**Table 1.** List of medicinal plants used to manage diabetes mellitus.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **S. No** | **Scientific name** | **family** | **Local name** | **Parts used** | **Method of preparation** | **Other Medicinal Uses** | **Reference** |
| 1. | *Aloe pulcherrima G* | Xanthorrhoeaceae | Set-eret (A) | Latex | water and sugar boiled together and given orally | Asthma, diabetes dandruff | [79] |
| 2. | *Thymus schimperi Ronniger,* | Lamiaceae, | Tosign (A) | Stem, leaf, Whole plant | Dried stem and leaf powder boiled with tea is given orally | Diabetes | [80, 79] |
| 3. | *Croton macrostachys* | Euphorbiaceae | Bisana (A) | Root |  | Anti diabetic activity, malaria, purgative and anti-inflammatory effects, | [52,81] |
| 4. | *Aloe vera* | Asphodelaceae | Eret (A) | Fresh leaf | Not specified | Diabetes | [82] |
| 5. | *Euphorbia sp. Gmel* | Euphorbiaceae | Kulkual (A) | Latex | The plant is cut and squeezed until enough is collected, a cup and half is drunk three times a day before food | Diabetes, Homorroids, ascaries | [83] |
| 6. | *Asparagus africanus Lam* | Asparagaceae | Sereti(A) Sarritt/qastanticha | Root, Leaf | Give the dikus with food and drinks Powdered and taken orally | Diabetes, nekersa, urine retention, chest pain, sleeping, Snake bite, poisoning, diabetes | [79,84] |
| 7. | *Discopodium penninervum Hoschst* | Solanceae | Ameraro (A) | Leaf | Eat the boiled leaf as a cabbage | Diabetes | [84] |
| 8. | *Caylusea absyssinica (fresen)* | Resedaceae | Rench (A) | Leaves | Not specified | stomachache , skin diseases, diabetes mellitus and amoeba | [43,85-87] |
| 9. | *Ajuga integrifolia Ham-Buch. Labiatae* | lamiaceae | Harmagusa[O]Akorarach (A) | Leaves, Root | Aqueous and sometimes “Arekie” (alcohol) infusion of the fresh or dried leaves | Malaria, toothache, skin disease whooping cough, pneumonia,hypertension, diabetes etc… | [37,43,84,87] |
| 10. | *Solanum marginatum L.f* | Solanaceae | Zerch embuay, (A) | seeds | Seeds taken out, washed, dried and drunk with goats kebe or milk after boiling | Cough, lung problem, diabetes | [84] |
| 11. | *Podocarpus gracilis* | Podocarpaceae | Zigba (A) | Gum and shoot | Betazma mar lewuso meblat(1/2 spoon) | Cough, lung problem, diabetes, | [43,84] |
| 12. | *Crinum abyssinicum(Hochst) ex A. Rich* | (Amaryllidaceae) | Yejib shinkutrt (A) | Shoot tip-fresh | Squeezed, mixed with water, drink | Hypertension, diabetes | [88] |
| 13. | *Psidium guajava* | Myrtaceae | Zeytun (A) | Leaves | Boil with the leaves of camellia sinesis and drink | Wounds, ulcers, bronchitis,hypoglycemic , anti hyperglycemic, anti-inflammatory effect etc.. | [73,88,89] |
| 14. | *FoeniculumVulgare Miller.* | Apiaceae | Ensilsl (A) | Fresh leaves | Boil and drink | Hypertension, diabetes, gonorrhea | [88] |
| 15. | *Argemone thiopia .L* | papaveraceae | Wajo uta (Sd) | leaves | Dry or fresh leaves crushed, pounded, and filtered then infusion drunk in the middle of night | Diabetes | [90] |
| 16. | *Delonix regia (Boj.ex Hook)* | Fabaceae | Mimi (Sd) | leaves | Dry or fresh leaves crushed, pounded, and filtered then infusion drunk in the middle of night | Diabetes | [90] |
| 17. | *Moringa- stenoptela* | Moringaceae | Shiferaw (A) | Fresh leaves | Fresh leaves cooked as food and eaten or Boil and drink its soup | Hyperglycemia, kidney infection, cold, malaria | [58,87,88,90-92] |
| 18. | *Calpurnia aurea* | Fabaceae | Digita (A) | Leaf | Not specified | Malaria, diarrhea, diabetes, rabies, hypertension amoebiasis, giardiasis etc | [49,93,111] |
| 19. | *Lens culinaris Medik* | Fabaceae | Misir [A] | seed | Not specified | Diabetes | [49] |
| 20. | *Acacia nilotica (L.) seed, stem bark* | Fabaceae | Ghered (T) | seed, stem bark | Decoction of the seed or bark is used or Regularly fruits are given in spoonful before break fast | Malaria, cough, dysentery, insect repellent Diabetes, diarrhea, hemorrhage, tooth | [73,94] |
| 21. | *Ambrosia maritma L* | Asteraceae | …….. | Whole plant | Not specified | Reheumatic pains, asthma, biliharziasis, diabetes and to expel renal stones | [94] |
| 22. | *Bryonia cretica L.* | Cucurbitaceae |  | Not specified | Not specified | Bitter tonic, ameliorate the condition of diabetic persons, whooping cough, bronchitis and tonsillitis | [94] |
| 23. | *Centaurium pulchelum (Swartz) druce* | Gentiaceae | ……………. |  | Infusion of the herb is used for diabetes | Gastric and abdominal pain, diabetes, hypertension, renal colic, rheumatic pains etc… | [94] |
| 24. | *Cleome droserifolia (Forssk)Delile* | Cleomaceae | …… |  | 5 gm of paste powder is topically used before meal for treatment | Hyperglycemia (diabetes), wounds and for dermatitis | [94] |
| 25. | *Glinus lotoides* | Molluginaceae | …. | Fruit | Not specified | Anti-diabetic | [95] |
| 26. | *Stevia rebaudiana Bertoni* | Asteraceae | ….. | Leaf | Aqueous leaf extract | diabetes, hypertension, antimicrobial, anti-obesity and antioxidant activities | [37] |
| 27. | *Aloe camperi Schweinfurth* | Aloaceae | Sandai-ere (T) | fresh leaves, latex | Extract of the latex or leaf is used regularly | Skin burns, dandruff, stomach pain, hypertension, hair fall | [73,74] |
| 28. | *Meriandra dianthera (Roth) Briq.* | Lamiaceae | Nehiba/Mezeguf (T) | fresh leaves | Extract of the leaf is taken 1 cup daily | Hypertension, diarrhea, diabetic gastritis, bronchial asthma, purgative, diarrhea, | [73,75] |
| 29. | *Otostegia integrifolia Benth.* | Lamiaceae | Ch’endog (T) | Leaf | Extract of the leaves taken in the evening | Gynecological problems, inflammation, insecticidal, antioxidant, anti diabetic activity, etc… | [48,73] |
| 30. | *Pentas schimperiana Subsp.* |  | Woina grefet | Leaves | decoctions of leaves | diabetes, epilepsy | [76] |
| 31. | *Allium sativum* | Lilliceae | Shiguerti-tsada (T) | bulb | Fresh bulb is eaten raw or added in sauce The powdered bulb is dispersed in decocted root. | Asthma, antiseptic, diuretic, hypertension, expectorant | [73,87,93,96,97] |
| 32. | *Sesbania sesban (L)* | Papilionoideae, | girangire (A) | Seeds and leaves | Not specified | Anti-diabetic, antioxidant effect, antimicrobial activity, anti fertility agent, ethno veterinary use | [98] |
| 33. | *Satureja punctata Benth. Briq* | Lamiaceae) | Lomishet (A) | leaves | leaves are cooked and the extract drank | treatment of liver diseases, hypertension, diabetes and other disorders | [99] |
| 34. | *Datura stramonium L.* | Solonaceae | Asangra (O) | Root | The root is decocted overnight and mixed with rancid butter | Toothache, asthma, hypertension, diabetes mellitus | [97] |
| 35. | *Lagenaria abyssinica (hook.f.) C.Jeffrey* | Cucurbitaceae | Buqe setena (O) | Flower | The powdered flower is dispersed in water | Diabetic Mellitus, rabies | [97] |
| 36. | *Guizotia Schimperi* | Asteraceae | Adey Abeba (A) | Whole part | It is crushed with whole part of Cucumis ficifolius, boiled in the water and one glass is taken orally until recovery. | Diabetes | [100] |
| 37. | *Indigofera spicata Forssk.* | Fabaceae | Reencii (O) | leaves | Leaves powdered and mixed in water and taken when need arises | Diabetes | [101] |
| 38. | *Cineraria abyssinica* | Asteraceae) | ‘Esemefirh’(G) | Leaves,aerial parts | The aqueous decoction of the leaves and aerial parts | cancer, liver and kidney diseases, hypertension, diabetes | [102] |
| 39. | *Myrts commuis* | Myrtaceae | Ades (A) | Leaves Fruit | Not specified | Anti-hyperglycemic | [103] |
| 40. | *Allium Cepa* | Alliaceae | Qey-shnkurt (A) | bulb | Freshly cut bulb is often used | Hypoglycemic, anti-hyperglycemic activity in normal and STZ induced diabetic rats etc… | [73,87] |
| 41. | *Curcuma longa* | Zingeberaceae | Ird (A) |  | Not specified | Antihyperglycemic effect in STZ induced diabetic rats | [87] |
| 42. | *Coriandrum- sativum* | Apiaceae | Dimbelal (A) |  | Not specified | Hypoglycemic effect in normal rats | [87] |
| 43. | *Cuminum- cyminum* | Apaiaceae | Ensilal (A) |  | Not specified | Antidiabetic influence in STZ induced Diabetic rats | [87] |
| 44. | *Cymbopogon- thiopia Stapf* | Poaceae | Lomi sar (A) |  | Not specified | Hypoglycemic effect in normal rats | [87] |
| 45. | *Linum- usitatissimum* | Linaceae | Telba (A) |  | Not specified | Antihyperglycemic effect in alloxan induced diabetic rats | [87] |
| 46. | *Mangifera indica L.* | Anacardiaceae | Mangus (T) | leaf, stem bark | Decoction of leaf or stem bark is used regularly | Diuretic, diarrhea, dysentery, anemia, bronchitis, hypertension | [73,87,104] |
| 47. | *Nigella sativa L.* | Ranunculaceae | Abosoda (T)Tikur-Azmud (A) | Seed | Seeds added in bread or a spoon of powdered seeds taken orally before meal | Anti-hyperglycemic activity in diabetic rats, asthma, dysentery, hypertension, gastrointestinal problems | [73,87] |
| 48. | *Trigonella foenum-graecum L.* | Fabaceae | Abe’ake (T) Abish (A) | Seed | Extract of the dried and powered seed is used regularly | Diuretic, antipyretic, stomachic, anemia, hypertension, diabetes gastrointestinal pains | [73,87] |
| 49. | *Zingiber officinale Roscoe* | Zingiberaceae | Zingible (T) | Root | Tea of the rhizome frequently used | Digestive disorders, stimulant, bronchitis, throat infections, hypoglycemia | [73,87] |
| 50. | *Solanum incanum L.* | Solanaceae | Uengule (T) | Fruit Root | Fruits boiled in hot water or mixed with yogurt or root is chewed and swallowed. | Expectorant, diabetes stomach ache, fever, snake bite, bronchitis. | [73,105] |
| 51. | *Salvia lavandulifolia* | Lamiaceae | …….. | …… | Not specified | Hypoglycemic activity | [106] |
| 52. | *Salvia officinalis* | Lamiaceae | ……. | …… | Not specified | Hypoglycemic activity | [106] |
| 53. | *Salvia fruticosa Mill* | Lamiaceae | …….. | …… | Not specified | Hypoglycemic activity | [106] |
| 54. | *Salvia splenden* | Lamiaceae | …….. |  | Not specified | Hypoglycemic activity | [106] |
| 55. | *Salvia tillifolia* | Lamiaceae | ……. | Aerial part | Methanolic extract of aerial part | Hypoglycemic activity, headache, stomach trouble and as memory enhancing herb | [106] |
| 56. | *Ricinus communis* | Euphorbiaceae | Gulo (A) | Roots | Not specified | anti-diabetic | [81] |
| 57. | *Securidaca longepedunculata Fresen* | Polygalaceae) | ……. | root bark | Malaria, rheumatism, gonorrhea, palpitations, pneumonia, syphilis, asthma | diabetes, inflammation, insanity and epilepsy, wounds, cough, venereal diseases, snake bite etc | [107,108] |
| 58. | *Balanites rotundifolia* | Balanitaceae | Alayto (Sm) | Leaves | Soaking crushed fresh leaves in water and the water is taken orally | Laxative, fevers , diabetes | [109] |
| 59. | *Buxus hildebrandtii Baill.* | Buxaceae | Gaydarto | Leaves | Soaking crushed fresh leaves in water and the water is taken orally | Diabetes, infections, parasites | [109] |
| 60. | *Lavandula coronopifolia L.* | Lamiaceae | Dananwada (Sm) | Plant parts without leaves | Soaking crushed plants without the leaves in water and the water is taken orally | Diabetes, sun burns, Kidney problems ,side ache problems | [109] |
| 61. | *Melia azedarach L.* | Meliaceae | Dat caxa (Sm) | Whole plant | Soaking crushed whole plant in water and the water is taken orally | Diabetes, Wound infections | [109] |
| 62. | *Nepeta azurea R.Br. Ex Benth.* | Lamiaceae | Simitri (Sm) | Leaves | Soaking crushed leaves in boiled water and the water is taken orally | Diabetes ,kidney diseases, asthma | [109] |
| 63. | *Tarchonanthus thiopias L.* | Asteraceae | Galqaddo (Sm) | …….. | Soaking crushed leaves in water for 1 h and the water is taken orally | Diabetes, Bladder inflammations | [109] |
| 64. | *Cinnamomumverum* | Lauraceae | …. | ……. | Not specified | Diabetes | [110] |
| 65. | *Azadirachta indica A. Juss.* | Meliaceae | Neem (T) | leaf, stem bark | Leaf or bark decoction used for drinking | Insect repellent, malaria, skin diseases, anthelmintic, diuretic | [73,110] |
| 66. | *Aloe megalacantha* | Asphodeloideae | …….. |  | Not specified | Diabetes | [110] |
| 67. | *Justicia Schimperiana* | Acantanceae |  | Leaves | Not specified | Diabetes | [54] |
| 68. | *Lysimachia ruhmeriana vatke* | primulaceae | …… | ….. | Not specified | Diabetes, haemorrhoids | [43] |
| 69. | *Thymus serrulatus Hochst ex Benth,* | Labiatae | ….. | ….. | Not specified | Diabetes, hypertension, rheumatism, menorrhagia, amenorrhoea | [43] |
| 70. | *Verbascum sinaiticum Benth.* | Scrophulariaceae | ….. | …… | Not specified | Diabetes, scabies, colic, anti-emetic, amoebiasis, diarrhoea, epilepsy, aphrodisiac, infertility | [43] |
| 71. | *Verbena officinalis L* | Verbenaceae | ….. | …… | Not specified | Anti-emetic, malaria, diabetes, burns, respiratory diseases | [43] |
| 72. | *Rubus steudneri* | Rubiaceae | Enjori (A) | Leaf | Not specified | Liver disorders , diabetes, cough, gum pain, anti-oxidant | [43] |
| 73. | *Arachis hypogeal l.* | Leguminaseae | ,,,, | flower | In prepared foodstuffs such as biscuits and sweetmeats | Diabetes | [43] |
| 74. | *Coffea Arabica L.* | Rubiaceae | Buna [A] | Green seed | Not specified | Blood glucose level decreased in mice after oral administration of the substance | [43] |
| 75. | *Cucurma domestic valeton* | zingibraceae | ….. | Rhizome | Not specified | Reduces or helps to control blood sugar | [43] |
| 76. | *morus spp* | Moraceae | …. | …… | Not specified | Shows anti-hyperglycemic activity in vivo. | [43] |
| 77. | *Ammi visnaga (L.) Lam.* | Apiacea | E’bna (T) | leaf | Leaf extract is used in the morning | Diabetes ,diuretic, hypotensive, hair-care, antispasmodic, asthma | [73] |
| 78. | *Anethum graveolens Linn* | Apiacea | Shilan-maedo (T) | leaf | Tea of the leaves is taken twice daily | Diabetes, diarrhea, eye problems, indigestion, stomachache | [73] |
| 79. | *Balanites aegyptica (L.) Del.* | Balanitaceae | Mekie (T) | leaf, fruit | Leaf extract or ripe fruit is taken | Purgative, insecticidal, laxative, stomach aches | [73] |
| 80. | *Brassica nigra Koch.* | Brassicaceae | Adri (T) | Seed | Seed decoction is used regularly | Gastrointestinal disorder, stimulant, diuretic, bronchitis | [73] |
| 81. | *Calotropis procera (Ait.)* | Asclepiadaceae | Ghinde’a (T) | stem bark, latex | Crushed bark or latex are mixed with butter | Skin diseases, anthelmintic, expectorant, wounds, diarrhea | [73] |
| 82. | *Capparis thiopia (Forssk.)* | Caparidiacea | Sorob[T] | stem bark, leaf | Infusion of stem bark or leaf is used | Tooth ache, cough, arthritis, anthelmintic, malaria, inflammation | [73] |
| 83. | *Carica papaya L.* | Caricaceae | Papaya (T) | leaf, seed | Decoction of seed or leaf is drunk 1 beaker in the morning | Amoebicide, hypertension, constipation, expel worms, laxative, Hypoglycemic and Antihyperglycemic effects | [73,87] |
| 84. | *Carissa edulis (Forssk)* | Apocynaceae | Agam (T) | stem bark | Extract of stem bark is drunk regularly | Anthelmintic, inflammation, hypotensive, diuretics, headache | [73] |
| 85. | *Cichorium endivia L.* | Asteraceae | Shikoria (T) | Leaf | Cooked properly and eaten with enjera | Appetizer, febrifuge, anti-allergic | [73] |
| 86. | *Clerodendrum myricoides (Hochst)* | Lamiaceae | Sur-betri /Ugandense (T) | stem bark, leaf | Leaf or stem bark extract is drunk regularly | Abdominal pains, snake bites, hemorrhoids, eye disease | [73] |
| 87. | *Clutia lanceolata (Forssk)* | Euphorbiaceae | Tish-belalito (T) / | Leaf | Leaf extract is taken twice a day | Malaria, diarrhea, colds, gynecological problems | [73] |
| 88. | *Daucus carota L.* | Apiacea | Caroti (T) | tuber | Tuber is eaten in raw or with salad | Diuretic, inflammation, leprosy, worms troubles | [73] |
| 89. | *Entada abyssinica Steud. Ex A.* | Fabaceae | Halke (T) | stem bark, leaf | Decoction of the stem bark or leaf | Gastrointestinal problems, cold, candidiasis | [73] |
| 90. | *Eucalptus thiopia (Labill.)* | Myrtaceae | Tsaeda-kelamintos(T) | Leaf | Leaf extract is taken 1 cup per day | Insect repellent, tuberculosis, bronchitis, malaria, skin diseases | [73] |
| 91. | *Ferula communis L.* | Apiacea | Diog (T) | seed, leaf | Decoction of fresh leaf or dried seed | Antispasmodic, diarrhea, expectorant ,dermatitis | [73] |
| 92. | *Gymnema sylvestre Roxb.* | Asclepiadaceae | Shankuk (T) | Leaf | Leaf extract is taken | daily Cough, inflammations, constipation, haemorrhoids, bronchitis | [73] |
| 93. | *Kigelia thiopia (Lam.) Benth.* | Bignoniaceae | Mederba/Zelzale (T) | Fruit | Fruits are eaten | Constipation, tapeworm, dysentery, gynecological disorders | [73] |
| 94. | *Lepidium sativum L.* | Brassicaceae | Shinfae (T) | Seed | The seed extract is taken before bed | Diuretic, cough, laxative, asthma, diarrhea, malaria, hypoglycemic effects | [43,73] |
| 95. | *Moringa oleifera Lam.* | Moringaceae | Moringa (T) / | Leaf | Fresh leaf juice taken every morning in empty stomach | Asthma, constipation, skin diseases, diarrhea, stomach pain, hypertension | [73] |
| 96. | *Plumbago zeylanica L.* | Plumbaginaceae | Aftooh (T) | root, stem | Decoction of stem or roots used trice a day | Stimulant, abortifacient, inflammation, bronchitis, itching | [73] |
| 97. | *Psiada panctulata (DC.) Vatke -* | Asteraceae | Tsehaiferhet (T) | leaf, root | Decoction of the leaves or roots is used | Cough, anti-abortion, asthma | [73] |
| 98. | *Rosmarius officianilis L.* | Lamiaceae | Azmarino (T) y | Leaf, stem | A spoon of leaf or stem is added in daily food | Stomach pains, gynecological problems, bad breath, migraine | [73] |
| 99. | *Steganotaenia araliacea Hochst.* | Apiaceae | Mewets denagl (T) | leaf, seed | Decoction of either leaf or seed mixed with milk is taken in the morning | Sore-throat, ulcer, diuretic, stomachache, dysentery, hypotensive | [73] |
| 100. | *Tamarindus indica L. t* | Fabaceae | Humer (T) | fruit | Extract of the fruit is taken twice a day | Malaria, fever, stomach ache, wounds, purgative | [73] |
| 101. | *Terminalia thiopi Fresen* | Combretaceae | weiba (T) | stem bark, leaf | Decoction of the stem bark or leaf | Wounds, malaria, dermatitis, tuberculosis | [73] |
| 102. | *Trachyspermum ammi (L.)* | Apiaceae | Kamun/Tsakida (T) | Seed | Seed powder is soaked in water or milk | Hypertension, diarrhea, asthma, anti-helminthic, diuretic | [73] |
| 103. | *Vernonia amygdalina Del.* | Asteraceae | Grawa (T) | leaf, stem bark | The extract of fresh leaves in water is used | Stomach ache, skin infections, tooth ache, cough, malaria, | [73] |
| 104. | *Withania somnifera (L.)* | Solanaceae | Agol (T) | root, leaf | Roots are immersed in hot water and the juice of the leaves | Diabetes, constipation, skin infection, rheumatism | [73] |
| 105. | *Zizyphus spina-christi (L.)* | Rhamnaceae | Gaba (T) | Leaf | Infusion of the leaves used regularly | Diarrhea, dandruff, skin infections, bronchitis, malaria | [73] |

**Table 2.** List of medcinal plants in terms of citation

|  |  |  |
| --- | --- | --- |
| **Plant name** | **N** | **%** |
| *Moringastenopetaa* | 6 | 5.7 |
| *Allium sativum* | 5 | 4.8 |
| *Caylusea- abyssinica* | 4 | 4.8 |
| *Ajugaintegrifolia.* | 4 | 4.8 |
| *Psidiumguajava* | 3 | 2.8 |
| *Calpurnia aurea* | 3 | 2.8 |
| *Thymus schimperi* | 2 | 1.9 |
| *Acacia nilotica L.* | 2 | 1.9 |
| *Allium Cepa* | 2 | 1.9 |
| *Asparagus africanus* | 2 | 1.9 |
| *Azadirachtaindica* | 2 | 1.9 |
| *Carica papaya* | 2 | 1.9 |
| *Croton macrostachys* | 2 | 1.9 |
| *Glinuslotoides* | 2 | 1.9 |
| *LepidiumsativumL.* | 2 | 1.9 |
| *Mangiferaindica* | 2 | 1.9 |
| *Meriandradianthera* | 2 | 1.9 |
| *Nigella sativa* | 2 | 1.9 |
| *OtostegiaintegrifoliaBenth* | 2 | 1.9 |
| *Podocarpusgeacilior* | 2 | 1.9 |
| *Securidacalongepedunculata* | 2 | 1.9 |
| *Solanumincanum* | 2 | 1.9 |
| *Trigonella-foenumgraceum* | 2 | 1.9 |
| *Zingiber-officinale* | 2 | 1.9 |
| *Aloe camperi* | 2 | 1.9 |
| Rest | 1 | 0.9 |
| Total | 105 | |