)

Fig (b) Sample of Dried *Aftimoon* (*Cuscuta reflexa Roxb.*)

B. **Vernacular names** (Ibn Sina, 2010; Anonymous, 1950; Anonymous, 2007; Anonymous, 1992; Ashraf, H. M., ynm)

Arabic	*Aftimoon, Kasus, Sharulzabiha*
Assamese	*Akakhilata*
Bengali	*Algusi, Swarnlata*
English	*Dodder, Air Creeper*
French	*Cuscute*
Gujrati	*Akaswel*
Hindi	*Amarbel, Akashbel*
Kannada	*Amaraballi, Akashballi*
Marathi	*Nirmuli*
Persian	*Darakht-e-pechan, Aftimoon, Tukhm-e-kasus*
Punjabi	*Nilathari, Amil*
Sanskrit	*Akashabhavna, Amarvela*
Tamil	*SitamaPurgonalu, Erumaikkottan,Kodiyagundal*
Telugu	*Nulutega, Lanjasavasamu,Savarapukada*
Unani	*Aftimoon*
Urdu	*Aftimoon, Akasbel*

C. **Geographical distribution**

This parasitic climber is commonly found in tropical and temperate regions of the world throughout India and ascends the Himalayan to about 3000 meters and in Ceylon up to an altitude of 8000 ft., sometimes completely covering bushes and trees. It is abundant in the Bengal plains, Punjab and U.P. Additionally, it can be discovered in Pakistan, Persia, Afghanistan, Malaysia, Nepal, and Thailand. Every year during the rainy season, on the same plant, it sprouts afresh and blooms from late October to early March (Anonymous, 1950; Nadkarni, 1982; Kirtikar and Basu, 2012; Khory and Katrak, 1985; Anonymous, 2007; Anonymous, 1992; Lubhaya, 1977).

D. **Botanical description**

The herbaceous climber *C. reflexa* originates from the soil and becomes a parasite on the trees it encounters. It is chiefly found on *Zizyphus, Adhatoda*, and *Ficus* etc. It has very long, slightly stout, closely twining stems that are branching, glabrous, pale greenish, yellow, and occasionally speckled with red. Flowers are solitary or in short racemes or umbellate clusters of 2-4; pedicles are short, glabrous, and typically curved (occasionally 0); and the bracts are 1.5 mm long, ovate-oblong, obtuse, and fleshy. The calyx is almost completely divided, with lobes that are 3 mm long, slightly uneven, broadly oval, obtuse, glabrous, and fleshy. Corolla white, tube 6-8 by 4 mm, nearly cylindrical; lobes 2.5-3 mm long, deltoid, acute, reflexed; scales large, oblong, subquadrate or rather obovate, fimbriate and incurved at the apex, almost at the base of corolla tube. Anthers about ½ excreted beyond the top of the corolla-tube, and there are stamens in the corolla tube's throat and few filaments.Ovary is ovoid; style simple, very short and thick; stigma 2, distinct, large, thick and fleshy, 1.5 mm long, ovoid. Capsules are 6-8 mm in diameter, depressed-globose, glabrous, circumscissile near the base. Seeds are 2-4 in number, black, and glabrous (Nadkarni, 1982; Anonymous, 1992; Kirtikar and Basu, 2012).

II. UNANI DESCRIPTION

A. **Morphological features (*Mahiyat*)**

Aftimoon is an Arabic word taken from the Greek language, having a meaning of 'growing on thyme.' Dioscorides gave this name to a plant that flourished in Cappidocia and Pamphylis and was employed for purging yellow and black bile (Dymock *et al*., 1891). *Aftimoon* is a parasitic plant that climbs and grows upon the larger trees usually, it spreads on *Mango, Acacia, Zizyphus, Adhatoda*, and *Ficus* trees. It is very thin like thread yellowish-golden in colour and does not grow from the soil. Leaves of Cuscuta are very small; seeds are minute and reddish yellow coloured. Flowers are hair-like thin, reddish, acrid taste with some astringency. It takes its nutrition from the host plant and makes the latter dry. It is usually found in hilly areas and forests. *Cuscuta*, which is found on the Island of Aqritash, called *Aqritashi* is considered to be the best. *Aftimoon Muqaddasi* is found on *Muqaddas* Island, grown on *Satar* (*Zataria multiflora*) plant; however, it is not the actual *Aftimoon*. On rubbing, it gives a smell similar to that of *Satar*. *Aftimoon* is usually adulterated with *Hasha* (*Thymus vulgaris*) but can be identified on the basis of the difference in colour as *Hasha* is not red like *Aftimoon* (Ghani, 2011).

Ibn-e-Sina has described *Aftimoon* as an acrid, red, and seed-bearing plant. The plant which is used medicinally as *Aftimoon* in India is imported from Persia. Muslim physicians used this as a purgative of yellow and black bile and mentioned its efficacy in various disorders of the brain like fits, melancholy and insanity etc. *Habish Ibn Al-Hasan* claims *Malikholia* was successfully treated when patients were administered *Aftimoon* either alone or in combination with *Afsanteen* (Ibn Baitar, 1986; Ibn Sina, 2010; Lubhaya, 1977; Bagdadi, 2005; Ashraf, H. M., ynm).

B. **Parts used (*Hisas-e-Musta'mla*)**

Whole plant and Seeds (Ghani, 2011; Ibn Baitar, 1986; Lubhaya, 1977; Anonymous, 1992; Nadkarni, 1982)

C. **Temperament (*Mizaj*)**

Hot 3º and Dry 3º (As per *Jalinoos*)	(Ibn Baitar, 1986; Ibn Sina, 2010; Ashraf, H. M., ynm)
Hot 3º and Dry 2º	(Lubhaya, 1977; Anonymous, 1992)
Hot 3º and Dry 1º (As per *Ibn Sina*)	(Ghani, 2011; Ibn Sina, 2010)
Hot2º and Dry 2º	(Ghani, 2011; Anonymous, 2007)

D. **Toxicity (*Mazarrat*)**

It is toxic to the lungs and people with hot temperament. It produces uneasiness, dryness, syncope, and increased thirst. (Ghani, 2011; Ashraf, H. M., ynm)

E. **Corrective (*Musleh*)**

Zafran (Crocus sativus), Katira (Astragalus gemmifer Labill*), Sharbat Sandal Anar, Samagh-e-Arabi (Acacia arabica), Gul-e-Banafsha (Viola odorata), Gule-e-Gaozaban (Borago officianalis)* and fry in *Roghan-e-Badam before use* (Ghani, 2011; Ibn Baitar, 1986; Anonymous, 1992; Ashraf, H. M., ynm).

F. **Substitute (*Badal*)**

Ustukhudoos (Lavandula stoechas), Bisfaij (Polypodium vulgare), Turbud (Ipomoea turpethum), Ghariqoon (Agaricus alba), Gil-e-armani, Katira (Astragalus gemmifer Labill) (Ghani, 2011; Anonymous, 1992; Ashraf, H. M., ynm)

G. **Therapeutic dosage (*Miqdar-e-Khurak*)**

3-5 gm	(Lubhaya, 1977; Anonymous, 2007; Ashraf, H. M., ynm)
4-6 gm	(Anonymous, 1992)
3.5-7 gm	(Ibn Baitar, 1986)
7-14 gm	(Ghani, 2011)
14-21 gm (Rhazi)	(Ibn Baitar, 1986)

H. **Compound formulations (*Murakkabat*)**

Sikanjbeen Aftimooni, Sharbat Deenar, Itrifal Aftimoon (Anonymous, 1992; Anonymous, 2007), *Majoon Naja, Majoon Ushba, Itrifal Ustukhudoos, Itrifal Deedan-wa-ghadadi, Sharbat Ahmad Shahi, Arq Musaffi-e-Khoon ba-nuskha-e-khas* (Lubhaya, 1977)

I. **Pharmacological actions (*Af'aal*)**

Actions	**Reference**
Mulattif (Demulcent)	Ghani, 2011; Lubhaya, 1977; Anonymous, 1992
Muhallil (Resolvent)	Ghani, 2011; Lubhaya, 1977; Kirtikar and Basu, 2012; Anonymous, 1992; Anonymous, 2007; Ashraf, H. M., ynm
Mufatteh (Deobstruent)	Ghani, 2011; Anonymous, 2007
Mushil-e-balgham-wa-sauda-wa-safra (Purgative of phlegm, black and yellow bile)	Ghani, 2011; Lubhaya, 1977; Ibn Baitar, 1986; Kirtikar and Basu, 2012; Khory and Katrak, 1985; Nadkarni, 1982; Anonymous, 1992; Anonymous, 2007; Ibn Sina, 2010; Ibn Sina, 1996; Ashraf, H. M., ynm
Musaffi-e-khoon (Blood purifier)	Ghani, 2011; Lubhaya, 1977; Kirtikar and Basu, 2012; Anonymous, 2007; Ashraf, H. M., ynm
Kasir-e-riyah (Carminative)	Nadkarni, 1982; Lubhaya, 1977; Kirtikar and Basu, 2012
Muqawwi-e-shaar (Hair tonic)	Lubhaya, 1977

Muwallid-e-mani (Spermatogenic)	Lubhaya, 1977

J. **Therapeutic uses (*Mahall-e-Istema'alat*)**

Therapeutic uses	**Reference**
Malikholia (Melancholia)	Ghani, 2011; Lubhaya, 1977; Ibn Baitar, 1986; Anonymous, 1992 Anonymous, 2007 Ibn Sina, 2010; Ashraf, H. M., ynm
Sara (Epilepsy)	Ghani, 2011; Lubhaya, 1977; Ibn Baitar, 1986 Ibn Sina, 2010; Ashraf, H. M., ynm
Kaboos (Nightmare)	Ghani, 2011; Lubhaya, 1977; Anonymous, 2007; Ashraf, H. M., ynm
Falij (Paralysis)	Ghani, 2011; Kirtikar and Basu, 2012
Laqwa (Facial paralysis)	Ghani, 2011; Ashraf, H. M., ynm
Khadre (Numbness)	Ghani, 2011
Waswas (Anxiety)	Ghani, 2011
Mania	Ghani, 2011
Junoon (Schizophrenia)	Ghani, 2011 Lubhaya, 1977; Anonymous, 1992; Anonymous, 2007; Ashraf, H. M., ynm
Deedan-e-am'a (Intestinal worm infestation)	Ghani, 2011; Lubhaya, 1977; Ibn Baitar, 1986; Kirtikar and Basu, 2012; Khory and Katrak, 1985; Nadkarni, 1982; Anonymous, 1992
Sartan (Cancer)	Ghani, 2011; Ibn Baitar, 1986
Khafqan (Palpitation)	Ghani, 2011
Warm-e-tihal (Splenomegaly)	Ghani, 2011; Kirtikar and Basu, 2012; Anonymous, 2007; Ashraf, H. M., ynm
Jildi amraaz (Skin diseases)	Ghani, 2011; Lubhaya, 1977; Ibn Baitar, 1986; Ashraf, H. M., ynm
Mudammil-e-qurooh (Cicatrizant)	Lubhaya, 1977; Ibn Baitar, 1986
Yarqan (Jaundice)	Kirtikar and Basu, 2012
Amraaz-e-jigar-wa-tihaal (Disease of liver and spleen)	Kirtikar and Basu, 2012; Khory and Katrak, 1985; Anonymous, 2007
Humma (Fever)	Kirtikar and Basu, 2012

III. PHYTOCHEMISTRY

It is been reported to possess organic substances as alkaloids, protein, flavonoids, resin, tannin, glycosides and carbohydrates and inorganic substances as aluminium, iron, calcium, sodium and potassium (Anonymous, 1992; Fatima, 2022). It contains Flavonoids and flavonoid glycosides such as kaempferol, quercitin, 30-methoxy-3, 40, 5, 7-tetrahydroxy flavones and 30-methoxy-40, 5, 7-trihydroxy flavone-3-glucoside are reported to be present in *C. reflexa* (Subramanian *et al*., 1963). Reflexin, 5-hydroxy-7-methoxy-6-(2, 3-epoxy-3-methylbutyl)-flavanone, is obtained from the stems of *C. reflexa* (Tripathi *et al*., 2005). Glycosides and steroids such as Cuscutin, stigmasterol and sitosterol were detected from its roots. Lycopene, dulcitol, mannitol, apigenin-7-b-rutinoside, 6–7 dimethoxy coumarin are also isolated from *C. reflexa* (Dandapani *et al*., 1989; Ramachandran *et al*., 1992). This plant also produces alkaloid components known as Cuscutalin, 1% and Cuscutin, 0.02% as the principal active ingredients, as well as a number of phenolic compounds. Cuscutalin and cuscutin are the pharmacologically active chemical constituents of this plant (Anis *et al.*, 1999). The *C. reflexa* seeds contain the pigments, amarbelin and cuscutin. They contain a wax consisting of esters of higher aliphatic alcohols with saturated fatty acids containing 26 and 28 carbon atoms among which cerotic acid has been identified (Mukherjee *et al.*, 2008). The seeds produce a semi-drying, translucent greenish-yellow oil. Linolenic, linolic, oleic, stearic, and palmitic fatty acids are among the other phytoconstituents. A phytosterol can be found in the unsaponifiable fraction. Cuscutin is additionally present in the stem (Anonymous, 1950; Chatterjee *et al*., 2014).

IV. PHARMACOLOGICAL STUDIES

Antidepressant activity

Zeeshan *et al.*, (2016) used multiple behavioral models, including as the Tail Suspension Test (TST), Forced Swim Test (FST), and locomotor activity test, to evaluate the methanolic extract of *C. reflexa* for antidepressant efficacy. Yohimbine potentiation tests and 5-hydroxytryptophan (5-HTP)-induced head twitches,

respectively, were used to assess the serotonergic and noradrenergic alterations. Without changing the locomotor counts, the *C. reflexa* extract considerably decreased the immobility duration in TST and FST. Additionally, the extract markedly raised 5-HTP-induced induced head twitches and the Yohimbine induced mortality. Because quercetin inhibits MAO, it is possible that quercetin-mediated increases in neuronal serotonin and noradrenaline levels occurred.

In a study involving forced swimming and tail suspension tests, Adnan *et al.,* (2020) found that mice given a methanolic extract of *C. reflexa* showed a dose-dependent reduction in the immobility time.

Anti-anxiolytic activity

Adnan *et al.,* (2020) used elevated plus maze and hole board tests to evaluate the anti-anxiolytic effects of a methanolic extract of *C. reflexa*. It revealed that anxiety-related behavior in mice was significantly reduced by extract at doses of 200 and 400 mg/kg.

Anti-nociceptive activity

Adnan *et al.,* (2020) investigated the methanolic extract of *C. reflexa* for its nociceptive effect, which was determined using chemically produced pain models (acetic acid and formalin). In both instances, it was discovered that 400 mg/kg was most efficient and significantly reduced the amount of writhing and licking (a pain response) that mice had in reaction to formalin and acetic acid, respectively.

Antihypertensive activity

Singh *et al.,* (1973) reported the alcohol-based extract of *Cuscuta reflexa* has favorable inotropic and cardiotonic effects on the perfuse frog heart. In a series of tests on the blood pressure of dogs, it resulted in a drop in blood pressure.

In addition, Gilani *et al*., (1992) found that rats under pentothal anesthesia experienced a dose-dependent reduction in arterial blood pressure and heart rate following ethanolic extract from the stem of *Cuscuta reflexa*. They discovered that the low blood pressure and bradycardic effects of *C. reflex* are unaffected by cholinergic receptor stimulation or adrenergic inhibition.

Antibacterial activity

In studies by Ayesha *et al*., (2011) and Sharma *et al.*, (2013), raw ethanolic extract of *Cuscuta reflexa* was examined. This extract exhibited antibacterial efficacy against *Escherichia coli, Staphylococcus aureus, Staphylococcus epidermidis, Shigella sonnei, Micrococcus luteus, and Pseudomonas aeruginosa.*

Antioxidant activity

Perveen *et al*., (2013) investigated in vitro antioxidant activity of *Cuscuta reflexa* stems by determining the extent of non-enzymatic haemoglobin glycosylation. In comparison to other fractions, the activity of ethanol extract and ethanol acetate was higher, and their magnitudes were nearly equivalent and similar to the standard antioxidant substances.

Antiepileptic and anticonvulsive activity

According to Borole *et al.,* (2011), mice were given pentylenetetrazole (30 mg/kg ip) to elicit a tonic seizure, and *Cuscuta reflexa* significantly reduced the overall duration of the convulsion. It also lessens the tonic extension convulsion brought on by the most extreme electroshock-induced convulsions.

Hypoglycaemic activity

According to Anis *et al.,* (2002), a methanol-based extract of the plant *Cuscuta reflexa* Roxb. and its corresponding ethyl acetate fraction effectively inhibited α-Glucosidase. This membrane-bound enzyme is present in the small intestine's epithelium. The absorption time of glucose into the bloodstream after a meal is extended by this enzyme's inhibition.

Anti-HIV activity

Mahmood *et al*., (1997) claimed that anti-HIV activity of the aqueous extracts of *C. reflexa* may have resulted from interactions with substances having various mechanisms of action. Both antibacterial and free radical scavenging properties were present in the *C. reflexa* methanolic extract.

Relaxant and spasmolytic activity

Prasad *et al*., (1965) examined water and alcoholic extracts of the *Cuscuta reflexa* Roxb. They have shown a relaxing and spasmolytic effect on the small intestine of guinea pigs and rabbits. Additionally, extracts showed acetylcholine-like activity.

Hepatoprotective activity

Jha *et al*., (2011) investigated the protective effects of *Cuscuta reflexa Roxb* ethanolic extract against paracetamol-induced liver damage in albino rats by measuring blood and liver glutathione, Na+ K+-ATPase activity, serum marker enzymes, serum bilirubin, glycogen, and thiobarbutiric acid reactive compounds. It was found that the values of the aforementioned parameters in paracetamol hepatotoxicity were reversed by the extract of *Cuscuta reflexa*. This hepatoprotective action of *Cuscuta reflexa Roxb*. may be caused by the normalization of defective membrane function.

Antitumor activity

According to Dandopani *et al.,* (2011), oral dosages of 200 and 400 mg/kg body weight of chloroform and ethanol extracts of *Cuscuta reflexa Roxb*. illustrated antitumor efficacy against the Ehrlich ascites carcinoma tumor in mice. To assess the safety of the extracts, investigations on acute oral toxicity were also conducted.

V. CONCLUSION

In conclusion, the exploration of *Cuscuta reflexa* Roxb. in this chapter has provided a comprehensive understanding of its multifaceted properties in traditional, ethnopharmacological, therapeutical, and phytopharmacological contexts. The rich traditional knowledge embedded in various cultures has been a valuable source, offering insights into the diverse medicinal applications of this plant.

A wide variety of medicinal herbs have been scientifically proven and reported to have incredible effects in treating various ailments, *C. reflexa* Roxb. is one of them. Being an incredible parasitic weed plant *C. reflexa* is known as a “miracle plant” in ethnobotany, and it is now been reported to have an array of medicinal properties, including antidepressant, anti-anxiolytic, antitumor, antiepileptic, anticonvulsive antibacterial, antioxidant, anti-inflammatory, hypoglycaemic, anti-HIV, and hepatoprotective activities attributed to its bioactive compounds, including flavonoids, alkaloids, and phenolic acids, etc. The phytopharmacological investigations have revealed the intricate mechanisms underlying *C. reflexa's* therapeutic potential. These findings not only validate its traditional use but also open avenues for further research, especially in drug discovery and development. Consequently, more exploration at the molecular level is the need of the hour in order to bring medicine back to its roots so that herbal medicinal plants can be widely accepted after being scientifically validated. Additionally, collaborative efforts between traditional practitioners, scientists, and policymakers are crucial to integrate valuable traditional knowledge into modern healthcare systems, promoting the responsible and informed use of *Cuscuta* in herbal medicine.

In essence, this chapter not only consolidates the existing knowledge about *C. reflexa* Roxb. but also emphasizes the need for continuous research, conservation efforts, and cultural preservation to fully harness the potential of this remarkable plant in the realm of natural medicine. From this analysis, it can be inferred that *Cuscuta reflexa* Roxb. is a safe, historically used, and experimentally documented natural remedy that can be effectively employed in treating numerous diseases.

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