
# A Comprehensive Review on Ethanomedical, Pharmacological and Phytochemical Properties of Genus *Cissus*: A therapeutic Genus

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**Abstract**
Plants are great source of medication in herbal way. These extracts are used in treatment of several diseases. The family *vitaceae* consist of several species having many properties to cure many illnesses and disorders to mankind. This review article reveales about some species of *cissus* with different genus, about there medicinal and pharmacological uses and there utilization in various scientific fields. Due to presence of various bioactive compound such as tannin, alkaloid, flavonoids and many more it is useful as good herbal therapeutic sources in drug industry. These plants posses efficacy againt antidiabetic, antiobesity, antiulcer, antioxidant, anticarcinogenic, antiglucocoid, antimicrobial, antinflammatory activity and are used as bone setter in fractures and cures female health as it used to regulates mesturation also. Although review shows properties and uses of various *cissus* species as a useful therapeutic and pharmacological herbious plant.

**Keywords:** bioactive, *cissus*, extracts, anticarcinogenic, antidiabetic, antiglucocoid

## Introduction
The plant kingdom has been the best source of therapies for curing a verity of ailment. The drug discovery industry is equally dependent on natural sources for new medicines mainly because existing remedies exhibit many side effects that results in the recall of drugs, bringing vast losses to the pharmaceutical industries (Newman, D. J., & Cragg, G. M. (2007)) [1]. Recently there has been a tremendous growth in the use of herbal health products in developing as well as developed countries resulting in an exponential progress of plant based products worldwide (EL-Kamali, H. H., & EL-Amir, M. Y. (2010)) [2]. One such set of plants that is used in all the continents and is implicated to treat different treatments is plants belonging to the genus 'Cissus' (Tasadduq, R., *et al*.,(2017)) [3].Genus Cissus consist many therapeutic plants of vitaceae family having many medicinal and curative properties due to presence of many phytochemicals in their plant parts. The genus Cissus shows their ethnomedicinal and pharmacological value for treatment of many diseases.

## Objective
The aim of this review research article is to explore the detailed insights on pharmacological and phytochemical properties of genus:*Cissus.*

## Methods and Methodology
The resourceful data used for this review article includes of research and review articles published by trustworthy publishers such as Springer, Elsevier, Wiley, etc. Literature of this review article was conducted by using Google Scholar and PubMed with the following keywords:*Cissus, pharmacological constituents of Cissus,pharmaceutical activity of Cissus, phytocompounds of Cissus, therapeutic applications of Cissus* etc. Several valuable research and review papers published maintaining base of this review research paper. As,prior researches have detailed about the description, traditional usage, extraction, phytochemical composition and pharmacological activities this plant.

**Reported plant species from Genus *Cissus***

Genus Cissus (family Vitaceae) consist of 350 species, and many of these are used worldwide in traditional medicines to treat various diseases and disorders( Dhanasekaran, S. (2020)) [4](Suneetha,J.,et al.,(2011)) [5]. In India, 22 species of Cissus have been reported.( Mondal, S., & Rahaman, C. H.(2012) [6](Gupta, M.,et al.,.(2018) [7].)( Ezeja, M. I.,et al., (2015) [8].Some species spread over the world descripted below in table 1.

**Table 1:** of different species of *Cissus* genus used in medication

| S. No. | Species | Location | Common Name | Medicinal Properties | References |
|---|---|---|---|---|---|
| 1 | *Cissus aralioides* | Forest in Michael Okpara University of Agriculture, Umudike, Abia State | Kindamina | Anti-inflammatory and antioxidant activity | Dutta, T., *et al.* (2020) |
| 2 | *Cissus assamica* | Chittagong Hill Tracts (Rangamati Hill District), Bangladesh | Amasha lata, Sarba amila, Murmuijja | Management of pain and pyrexia | Oleski, A., *et al.* (2006) |
| 3 | *Cissus debilis* | Cap Esterias region, neighbourhood of Libreville, Gabon Republic | — | Anticancer activity | Ahmadu, A. A., *et al.* (2009) |
| 4 | *Cissus hamaderohensis* | Different localities on Soqotra Island, Yemen | — | Inhibitory potency against ACE, NEP and APN enzymes | Adebowale, K. O. (2013) |
| 5 | *Cissus hypoglauca* | Southern New Guinea to Victoria in southern Australia | Giant Water Vine | Ecological adaptability and resilience to dry environmental conditions | Bafna, P. S., Patil, *et al.* (2021) |
| 6 | *Cissus ibuensis* | Nigeria, Niger, Togo, Benin and Ghana | — | Anti-diabetic, anti-cancer, gastrointestinal disorder, rheumatism, arthritis and cardiovascular disease management | AliMohammed, W. M. (2014) |
| 7 | *Cissus populnea* | Nigeria | Dafaraa, Okoho, Ogbolo | Pharmaceutical applications | Al-Bukhaiti, W. Q. (2019) |
| 8 | *Cissus quadrangularis* | Africa, Arabia, South Asia, Sri Lanka, India and tropical regions | Bonesetter, Adamant creeper, Veldt-grape, Hadjod, Asthisamadhani, Hadsanka | Treatment of bone fractures, scurvy, tumors, hemorrhoids, peptic ulcer, menstrual disorders, gout, syphilis, piles, diarrhea and leucorrhoea | Otshudi, A. L., Vercruysse, A., & Foriers, A. (2000) |
| 9 | *Cissus rotundifolia* | Yemen regions | Arabian wax | Antimalarial, analgesic, anti-inflammatory, antiulcerative, antioxidant, hepatoprotective and anti-diabetic activities | Salazar, M. A. R. Costa (2018); Drobnik, J. & de Oliveira, A. B. (2015) |
| 10 | *Cissus rubiginosa* | Lomela villages, Congo | Sume | Treatment of diarrhoea and dysentery | James, O. & Ogirima, Y. H. (2011) |
| 11 | *Cissus sicyoides* | Amazon region | Cipó-pucá | Anti-inflammatory, antitumour activity and neuroprotective properties | San, H. T., Boonsnongcheee (2020) |
| 12 | *Cissus verticillata* | Brazil | *C. canescens*, *C. compressicaulis*, *C. latifolia*, *C. puncticulosa*, *C. umbrosa*, *Vitis sicyoides* | Anti-inflammatory, cytostatic, vasoconstrictory, hypoglycaemic, anti-lipemic and gastroprotective effects | Wu, S., Rajeshkumar (2020) |
| 13 | *Cissus multistriata* | Nigeria | — | Anti-diabetic and wound healing properties; reduction in blood glucose levels | Shoibe, M. (2017) |
| 14 | *Cissus javana* | Shan State, Myanmar | *Vitis discolor*, *Cissus discolor*, *Cissus javana var. pubescens* | Antidiabetic potential and glucose uptake enhancement by bergenin | Kunder, P. R. & Vidya, S. M. (2016) |
| 15 | *Cissus vitiginea* | Tamil Nadu, India | — | Used in Ayurveda as alternative, digestive, tonic analgesic; treatment of eye and ear diseases, irregular menstruation and asthma | Kakade, P. S. & Zimare, S. B. (2022) |
| 16 | *Cissus vitiginea* | Khagrachari, Bandarban, Cox's Bazar, Sylhet and Chittagong regions, Bangladesh | Isswarmuli, Mach toi kitab, Alianga lota, Bhatia lota | Used for boils, wounds, stomach upset, peptic ulcer, snake bites, rheumatic pain, bone fractures, jaundice, paralysis, scurvy, cancer, dysentery, epilepsy, fever, asthma, malaria and food poisoning | Chang, C. W. (2012) |
| 17 | *Cissus elongata* | Western Ghats of India | — | Treatment of skin and nerve diseases; antibacterial and antifungal activity | Bhandari, R., Sharma, G. & Jamarkatel- |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | pandit, N. (2015) |
| 18 | *Cissus woodrowii* | Satara district, India | Stapf, Cooke | Antinutritional analysis, malnutrition and proximate composition studies | Rubeena, M. & Thoppil, J. E. (2020) |
| 19 | *Cissus repens* | Taiwan | Jogeelahara | Analgesic, anti-inflammatory and antiulcer activity | Joseph, N., Jayakumar, K. (2024); Méndez-López, L. F. (2020) |
| 20 | *Cissus latifolia* | Kerala, India | Chunnambuvalli | Treatment of weak bones, bone fractures, cancer, scurvy, peptic ulcer disease, hemorrhoids, malaria, pain and asthma; anticancer activity | Harisha, C. R. (2010); Doweld, A. B. (2015) |
| 21 | *Cissus trifoliata* | Mexico, Southern United States, Caribbean and South America | Hierba del buey | Antibacterial, cytotoxic and anti-inflammatory activities | Ayyanar, M. & Ignacimuthu, S. (2005) |
| 22 | *Cissus rependa* | Odisha, Gujarat, Andhra Pradesh and Karnataka, India | Panivel | Used for bone fractures, cuts, boils and wounds | Soladoye, M. O. & Chukwuma, E. C. (2012) |
| 23 | *Cissus spectabilis* | West Bengal, Sikkim and Siliguri regions | *Cissus notabilis* | Fossil species | Reis, A. C. C. (2020) |
| 24 | *Cissus trilobata* | — | Moovilai kodi | Used for treatment of rheumatism | Dickson, U. J. (2011) |
| 25 | *Cissus populnea* | New Bussa, Niger State, Nigeria | — | Source of useful drugs; used for stopping bleeding, venereal diseases and treating sore breasts after childbirth | Manikandan, S. A. S. & Lakshmanan, G. (2016) |
| 26 | *Cissus erosa* | Brazil | Cipó-fogo | Activity against Dengue and Zika virus; anti-Zika virus potential | Selvi, P. (2021) |
| 27 | *Cissus arguta* | Tropical countries including Nigeria (Benin City, Warri, Sapele, Calabar, Uyo and Port Harcourt) | Awoloma, Umion, Ikon Efere Ekpo, Ibia-bia, Osimere, Deko-deko | Treatment of intense fever, body pain and wounds | Borquaye, L. S. (2020) |
| 28 | *Cissus discolor* | Tropical regions of India, Sri Lanka, Africa, Arabia and South Asia | Sangharhmai | Treatment of stomach disorders; leaves used as antidiabetic and antiseptic agents | Halliwell, B. (1996) |
| 29 | *Cissus arittiana* | Tamil Nadu, India | Nanaminukki (Tamil), Nelagummadi (Telugu) | Antibacterial, antioxidant, anti-inflammatory, anticancer and antiviral activities | Chidambara Murthy (2003) |
| 30 | *Cissus cornifolia* | Ghana | Rigarbiri, Duwawun biri | Antioxidant and anti-inflammatory activity; treatment of gonorrhoea, pharyngitis and malaria; sedative effects | Borquaye, L. S. (2020) |

**Pictures of Some Plants Belongs to Cissus Genera**

***Cissus cornofolia*** ***Cissus arnottiana*** ***Cissus discolour*** ***Cissus arguta***

***Cissus erosa*** ***Cissus verticillate*** ***Cissus quadragularis*** ***Cissus woodrowii***


*Cissus nodusa*


*Cissus vitigenia*


*Cissus javana*


*Cissus rotendifolia*

**Pharmacological Properties Of *Cissus* Family**

**1.Antioxidant**

The term "antioxidant" is restricted to chain-breaking inhibitors of lipid peroxidation. A broader definition is: an antioxidant is any element that when present at low concentrations compared to an oxidizable substrate delays or prevents oxidation of that substrate. Mechanisms of antioxidants can include: removal of O2, scavenging reactive oxygen/nitrogen species or their inhibiting ROS/RNS formation, binding metal ions needed for catalysis of ROS generation, and up regulation of endogenous antioxidant defenses.( Kolap, R. M.,et al.,2021) [42].

Extracts of Cissus quadrangularis L. were tested for antioxidant activity by β-carotene linoleic acid model and also by 1,1-diphenyl-2-picrylhydrazyl model. The ethyl acetate chromatographic fraction of fresh and dry stem extracts at the concentration of 100 ppm showed 64.8% antioxidant activity in the β-carotene linoleic acid system and 61.6% in the 1,1-diphenyl-2-picrylhydrazyl system.( Li, Y. J *et al*., 2015) [43]

Cissus cornifolia, a medicinal plant with widely use in ancient medication in Ghana—were used in this study. The phytochemicals analysis and total phenolic content (TPC) of these extracts were determined using standard methods. Antioxidant potential was tested using the ferric reducing antioxidant activity, nitric oxide and hydrogen peroxide scavenging, and the phosphomolybdenum assays(Vinoth, K., & Kumar, S. R. (2025)) [44].

The antioxidant potential of plant Cissus woodrowii (CW) which is tree of the Vitaceae family. Maximum percent yield (13.49%), total phenolic content (24.14 mg TAE/g dry weight), and total flavonoid content (18.45 mg QE/g dry weight) were reported in the methanolic leaf extract. Whereas the *in vitro* antioxidant activities of different extracts were tested using 2,2′-azino-bis (3-ethylbenzothiazoline-6-sulfonic acid), 2,2-diphenyl-1-picrylhydrazyl, hydroxyl, nitric oxide, hydrogen peroxide percent radical scavenging activity (% RSA), antioxidant power assay (ferric-reducing antioxidant power) and total antioxidant capacity (phosphomolybdate assay). Antioxidant activity of CW extract may be due to its high level of phenolics which were adressed through liquid chromatography–high-resolution mass spectrometry (LC-HRMS), and the quantity of selected three phenolic compounds were tested by using high-performance liquid chromatography (HPLC).( Mishra, G.,2010) [45]

In Cissus pteroclada glucose and galactose were the key monosaccharides of three fractions, CPHP II-1 and CPHP II-2 were acidic polysaccharides that contain uronic acid content. Scavenging radical assay *in vitro* shows that CPHP II-1 was a natural bioactive compounds possessed strong antioxidant and hepatoprotective activity.( Jayachitra, C.,2018) [46]

**2.Antiobesity**

*Cissus quandrangularis* L. is responsible to reduce the body weight, serum lipid and serum glucose level. The chemical components of this plant addressed to have phytosterols, keto-steroids, Indane and flavonoids which is having anti-oxidant properly.( James, O.,2013) [47]

**3. Antiulcer effect**

*Cissus quadrangularis* having antiulcer and cytoprotective property in indomethacin induced gastric mucosal injury. The aqueous extracts of CQ also proves acetylcholine like activity on isolated ileum of rabbit and uterus of rat.( Parimala, S., & Selvan, A. T. (2017).) [48]

*Cissus setosa* is an medicinal herb commonly used for the medication of gastro ulcers. The aerial methanolic extract of C. setosa was tested for theantiulcer activity using pylorus ligation and ethanol in rats. The extract was used at the doses of 200 and 400 mg/kg bw. orally for 3 days. Higher dose of the extracts reduced gastric ulcer induced by pylorus ligation (70.05%) and ethanol (78.16%) as tested on their biochemical parameters such as free acidity, total acidity, total carbohydrate, total protein and pepsin activity.( Ruskin, R. S., *et al*.,2014) [49]

Anti-ulcer activity of *C. multistriata* was addressed on albino rats at doses of 30, 50 and 100 mg/kg body weight. Cissus multistriata showed gastro-protective action in the groups and the protection was dose dependent and comparable to the standard drug (Omeprazole) used. The mechanism in the gastro-protective effect of C. multistriata shows relation with the mucosal protector factors, such as Nitric Oxide (NO) and Sulfhydryl (SH) compounds.( Kujur, E. N. (2019).) [50]

**4. Anticarcinogenic effect**

The effect of methanolic extract of Cissus pallida and Cissus vitegenia has been tested on various cancer cell lines. The results show cytotoxic effects in both *in vitro* and *in vivo* models. Treated with the extract shows concentration dependent inhibition of the cell growth of human cancer cell lines. The cytotoxic effect was more dominantly expressed upon all the cell lines. The phytocompounds present in the methanolic extract may shows relation to this anticancer action. Different cytotoxic effect of the extracts against different types of cancer cell lines shows it can be use against various cancers might show positive results.( Payani, S.,et al.,2023) [51]. The secondary metabolites such as phenol, alkaloids, tannins and flavonoids were present in the ethanolic extract of C.quadrangularis. The anti-bacterial activity of various extracts of leaves at different concentrations was expressed against some human pathogenic bacterias. The result of the in-vitro anticancer activity of C.quadrangularis shows that ethyl acetate extract shows lowest percentage of viability which has important activity against cancerous cells. (Sundaran, J.,et al.,2020) [52].

**5. Antiglucocoid effect**

*Cissus quadrangularis* possess anti-glucocorticoids properties, it is useful for athletes and bodybuilder. Glucocorticoids,sbody's cortisol hormone, may induce muscle breakdown, loss of skeletal muscle proteins and weakens the bones. CQ is a competitor to glucocorticoids. CQ anabolic in nature and increases bone strength. During periods of stress, over-training, or illness, the cortisol level rises, this can be maintained by using *C. quadrangularis*. ( Sultana, F., & Sindhu, R. K. (2021)) [53]

**6. Antimicrobial effect**

In vitro antibacterial activity of *Cissus quadrangularis* stem methanolic extract were tested against pathogens suchas Vibrioparahaemolyticus, Shigellaflexneri, Micrococcus leteus and Pseudomonas aeroginousa in. The crude methanol extract showed maximum inhibitory activity against Vibrio parahaemolyticus with inhibition zone diameter (mm) of 25, Shigella flexneri 18, Serratia marcescens19, Micrococcus leteus 9 and least inhibitory activity against Pseudomonas aeroginousa with inhibition zone diameter of 7.The results shows that *C. quadrangularis* stem methanolic extract showed highest anti-bacterial activity against Vibrio parahaemolyticus, Shigella flexneri, and Serratia marcescens.IN antifungul activity, methanol extract showed highest inhibitory activity against Candida albicans with inhibition zone diameter of 14, Trichoderma viride 13, and Low inhibitory activity observed in Penicillium crysogenum with inhibition zone diameter of 7. The results claimed strong antifungal activity was observed on Candida albicans and Trichoderma viride.( Sirasanagandla, S. R.,2013) [54]

**7. Antidiabiatic effect**

Anti- diabetic properties of Cissus quadrangularis was reported in a study where dry powder of Cissus quadrangularis is obtained through ethyl acetate extraction. This is tested for diabetes induced in wister albino rats by administering alloxan.( Sreebala, G.,2021) [55]

**8. Antinflammatory effect**

*Cissus trifoliata (Vitaceae)* Marine ivy or possum grape, bolontibi are common name of Cissus trifoliate Rott that belongs to the family Vitaceae. It helps to prevents rheumatic arthritis. The ethanolic root extract shows anti-inflammatory activity in carrageenan induced edema in mice, adjuvant-induced arthritis and formaldehyde in rats.( Mziray, A. M. (2021). ) [56]

**9. Treatment of bone fractures**

CQ, has been used widely used to promote the bone health in the traditional medication. The fracture healing property and anti-osteoporotic activities of CQ has been reported in various pharmacological researches. The application of CQ tablets in fracture healing has been tested in rats, dogs and human subjects.( Siddiqua, A., & Mittapally, S. (2017)) [57]. Cissus latifolia Lam. Is used in the treatment of weak bones, bone fractures. Phytochemical analysis of this plant revealed the presence of flavonoids, tannins, alkaloids, steroids, saponins, quinines, anthraquinones and phenols which helps in bone healing.( Ezeja, M. I.,2015) [58]

**10. For female health**

*Cissus rotundifolia (Forssk.)* Vahl., has been traditionally used as a fertility regulator in human beings. This plant extract has anti-ovulatory and anti-implantation properties and is a potential anti-fertility agent. (Dutta, T.,et al., 2020) [59]

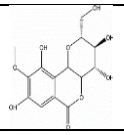
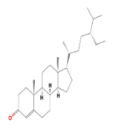
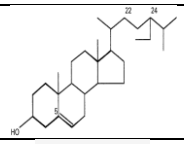
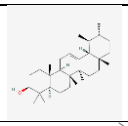
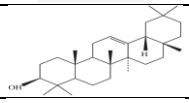
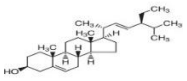
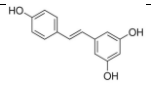
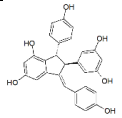
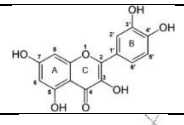
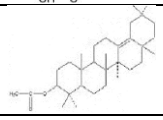
*Cissus quandrangularis* traditionally it was mostly used in treatment of female ovaral health disorders (menopause, libido, and menstrual disorders) and treating bone disorders.( Chan, Y. Y.,et al.,2018) [60]

**Bioactive Component Present *Cissus* Genus**

| S.no. | Species name | Metabolites compound | Reference |
|---|---|---|---|
| 1. | *Cissus aralioides* | alkaloids, tannins, saponins, steroids, terpenes, flavonoids and cardiac glycosides | (Line-Edwige,2009) |
| 2. | *Cissus assamica* | alkaloid,tannin,steroid,triterpenes, flavonoid,saponin,rasins,glycosides, Anthraquinone glycoside, Phenol,reducing sugars,carbohydrate,protein,fats. 14 benzenoids, 11 triterpenes, nine steroids, five tocopherols, five chlorophylls, four flavonoids, two benzoquinones, two tannins, and three other compounds. | (Aguoru, C. U., Ameh, S. J., & Olasan, O. (2014); Chenniappan, J.,2020) |
| 3. | *Cissus debilis* | tannins, flavones, alkaloids, steroids, terpenoids, saponosides and glycosides. | (Méndez-López,2020) |
| 4. | *Cissus populnea* | alkaloids, tannins, saponins, flavonoids and anthraquinon | (Wu, S.,2020) |
| 5 | *Cissus quandrangularis* | saponin, tannin, phenol, flavonoid, terpenoid, alkaloids | (Manikandan Ganapathymuru, S. A. S., & Lakshmanan, G. A. N. A. L. A. G. U. (2016)) |
| 6 | *Cissus trifoliata* | terpene, flavonoid and stilbene | (Kyaw, M. M) |
| 7 | *Cissus vitiginia* | Flavonoid,saponin,alkaloid,polyphenol, Anthroquinone,steroids,tannin, Terpenoids | (Kunder, P. R., & Vidya, S. M. (2016)) |
| 8. | *Cissus arnottiana* | Alkaloids, Flavonoids Phenols, Tannins, Terpenoids, Quinines, Saponins, Glycosides and Carbohydrates | (Salazar, M. A. R.,et al.,2018) |
| 9. | *Cissus repens* | alkaloids, carbohydrates, flavonoids, glycoside, organic acid, phenolic compounds, saponins, steroids, tannins and terpenoids | (Shoibe, M.,2017) |
| 10. | *Cissus elongata* | flavonoids, alkaloids, terpenoids and tannins | (Manikandan Ganapathymuru, S. A. S., & Lakshmanan, G. A. N. A. L. A. G. U. (2016)) |
| 611 | *Cissus sicyoides* | terpenes, phenolic compounds, and flavonoids | (Nocedo-Mena *et al*.,2016) |
| 12 | *Cissus adnata* | alkaloids, carbohydrates, flavonoids, phenols, terpenoids, saponins, and tannins | (Parimala, S.,2012) |
| 13. | | vitamins, terpenoid, phenolic acids, lignins, stilbenes, tannins, flavonoids, quinones, | (Sani, Y. M.,2014) |

| | | | |
|---|---|---|---|
| | *Cissus aralioides* | coumarins, alkaloids, amines, betalinins, a | |
| 14 | *Cissus incisa* | Fatty acyls, sphingolipids, sterols, glycerolipids, prenol lipids, and terpenes | (Said, A.,2018) |
| 15 | *Cissus pallida* | carbohydrates, tannins, proteins, alkaloids flavonoids, sterols and saponins. | (Muhamad,M.,et al.,2022) |
| 16 | *Cissus polyantha* | flavonoids, tannins, saponins, steroids/triterpenes and cardiac glycosides. | (Omale, J.,2006) |
| 17 | *Cissus rotundifolia* | triterpenes, carbohydrates glycosides, tannins, flavonoids, coumarins and saponins | (Reis, A. C. C.,2020) |
| 18 | *Cissus hastata* | phenolic compounds, including tannins, alkaloids, and steroid | (Omale, J.,2006) |
| 19 | *Cissus multistriata* | carbohydrate, cardiac glycosides, flavonoids, lipids, proteins, sponnins, steroids and vitamin C | (Bhusari,S.,et al.,2019) |
| 20 | *Cissus repanda* | alkaloids, flavonoids, glycoside, steroids and carbohydrates. presence of glycoside, flavonoids, tannin and steroid | (Reis, A. C. C.,et al.,2020) |
| 21 | *Cissus erosa* | flavonoids, tannins and terpenoids | (Okeh, Q.,et al.,2017) |
| 22 | *Cissus ibuensis* | Carbohydrate, Saponins, Flavonoids, Steroids/Triterpenes, Tannins and Cardiac glycosides | (Ogunmefun, S. A., Ajayi, T. O., & Moody, J. O. (2022)) |
| 23 | *Cissus arguta* | alkaloids, tannins, saponins, flavonoids, glycosides, phenolic compounds, steroids, terpenoids and eugenols | (San, H. T.,et al.,2020) |

**Bioactive Compounds in *Cissus* Family with Bioactive Compound and Their Molecular Structures**

| s.no | Active compounds | Chemical structure | Reference |
|---|---|---|---|
| 1. | Bergenin |  | (San, H. T.,et al.,2020) |
| 2. | stigmast-4-en-3-one |  | (San, H. T.,et al.,2020) |
| 3. | β-sitosterol |  | (Siddiqua, A., & Mittapally, S. (2017)) |
| 4. | α amyrins, |  | **(**Siddiqua, A., & Mittapally, S. (2017). |
| 5 | β- amyrins, |  | (Siddiqua, A., & Mittapally, S. (2017)) |
| 6 | Stigmasterol |  | (Siddiqua, A., & Mittapally, S. (2017)) |
| 7 | Resveratrol |  | **(**Anuj, S. K.,2011) |
| 8 | Quadrangularin-A |  | (Anuj, S. K.,2011) |
| 9 | Quercetin |  | (Anuj, S. K.,2011) |
| 10 | Amyrin acetate |  | **(**Anuj, S. K.,2011) |

**Conclusion and Future Prospective**

Ethnobotanical and traditional uses of natural compounds, especially of plant origin established much attention as they are well confirmed for their efficacy and potential to be safe for human use. The plant family vitaceae is considered as a versatile therapeutic plant family in both Ayurvedic and modern treatment development ranges for its valuable medicational uses. Genus *Cissus* and their plants are having a very rich source of some minerals, which are essential for proper working of human body funtions. Many *in vitro* and *in vivo* studies proved that some of the traditional claims of the herbs of this genus *Cissus*. However, its claim in the treatment of piles, blindness, constipation, eye diseases, insect bites, epistaxis, leprosy and skin disease should be validated by modern scientific approach. In conclusion and based on our literature review, we hope that the present review on genus *Cissus* will serve like a baseline for the future researchers for the next scientific and experamentic lessons on these herb belongs to this family, their plants posses flavonoids, alkaloids, terpenes, iridoids, steroids, glycosides, etc. Quercetin, kaempferol, resveratrol, luteolin, β-sitosterol, friedelin are well-thought-out to be having important constituents of responsible for its therapeutic and beneficial ways to cure as antianalgestic, antidiabetic, antiulcer, anticancer, anti-inflammatory and estrogenic agents.So, this review is useful for future scientist, research scholar and academician to consider *Cissus* genus as a scientific source full of its pharmacological properties.

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