

Table 1

Main plants reported in México as Hypoglycemic, the original table is from Andrade, 1995, the data were actualized and 40 species added from Aguilar and Xolalpa 2002, the correct botanical names were corroborated at Missouri Botanical Garden (2004)—TROPICOS

Scientific name	Common name	Family	Plant part used and preparation	Pharmacological Studies*	Phytochemical informat**
<i>Abutilon lignosum</i> (Cav.) D. Don	Saxiu	Malvaceae	Root infusion		
<i>Abutilon trisulcatum</i> (Jacq.) Urban.	Tronadora	Malvaceae	Leaf boil		
<i>Acacia retinodes</i> Schltld.	Mimosa	Fabaceae	Leaf boil		
<i>Acourtia thurberi</i> . (A. Gray) Reveal & R. M. King	Matarique	Asteraceae	Plant (aerial) infusion	Normal rabbits (+)	
<i>Acrocomia mexicana</i> Karw. ex Mart.	Coyol	Arecaceae	Root roasted, fruit raw	Alloxanic mice (+) Alloxanic mice (++) EtOH	Tetrahydropyrene, Coyolose
<i>Agastache mexicana</i> (Kunth) Lint et Epling	Toronjil	Lamiaceae	Plant (aerial) infusion		Essential oils
<i>Agave atrovirens</i> Karw. Ex Salm-Dyck	Maguey	Agavaceae	Steam macerated		Sapogeninns
<i>Agave lechuguilla</i> Torr.	Lechuguilla	Agavaceae	Steam macerated		
<i>Agave salmiana</i> Otto ex Salm-Dyck	Maguey	Agavaceae	Steam macerated		
<i>Ageratina petiolaris</i> Moc. & Sessé ex DC.	Hierba del ángel o Yolochichotl	Asteraceae	Plant (aerial) infusion		Terpens
<i>Ageratum conyzoides</i> L.	Hierba dulce	Asteraceae	Plant (aerial) infusion		Flavonoids, essential oils, terpens
<i>Allionia choisyi</i> Standl.	Hierba de la hormiga	Nyctaginaceae	Plant (aerial) infusion		
<i>Allium cepa</i> L.	Cebolla	Liliaceae	Bulbs raw		Sulfuric compounds
<i>Alloispermum integrifolium</i> (DC.) H. Rob.	Prodijiosa	Asteraceae	Plant (aerial) infusion		
<i>Aloe barbadensis</i> Mill.	Sábila	Liliaceae	Steam roasted, juice of the leaves	Normal rabbits (–)	Polysaccharides, flavonoids
<i>Aloe vera</i> (L.) Burm. F	Sábila	Liliaceae	Mixed with Nopal taken orally before meals	Normal mice (+)	Polysaccharides A B, flavonoids, terpens Sesquiterpen lactones
<i>Ambrosia artemisiifolia</i> L.	Artemisa	Asteraceae	Plant (aerial) infusion		
<i>Anacardium occidentale</i> L.	Marañón	Anacardiaceae	Bark infusion		
<i>Ananas comosus</i> (L.) Merr.	Piña	Bromeliaceae	Juice of the fruit		Monoterpenoids, Carotenoids, Lactones Isoquinolin Alkaloids
<i>Annona cherimola</i> Mill.	Chirimoya	Annonaceae	Bark infusion		
<i>Annona glabra</i> L.	Anona silvestre, palo de corcho	Annonaceae	Juice of the fruit root infusion		Diterpens, Alkaloids
<i>Annona muricata</i> L.	Guanabana	Annonaceae	Fruit raw		
<i>Apodanthera buraeavi</i> Cogn.	Pisto	Cucurbitaceae	Plant (aerial) infusion		
<i>Aporocactus flagelliformis</i> (L.) Lem.	Flor de junco	Cactaceae	Flowers infusion, steam infusion		
<i>Arachis hypogaea</i> L.	Cacahuate	Fabaceae	Seeds and oil		Sterols, flavonoids
<i>Arceuthobium vaginatum</i> (Humb. & Bonpl. ex Willd.) J. Presl	Injerto	Loranthaceae	Plant infusion		
<i>Arctostaphylos pungens</i> Kunth	Pingüica	Ericaceae	Leaves infusion, roots infusion		Tannins
<i>Argemone mexicana</i> L.	Chicalote, Cardo lechero.	Papaveraceae	Plant (aerial) infusion		Alkaloids, flavonoids
<i>Argemone ochroleuca</i> Sweet	Chicalote	Papaveraceae	Plant (aerial) infusion		Alkaloids
<i>Argemone platyceras</i> Link & Otto	Chicalote	Papaveraceae	Plant (aerial) infusion		
<i>Aristolochia asclepiadifolia</i> Brandegee	Guaco	Aristolochiaceae	Plant infusion EtOH		
<i>Aristolochia malacophylla</i> Standl.	Guaco	Aristolochiaceae	Flowers infusion		
<i>Aristolochia sericea</i> Benth.	Guaco	Aristolochiaceae	Steam infusion		

Table 1 (Continued)

Scientific name	Common name	Family	Plant part used and preparation	Pharmacological Studies*	Phytochemical informat**
<i>Artemisia absinthium</i> L.	Ajenjo	Asteraceae	Leaf boil		Sesquiterpen lactones, flavonoids
<i>Artemisia ludoviciana</i> Nutt.	Estafiate	Asteraceae	Plant (aerial) infusion		
<i>Artemisia vulgaris</i> L.	Ajenjo	Asteraceae	Leaf boil		Sesquiterpens flavonoids
<i>Asclepias linaria</i> Cav.	Romerillo	Asclepiadaceae	Plant (aerial) infusion		Sterols, triterpenoids
<i>Barosma betulina</i> Bartl. & H.L. Wendl.	Buchü	Rutaceae	Leaves infusion		
<i>Bauhinia divaricata</i> L.	Pata de vaca	Fabaceae	Leaf boil, flowers boil	Normal rabbits (+)	
<i>Begonia heracleifolia</i> Schltld. & Cham.	Mano de león	Begoniaceae	Steam infusion		
<i>Berberis moranensis</i> Schult. & Schult. f.	Palo muerto	Berberidaceae	Bark infusion		Cucurbitacines
<i>Beta vulgaris</i> L.	Betabel	Chenopodiaceae	Juice of the leaves		Alkaloids, flavonoids
<i>Bidens aurea</i> (Aiton) Sherff	Té de milpa	Asteraceae	Plant (aerial) infusion		Essential oils
<i>Bidens leucantha</i> (L.) Willd.	Rosilla	Asteraceae	Plant (aerial) infusion	Alloxanic mice (++)	
<i>Bidens odorata</i> Cav.	Aceitilla, Mosote blanco	Asteraceae	Plant (aerial) infusion		Flavonoids, triterpens
<i>Bidens pilosa</i> L.	Aceitilla	Asteraceae	Plant (aerial) infusion	Alloxanic mice (+)	Flavonoids, triterpens
<i>Bocconia arborea</i> S. Watson	Llora sangre	Papaveraceae	Leaves infusion		Alkaloids
<i>Puemeus boldus</i> Molina J. A. Schultes & J. H. Schultes in J. J. Roemer & J. A. Schultes	Boldo	Monimiaceae	Plant (aerial) infusion		
<i>Bouvardia ternifolia</i> (Cav.) Schltld.	Trompetilla	Rubiaceae	Leaves, steam infusion		Bouvardin
<i>Brickellia cavanillesii</i> (Cass.) A. Gray	Prodigiosa	Asteraceae	Plant (aerial) infusion	Normal rabbits (+)	Essential oils, brikelin
<i>Brickellia squarrosa</i> B.L. Rob. & Seaton	Amula	Asteraceae	Plant (aerial) infusion	Normal rabbits (+)	Flavonoids
<i>Brosimum alicastrum</i> Sw.	Ojite	Moraceae	Bark infusion		Benzoquinones
<i>Buchnera pusilla</i> Kunth	Chichibé	Scrophulariaceae	Bark infusion		
<i>Buddleia stachyoides</i> Cham. & Schltld.	Hierba del perro	Loganiaceae	Leaves infusion		Flavonoids, alkaloids, essential oils
<i>Buddleja Americana</i> L.	Tepozán	Loganiaceae	Leaves infusion		Flavonoids, alkaloids
<i>Buddleja cordata</i> Kunth	Tepozán	Loganiaceae	Leaves infusion		Alkaloids
<i>Bursera simaruba</i> (L.) Sarg.	Cuajote	Burseraceae	Bark infusion		Tannins
<i>Byrsonima crassifolia</i> (L.) Kunth	Nanche	Malpighiaceae	Fruit, bark infusion		Triterpenoids
<i>Cacalia decomposita</i> A. Gray	Matarique	Asteraceae	Root infusion	Alloxan Mice (++)	Alkaloids, polysaccharides
<i>Cacalia peltata</i> Kunth	Matarique	Asteraceae	Root infusion	Normal rabbits (++)	Polysaccharides
<i>Calamintha macrostema</i> Benth.	Tabaquillo	Lamiaceae	Root infusion	Alloxanic mice (+)	
<i>Calea hypoleuca</i> B.L. Rob. & Greenm.	Prodigiosa	Asteraceae	Plant (aerial) infusion		
<i>Calea integrifolia</i> (DC.) Hemsl.	Prodigiosa	Asteraceae	Stem, infusion		Sesquiterpen lactones
<i>Calea zacatechichi</i> Schltld.	Prodigiosa	Asteraceae	Leaves infusion	Normal rabbits (+)	
<i>Calliandra anomala</i> (Kunth) J.F. Macbr.	Cabello de ángel	Fabaceae	Leaves infusion		Triterpenoid saponins
<i>Callicarpa acuminata</i> Kunth	Xpuk'im	Verbenaceae	Root, infusion		
<i>Capraria biflora</i> L.	Sabadilla	Scrophulariaceae	Leaves infusion	Alloxanic mice (+)	Alkaloids, loiflorin
<i>Carica papaya</i> L.	Papaya	Caricaceae	Latex		Monoterpenoids
<i>Carya</i> Nutt.	Nogal	Juglandaceae	Leaves infusion		
<i>Casimiroa edulis</i> La Llave & Lex.	Zapote blanco	Rutaceae	Leaves infusion, bark infusion		Alkaloids, casimiroin, edulein, edulinin
<i>Cassia fistula</i> L.	Caña Fístula	Fabaceae	Fruit		

Table 1 (Continued)

Scientific name	Common name	Family	Plant part used and preparation	Pharmacological Studies*	Phytochemical informat**
<i>Cassia skinneri</i> Benth.	Frijolillo	Fabaceae	Leaves infusion		
<i>Cassia tomentosa</i> L. f.	Retama cimarrona	Fabaceae	Leaves infusion		
<i>Castela texana</i> (T. & G.) Rose	Chaparro amargoso	Simaroubaceae	Bark infusion		Steroids
<i>Castela tortuosa</i> Liebm.	Venenilo	Simaroubaceae	Bark infusion		
<i>Castilleja Mutis</i> ex L. f.	Hierba del gato	Scrophulariaceae	Plant (aerial) infusion		
<i>Catharanthus roseus</i> (L.) G. Don	Vicaria	Apocinaceae	Root infusion		
<i>Cecropia peltata</i> L.	Guarambo	Cecropiaceae	Leaves infusion		
<i>Ceiba pentandra</i> (L.) Gaertn.	Ceiba, Pochote	Bombacaceae	Bark infusion		Essential oils
<i>Centaurium brachycalyx</i> Standl. & L.O. Williams	Tlanchalahua	Gentianaceae	Leaves infusion		
<i>Centaurium calycosum</i> (Buckley) Fernald	Tlanchalagua	Gentianaceae	Leaves infusion		
<i>Chamaecrista hispidula</i> (Vahl) H.S. Irwin & Barneby	Frijolillo	Fabaceae	Leaves infusion		
<i>Chamaecrista hispidula</i> (Vahl) H.S. Irwin & Barneby	Frijolillo	Fabaceae	Leaves infusion		
<i>Chenopodium glaucum</i> L.	Hierba del puerco	Chenopodiaceae	Plant (aerial) infusion		
<i>Chromolaena bigelovii</i> (A. Gray) R.M. King & H. Rob	Ambula	Asteraceae	Plant (aerial) infusion		
<i>Cirsium mexicanum</i> DC.	Cardo santo	Asteraceae	Root infusion		
<i>Cirsium raphilepis</i> (Hemsl.) Petr.	Cardo santo	Asteraceae	Flower infusion		
<i>Cissampelos pareira</i> L.	Guaco	Menispermaceae	Root raw		Alkaloids, isoquinolin
<i>Citrus aurantifolia</i> (Christm.) Swingle	Limón	Rutaceae	Fruit		Essential oils, sesquiterpen lactones
<i>Citrus limetta</i> Risso	Lima	Rutaceae	Fruit		
<i>Citrus sinensis</i> (L.) Osbeck	Flor de azahar	Rutaceae	Ripe fruit infusion		Essential oils, flavonoids
<i>Cnidoscolus aconitifolius</i> (Mill.) I.M. Johnst.	Chaya	Euphorbiaceae	Leaves infusion		Polysaccharides
<i>Cnidoscolus multilobus</i> (Pax) I.M. Johnst.	Mala mujer	Euphorbiaceae	Leaves infusion		Triterpenoids, flavonoids, tannins
<i>Cnidoscolus chayamansa</i> Mc Vaugh	Chayamansa	Euphorbiaceae	Leaves infusion		Flavonoids glycosides
<i>Coix lacryma-jobi</i> L.	Lágrima de San Pedro	Poaceae	Plant (aerial) infusion	Normal rabbits (+)	
<i>Combretum farinosum</i> Kunth	Bejuco de Carape	Combretaceae	Sap raw		
<i>Conyza filaginoides</i> (D C.) Hieron.	Simonillo	Asteraceae	Plant (aerial) infusion		Alkaloids, lenecin
<i>Conyza gnaphalioides</i> Kunth	Cimonillo, zacachichitl	Asteraceae	Leaves infusion		Terpens
<i>Cordia elaeagnoides</i> A. DC.	Cueramo	Boraginaceae	Bark infusion		Terpens
<i>Cordia tinifolia</i> Willd. Ex Roem. & Schult.	Palo mulato	Boraginaceae	Bark infusion		
<i>Coriandrum sativum</i> L.	Cilantro	Apiaceae	Plant (aerial) infusion		Coumarins, flavonoids, sesquiterpenoids, steroids
<i>Costus mexicanus</i> Liebm. ex Petersen	Caña de Jabalí	Zingiberaceae	Plant (aerial) infusion		
<i>Costus rubber</i> C. Wright ex Griseb.	Caña agria	Zingiberaceae	Plant (aerial) infusion		
<i>Costus spicatus</i> (Jacq.) Sw.	Caña de Jabalí	Zingiberaceae	Plant (aerial) infusion		
<i>Crataegus mexicana</i> Moc. & Sesse ex DC.	Tejocote	Rosaceae	Root infusion		
<i>Crataegus pubescens</i> (C. Presl) C. Presl	Tejocote	Rosaceae	Root infusion	Normal rabbits (++)	Tannins, flavonoids
<i>Crotalaria acapulcensis</i> Hook. & Arn.	Retama	Fabaceae	Leaves infusion		

Table 1 (Continued)

Scientific name	Common name	Family	Plant part used and preparation	Pharmacological Studies*	Phytochemical informatic**
<i>Croton draco</i> Schltldl.	Sangre de Grado	Euphorbiaceae	Cortex infusion, latex		Diterpens
<i>Croton torreyanus</i> Müll Arg.	Salvia	Euphorbiaceae			
<i>Cucurbita maxima</i> Duchesne	Calabaza	Cucurbitaceae	Fruit juice		Sterols, flavonoids
<i>Cucurbita mexicana</i> Damm	Calabaza, Melón	Cucurbitaceae	Leaves infusion fruit juice	Normal rabbits (++)	
<i>Cuscuta jalapensis</i> Schltldl.	Sacapal	Convolvulaceae	Steam infusion		
<i>Cyathea fulva</i> (M. Martens & Galeotti) Fée	Árbol de la vida	Cyatheaceae	Root infusion		
<i>Cyathea fulva</i> (Martens & Galeotti) Fée.	Árbol de la vida	Filicaceae	Leaves infusion		
<i>Cynara scolymus</i> L.	Alcachofa	Asteraceae	Fruit infusion, flowers infusion		Flavonoids, sesquiterpen lactones, fenolic acids
<i>Cynodon dactylon</i> (L.) Pers.	Gramma	Poaceae	Plant (aerial) infusion	Normal rabbits (+)	Flavonoids, terpens
<i>Daucus carota</i> L.	Zanahoria	Apiaceae	Root juice		Cumarines, flavonoids, essential oils, fenolic acids
<i>Diospyros digyna</i> Jacq.	Zapote negro	Ebenaceae	Fruit		
<i>Dorstenia contrajerva</i> L.	Contrayerba	Moraceae	Leaves boiled		Alkaloids, cardenolids
<i>Dyssodia micropoides</i> (DC.) Loes.	Hierba pelotazo	Asteraceae	Plant (aerial) infusion		
<i>Elaphoglossum</i> sp. Schott ex J. Sm.	Hierba del pastor	Lomariopsidaceae	Plant (aerial) infusion		
<i>Equisetum giganteum</i> L.	Limpia plata	Equisetaceae	Plant (aerial) infusion		Flavonoids
<i>Equisetum hyemale</i> L.	Cola de caballo	Equisetaceae	Plant (aerial) infusion		Flavonoids, alkaloids
<i>Eriobotrya japonica</i> (Thunb.) Lindll.	Nispero	Rosaceae	Leaves infusion, flowers infusion	Normal rabbits (–)	Sesquiterpens, flavonoids
<i>Eucalyptus globules</i> Labill	Eucalipto	Myrtaceae	Leaves infusion	Alloxanic mice (+)	Flavonoids, terpens
<i>Euphorbia maculata</i> L.	Hierba de la Golondrina	Euphorbiaceae	Leaves infusion		
<i>Euphorbia prostrata</i> Aiton	Hierba de la Golondrina	Euphorbiaceae	Leaves infusion		Flavonoids
<i>Eysenhardtia polystachya</i> (Ortega) Sarg.	Palo dulce	Fabaceae	Plant (aerial) infusion, bark infusion	Alloxanic mice (+)	Flavonoids, triterpens
<i>Foeniculum vulgare</i> Mill.	Hinojo	Apiaceae	Plant (aerial) infusion		Essential oils, flavonoids
<i>Fouquieria splendens</i> Engelm.	Albarda	Fouquieriaceae	Leaves infusion		
<i>Fraxinus alba</i> Marshall	Fresno	Oleaceae	Leaves infusion bark infusion		
<i>Gnaphalium oxyphyllum</i> DC.	Gordolobo	Asteraceae			Diterpens, flavonoids
<i>Guaiacum coulteri</i> A. Gray	Guayacan	Zygophyllaceae	Bark infusion		Alkaloids
<i>Guaiacum sanctum</i> L.	Guayacan	Zygophyllaceae	Bark infusion		
<i>Guardiola angustifolia</i> (A. Gray ex S. Watson) B.L. Rob.	Chintuza	Asteraceae			
<i>Guardiola tulocarpus</i> A. Gray	Chintuza	Asteraceae	Leaves infusion		
<i>Guazuma ulmifolia</i> Lam.	Guázima	Sterculiaceae	Bark infusion		Alkaloids, tannins
<i>Haematoxylon brasiletto</i> H. Karst.	Palo Brazil	Fabaceae	Bark infusion		
<i>Hamelia patens</i> Jacq.	Balletilla	Rubiaceae	Leaves infusion		Tannins
<i>Haplopappus venetus</i> (Kunth) S.F. Blake	Xapulli	Asteraceae	Plant (aerial) infusion		
<i>Hechtia melanocarpa</i> L. B. Sm.	Maguey agrio	Bromeliaceae	Steam raw		Flavonoids, alkaloids
<i>Heterotheca inuloides</i> Cass.	Arnica	Asteraceae	Leaves infusion		Flavonoids, essential oils
<i>Hibiscus rosa-sinensis</i> L.	Tulipán	Malvaceae	Plant (aerial) infusion		Sterols, flavonoids
<i>Hidalgoa ternata</i> La Llave	Mozote de monte	Asteraceae	Plant (aerial) infusion		
<i>Hintonia latiflora</i> (Sesse & Moc. ex DC.) Bullock	Copalquin, Cáscara sagrada.	Rubiaceae	Bark infusion	Alloxanic mice (++)	Neoflavonoid, coutareagenin.

Table 1 (Continued)

Scientific name	Common name	Family	Plant part used and preparation	Pharmacological Studies*	Phytochemical informat**
<i>Hippocratea excelsa</i> Kunth	Cancerina	Hippocrateaceae	Root infusion		Sesquiterpens
<i>Ipomoea starts</i> Cav.	Tumba vaquero	Convolvulaceae	Plant (aerial) infusion		Essential oils
<i>Jatropha dioica</i> Cerv.	Sangre de grado	Euphorbiaceae	Root infusion		
<i>Jatropha elbae</i> J. Jiménez Ram.	Sangre de grado	Euphorbiaceae	Bark infusion		Terpens, flavonoids
<i>Juliania adstringens</i> (Schltdl.) Schltdl.	Cuachalalate	Julianiaceae	Bark infusion		Triterpens
<i>Justicia spicigera</i> Scheltdl	Muicle	Acanthaceae	Leaves infusion		Flavonoids
<i>Kalanchoe pinnata</i> (Lam.) Pers.	Tronador	Crassulaceae	Plant (aerial) infusion		Flavonoids
<i>Karwinskia humboldtiana</i> (Willd. ex Roem. & Schult.) Zucc.	Tullidora	Rhamnaceae	Leaves infusion		
<i>Kohleria</i> sp. Regel	Tlanchichinoli	Gesneriaceae	Leaves infusion		Triterpens
<i>Larrea tridentata</i> (Sessé & Moc. ex DC.) Coville	Gobernadora	Zygophyllaceae	Plant (aerial) infusion		Terpens, lignans
<i>Lepechinia caulescens</i> (Ortega) Epling	Bretónica	Lamiaceae	Leaves infusion	Alloxanic mice (++)	Terpens
<i>Lepidium virginicum</i> L.	Lentejilla	Brassicaceae	Leaves infusion		
<i>Leucaena leucocephala</i> (Lam.) de Wit	Guaje	Fabaceae	Seed raw		Tannins
<i>Leucophyllum texanum</i> Benth.	Cenicillo	Scrophulariaceae	Plant (aerial) infusion		
<i>Ligusticum porteri</i> J.M. Coult. & Rose	Raíz de cochino	Apiaceae	Root infusion		Essential oils
<i>Ligustrum japonicum</i> Thunb.	Fresno	Oleaceae	Leaves infusion		
<i>Loeselia coccinea</i> (Cav.) G. Don	Hoja de la virgen	Polemoniaceae	Leaves infusion		Alkaloids, saponins
<i>Loeselia mexicana</i> (Lam.) Brand	Hierba de la virgen.	Polemoniaceae	Leaves infusion	Alloxanic mice (+)	Alkaloids, essential oils
<i>Lonchocarpus cruentus</i> Lundell	Guayacán	Fabaceae	Bark infusion		
<i>Lopezia racemosa</i> Cav.	Perilla	Onagraceae	Plant (aerial) infusion		
<i>Lophocereus schottii</i> (Engelm.) Britton & Rose	Muso	Cactaceae	Steam infusion		Alkaloids
<i>Lysiloma acapulcense</i> (Kunth.) Benth	Tepehuaje	Fabaceae	Leaves infusion, bark infusion		Tannins
<i>Malmea depresa</i> (Baillon) Fries	Elemuy	Anonaceae	Root infusion		Flavonoids
<i>Malvastrum coromandelianum</i> (L.) Garcke	Marvavisco	Malvaceae	Leaves infusion		Tannins
<i>Mangifera indica</i> L.	Mango	Anacardiaceae	Bark infusion leaves infusion		Flavonoids, essential oils, terpens
<i>Marrubium vulgare</i> L.	Marrubio	Lamiaceae	Leaves infusion, root infusion	Normal rabbits (++)	Terpens, flavonoids
<i>Melothria pendula</i> L.	Sandiita	Cucurbitaceae	Plant (aerial) infusion		
<i>Mentha piperita</i> L.	Hierbabuena	Lamiaceae	Leaves infusion		Essential oils, terpens, flavonoids
<i>Mentha rotundifolia</i> (L.) Huds.	Mostranza	Lamniaceae	Leaves infusion		Essential oils, terpens
<i>Mentha suaveolens</i> Ehrh.	Mastranzo	Lamiaceae	Leaves infusion		
<i>Mimosa zygophylla</i> Benth.	Gatuño	Fabaceae	Leaves infusion		
<i>Mirabilis jalapa</i> L.	Maravilla	Nyctaginaceae	Plant (aerial) infusion		Triterpens, flavonoids
<i>Momordica charantia</i> L.	Cundeamor,	Cucurbitaceae	Leaves infusion		Terpens, steroids, flavonoids
<i>Morus nigra</i> L.	Moral negro	Moraceae	Leaves infusion		
<i>Musa sapientum</i> L.	Flor de plátano	Musaceae	Root infusion		
<i>Nasturtium officinale</i> R. Br.	Berro	Brassicaceae	Plant (aerial) infusion		Flavonoids, alkaloids, terpens
<i>Nopalea cochenillifera</i> (L.) Salm-Dyck	Nopal	Cactaceae	Steam raw		

Table 1 (Continued)

Scientific name	Common name	Family	Plant part used and preparation	Pharmacological Studies*	Phytochemical informat**
<i>Nopalea inaperta</i> Schott ex Griffiths.	Nopal	Cactaceae	Steam raw		
<i>Olea europaea</i> L.	Hierba de oliva	Oleaceae	Leaves infusion		Alkaloids, flavonoids, terpens
<i>Opuntia atropes</i> Rose	Nopal blanco	Cactaceae	Steam raw		
<i>Opuntia ficus-indica</i> (L.) Mill.	Nopal	Cactaceae	Steam raw		Alkaloids, flavonoids
<i>Opuntia fulgida</i> Engelm.	Choya	Cactaceae	Steam raw		
<i>Opuntia guilanchi</i> Griffiths	Nopal blanco	Cactaceae	Steam raw		
<i>Opuntia imbricata</i> (Haw) DC.	Xoconostle	Cactaceae	Steam raw, fruit		
<i>Opuntia leucotricha</i> DC.	Duraznillo	Cactaceae	Steam		
<i>Opuntia megacantha</i> Salm-Dyck	Nopal blanco	Cactaceae	Steam raw		
<i>Opuntia streptacantha</i> Lem	Nopal	Cactaceae	Steam raw	Normal rabbits (+)	
<i>Pachira aquatica</i> Aubl.	Zapote de agua	Bombacaceae	Bark infusion		
<i>Pachycereus marginatus</i> (DC.) Britton & Rose	Organo, Sahuaro	Cactaceae	Steam raw		
<i>Pachycereus pringlei</i> (S. Watson) Britton & Rose	Cardón	Cactaceae	Steam raw		
<i>Packera candidissima</i> (Greene) W.A. Weber & Á. Löve	Lechugilla	Asteraceae	Plant (aerial) infusion		
<i>Parathesis lenticellata</i> Lundell	Chagalapoli	Myrsinaceae	Leaves infusion		
<i>Parkinsonia aculeata</i> L.	Bagote	Fabaceae	Leaves infusion		Flavonoids, triterpens
<i>Parthenium hysterophorus</i> L.	Escobilla	Asteraceae	Plant (aerial) infusion		Alkaloids, partenin
<i>Pavonia schiedeana</i> Steud	Cadillo	Malvaceae	Leaves infusion	Normal rabbits (–)	Tannins
<i>Persea americana</i> Mill	Aguacate	Lauraceae	Leaves infusion		Sterols, flavonoids
<i>Petroselinum crispum</i> (Mill.) Nyman ex A.W. Hill	Perejil	Apiaceae	Plant (aerial) infusion		Essential oils, flavonoids
<i>Phaseolus vulgaris</i> L.	Fríjol	Fabaceae	Fruit infusion	Normal rabbits (+)	Essential oils, flavonoids, alkaloids
<i>Phlebodium aureum</i> (L.) J. Sm.	Calahuala	Polypodiaceae	Root infusion		Steroids
<i>Phoradendron bolleanum</i> (Seem.) Eichler	Injerto	Viscaceae	Plant (aerial) infusion		
<i>Phoradendron tomentosum</i> (DC.) Engelm. ex A. Gray	Muicle	Viscaceae	Plant (aerial) infusion		Phoratoxins
<i>Phragmites australis</i> (Cav.) Trin. ex Steud.	Carrizo	Poaceae	Plant (aerial) infusion		
<i>Physalis coztomatl</i> Dunal	Costomate	Solanaceae	Leaves infusion		
<i>Physalis philadelphica</i> Lam.	Tomate	Solanaceae	Fruit roasted	Normal rabbits (–)	
<i>Piper auritum</i> Kunth	Acoyo	Piperaceae	Leaves infusion		Terpens, flavonoids, essential oils
<i>Piper hispidum</i> Sw.	Cordoncillo	Piperaceae	Leaves infusion		
<i>Piper sanctum</i> (Miq.) Schlttdl. ex C. DC.	Hierba Santa	Piperaceae	Leaves infusion		Essential oils, alkaloids
<i>Piper schiedeana</i> Steud.	Tlaxalisnuat	Piperaceae	Leaves infusion		
<i>Pithecellobium dulce</i> (Roxb.) Benth.	Guamúchil	Fabaceae	Bark infusion		
<i>Plantago australis</i> Lam.	Gusanillo	Plantaginaceae	Plant (aerial) infusion		Lignans
<i>Plantago major</i> L.	Llante	Plantaginaceae	Plant infusion		Flavonoids, terpens
<i>Plumbago scandens</i> L.	Plumbago	Plumbaginaceae	w/i		Flavonoids
<i>Plumeria rubra</i> L.	Flor de mayo	Apocynaceae	Flowers infusion		
<i>Polygonum acre</i> Lam.	Sanguinaria	Polygonaceae	Leaves infusion		
<i>Populus alba</i> L.	Abedúl	Salicaceae	Leaves infusion		

Table 1 (Continued)

Scientific name	Common name	Family	Plant part used and preparation	Pharmacological Studies*	Phytochemical informat**
<i>Porophyllum punctatum</i> (Mill.) S.F. Blake	Piojillo	Asteraceae	Flowers infusion		
<i>Portulaca denudata</i> Poelln.	Verdolaga	Portulacaceae	Plant (aerial) infusion		
<i>Portulaca oleracea</i> L.	Verdolaga	Portulacaceae	Plant (aerial) infusion		Alkaloids, terpens
<i>Pouteria hypoglauca</i> (Standl.) Baehni	Baehni	Sapotaceae	Leaves infusion		
<i>Prosopis juliflora</i> (Sw.) DC.	Mezquite	Fabaceae	Fruit raw		
<i>Prunus serotina</i> subsp. <i>capuli</i> (Cav.) McVaugh	Capulín	Rosaceae	Fruit infusion		Terpens
<i>Psacalium sinuatum</i> (Cerv.) H. Rob. & Brettell	Matarique	Asteraceae	Root infusion		
<i>Pseudosmodium pemiciosum</i> (Kunth) Engl.	Cuajilote	Anacardiaceae	Root infusion bark infusion		
<i>Psidium guajava</i> L.	Guayaba	Myrtaceae	Fruit		Terpens, flavonoids
<i>Psidium yucatanense</i> Lundell	Pach	Myrtaceae	Bark infusion		
<i>Psittacanthus calyculatus</i> (DC.) G. Don	Muérdago	Loranthaceae	Plant infusion, flowers infusion	Alloxanic mice (++)	
<i>Quassia amara</i> L.	Cuasia	Simaroubaceae	Leaves infusion		Alkaloids, terpens
<i>Quercus acutifolia</i> Neé	Encino	Fagaceae	Bark infusion		Terpens, flavonoids
<i>Quercus rugosa</i> Neé	Encino	Fagaceae	Bark infusion		
<i>Randia echinocarpa</i> Moc. & Sessé ex DC.	Grangel	Grangel	Leaves infusion		
<i>Randia echinocarpa</i> Moc. & Sessé ex DC.	Granjil	Rubiaceae	Fruit		
<i>Raphanus sativus</i> L.	Rábano	Brassicaceae	Root infusion		
<i>Rhizopora mangle</i> L.	Mangle	Rhizophoraceae	Bark infusion		Tannins
<i>Rhizopora mangle</i> L.	Huiguerilla	Euphorbiaceae	Leaves infusion		Flavonoids, terpens
<i>Rosa centifolia</i> L.	Rosa de castilla	Rosaceae	Leaves infusion		
<i>Rubus adenotrichus</i> Schldtl.	Zarzamora	Rosaceae	Leaves infusion		
<i>Russelia equisetiformis</i> Schldtl. & Cham.	Cola de caballo	Scrophulariaceae	Plant (aerial) infusion		
<i>Salix taxifolia</i> Kunth	Taray	Salicaceae	Steam infusion		
<i>Salpianthus arenarius</i> Humb. & Bonpl.	Catarinita	Nyctaginaceae.	Leaves infusion	Normal rabbits (++)	
<i>Salvia leucantha</i> Cav.	Salvia morada	Lamiaceae	Plant (aerial) infusion		Terpens
<i>Samvitalia procumbens</i> Lam.	Ojo de gallo	Asteraceae	Plant (aerial) infusion		Terpens
<i>Saurauia pringlei</i> Rose	Picon	Actnidaceae	Leaves infusion		
<i>Sechium edule</i> (Jacq.) Sw.	Chayote	Cucurbitaceae	Fruit raw		Flavonoids
<i>Sedum dendroideum</i> Moc. & Sessé ex DC.	Siempreviva	Crassulaceae	Plant (aerial) infusion		Sedoheoptulose
<i>Sedum moranense</i> HBK.	Siempreviva	Crassulaceae	Plant (aerial) infusion		
<i>Sedum praealtum</i> A. DC.	Siempreviva	Crassulaceae	Leaves infusion		
<i>Selaginella lepidophylla</i> (Hook. & Grev.) Spring	Doradilla	Selaginellaceae	Plant (aerial) infusion		Essential oils
<i>Selaginella pallescens</i> (C. Presl) Spring	Flor de piedra	Sellaginaceae	Plant (aerial) infusion		
<i>Selloa plantaginea</i> Kunth	Diente de elef. ante	Asteraceae	Plant (aerial) infusion		
<i>Senecio albo-lutescens</i> Sch. Bip.	Matarique	Asteraceae	Root infusion		
<i>Senecio palmeri</i> A. Gray	Matarique	Asteraceae	Root infusion		
<i>Senecio peltiferus</i> Hemsl.	Matarique	Asteraceae	Root infusion		
<i>Senna multiglandulosa</i> (Jacq.) H.S. Irwin & Barneby	Retama china	Fabaceae	Leaves infusion		

Table 1 (Continued)

Scientific name	Common name	Family	Plant part used and preparation	Pharmacological Studies*	Phytochemical informat**
<i>Senna obtusifolia</i> L. (L.) H.S. Irwin & Barneby	Pa xojk	Fabaceae	Leaves infusion		Antraquinones, emodin
<i>Senna occidentalis</i> (L.) Link	Frijolillo	Fabaceae	Root infusion		Flavonoids, sterols
<i>Serjania racemosa</i> Schumach.	Bejuco tres en uno.	Sapindaceae	Plant (aerial) infusion		
<i>Serjania triquetra</i> Radlk.	Bejuco de tres C.	Salicaceae	Bark infusion		
<i>Simira</i> sp. Aubl	Quina roja, cáscara sagrada	Rubiaceae	Bark infusion		
<i>Smilax aristolochiifolia</i> Mill.	Zarzaparrilla	Similicaceae	Root infusion		Sapogenins
<i>Solandra nitida</i> Zuccagni	Flor de guayacán	Solanaceae	Flower infusion		
<i>Solanum americanum</i> Mill.	Hierba mora	Solanaceae	Plant (aerial) infusion		Alkaloids, solanin
<i>Solanum brevistylum</i> Wittm	Malabar	Solanaceae	Plant (aerial) infusion		
<i>Solanum diversifolium</i> Dunal	Malabar	Solanaceae	Leaves infusion	Normal rabbit (++)	
<i>Solanum nigrescens</i> M. Martens & Galeotti	Hierba mora	Solanaceae	Plant (aerial) infusion		
<i>Solanum rostratum</i> Dunal	Duraznillo	Solanaceae	Plant (aerial) infusion		
<i>Solanum torvum</i> Sw.	Berenjena	Solanaceae	Root infusion		
<i>Solanum verbascifolium</i> C.B. Wright	Berenjena	Solanaceae	Plant (aerial) infusion		Steroidal, alkaloids
<i>Sonchus oleraceus</i> L.	Lechuguilla	Asteraceae	Leaves infusion		Flavonoids
<i>Spartium junceum</i> L.	Retama	Fabaceae	Leaves infusion		
<i>Sphaeralcea angustifolia</i> (Cav.) G. Don	Hierba del negro	Malvaceae	Plant (aerial) infusion		
<i>Stachytarpheta jamaicensis</i> (L.) Vahl	Verbena	Verbenaceae	Plant (aerial) infusion		Terpens
<i>Stenocereus marginatus</i> (DC.) Berger & Buxb	Organo de Zopilote	Cactaceae	Steam roasted		
<i>Struthanthus densiflorus</i> (Benth.) Standl.	Injerto	Loranthaceae	Leaves infusion		
<i>Swietenia humilis</i> Zucc.	Zopilote	Meliaceae.	Seed raw		
<i>Tagetes erecta</i> L.	Cempasuchil o Flor de muerto,	Asteraceae	Plant (aerial) infusion		Terpens, essential oils
<i>Tamarindus indica</i> L.	Tamarindo	Fabaceae	Pulp of fruit raw		Flavonoids
<i>Taraxacum officinale</i> Weber ex F.H. Wigg.	Diente de león	Asteraceae	Leaves infusion		Terpens
<i>Taxodium mucronatum</i> Ten.	Ahuehuate	Taxodiaceae	Leaves infusion		Flavonoids
<i>Tecoma stans</i> (L.) Juss. ex Kunth	Tronadora	Bignoniaceae	Leaves infusion, plant infusion plant infusion	Alloxanic mice (++) Normal Dogs (++)	Alkaloids, terpens
<i>Terminalia catappa</i> L.	Castaño	Combretaceae	Fuit		
<i>Teucrium cubense</i> Jacq.	Agrimonia	Lamiaceae	Leaves infusion	Normal rabbits (+)	
<i>Thriallis glauca</i> (Cav.) Kuntze	Amargoso	Malphiigiaceae	Root infusion		Flavonoids, terpens
<i>Tillandsia usneoides</i> (L.) L.	Heno	Bromeliaceae	Plant (aerial) infusion	Alloxanic mice (++)	Flavonoids
<i>Tournefortia hirsutissima</i> L.	Lagrima de San Pedro.	Boraginaceae	Steam infusion		
<i>Tournefortia petiolaris</i> DC.	Lagrima de San Pedro.	Boraginaceae	Steam infusion		
<i>Tradescantia pendula</i> (<i>Schnizl.</i>) D.R. Hunt	Comellina	Commelinaceae	Leaves infusion		Flavonoids
<i>Trigonella foenum-graecum</i> L.	Fenogreco	Fabaceae	w/i		
<i>Tropaeolum majus</i> L.	Mastuerzo	Tropaeoleaceae	Leaves infusion		
<i>Turnera diffusa</i> Willd ex Schult.	Damiana.	Turneraceae	Leaves infusion		Flavonoids, terpens
<i>Urtica dioica</i> L.	Ortiga	Urticaceae	Plant (aerial) infusion	Normal rabbits (–)	Flavonoids, coumarins
<i>Urtica mexicana</i> Liebm.	Ortiga	Urticaceae	Leaves infusion		

Table 1 (Continued)

Scientific name	Common name	Family	Plant part used and preparation	Pharmacological Studies*	Phytochemical informat**
<i>Valeriana edulis</i> Nutt. ex Torr. & A. Gray	Valeriana	Valerianaceae	Root infusion		
<i>Valeriana procera</i> Kunth	Valeriana	Valerianaceae	Root infusion	Alloxanic mice (–)	
<i>Verbesina crocata</i> (Cav.) Less.	Capitaneja	Asteraceae	Leaves infusion	Alloxanic mice (+)	
<i>Verbesina persicifolia</i> DC.	Huichin	Asteraceae	Plant (aerial) infusion	Alloxanic mice (+)	Sesquiterpens
<i>Zaluzania angusta</i> (Lag.) Sch. Bip.	Limpia tuna	Asteraceae	Root infusion		
<i>Zantoxylum fagara</i> L.	Tankasché	Rutaceae	Leaves infusion		Alkaloids
<i>Zea mays</i> h.	Pelos de elote	Poaceae	Fruit infusion		
<i>Zexmenia gnaphalioides</i> A. Gray	Peonia	Asteraceae	Root infusion		
<i>Zizyphus acuminata</i> Benth	Corongoro, amol	Rhamnaceae	Plant (aerial) infusion		

* In the Animal studies +, indicates activity and the level of it, while—mean no observed activity for the tested extract.

** The phytochemical information, refers about the reports for the plant no the active compounds.

isolated from *Psacalium* spp., processes for obtaining the novel eremophilanolide sesquiterpenes and methods for their use as hypoglycemic agents, for example, in the treatment of diabetes.” Sadly, Mexicans have had no say in developing this patent on a Mexican plant.

Instead we review the current information of some lesser known plants commonly used in México to treat type 2 diabetes and summarise and discuss ethnobotanical, pharmacognostical, phytochemical, pharmacological and clinical data for the main species reported as hypoglycaemic in México (Table 1).

3. Ethnopharmacology of commonly used antidiabetic plants in México

Seven species used throughout México, reported in the international literature with pharmacological and phytochemical studies are discussed in greater detail and their potential for developing phytomedicines with a validated profile of activity and demonstrated safety profile is analysed (Table 2).

3.1. *Cecropia obtusifolia* Bertol. (Cecropiaceae)

The hypoglycaemic effect of this plant sold on several markets as a treatment for type 2 diabetes is well known in México, DF (Andrade-Cetto, 1999) and it is also known from many ethnobotanical collections in rural lowland areas (e.g. Heinrich, 1989).

3.1.1. Botanical description

A monopodic tree 20 m tall, growing in secondary vegetation in the tropical rain forest. This tree has a tall, straight, hollow trunk and a stratified treetop with few large branches growing horizontally from the trunk. The leaves are in a spiral disposition located at the top of the branches and are simple, peltate or deeply palmate, with a deep green colour in the

upper face and grey at the lower surface. It is a fast-growing pioneer tree from tropical America, the hollow septate twigs are inhabited by ants (Pennington and Sarukhán, 1998).

3.1.2. Distribution

It is widespread in México, along both coasts, from Tamaulipas and San Luis Potosí to Tabasco on the Gulf of México, and from Sinaloa to Chiapas on the Pacific side. It is, in fact, a weedy species, which would presumably be relatively easy to grow on a larger scale or to harvest it sustainably by collecting material in the first few years after a *milpa* (corn field) has been given up.

3.1.3. Ethnobotany

Traditionally the dry leaves (15 g) are boiled in water (500 ml), the resulting infusion is cooled in the pot, then filtrated and drunk as “agua de uso”. The cold infusion is consumed over the day or when the people have thirst. The use is reported from the following Mexican states, Hidalgo, Guerrero, Veracruz, Yucatan, Campeche, Tabasco, Edo. de México, Oaxaca and Chiapas. The traditional names include “Guarumbo”, “Chancarro”, “Hormiguillo”, “Chiflon” and “Koochlé” among others.

3.1.4. Main constituents

The following constituents have been reported: β -sitosterol, stigmasterol, 4-ethyl-5-(*n*-3valeroil)-6-hexahydrocoumarin and 1-(2-methyl-1-nonen-8-il)-aziridine (Argueta, 1994). The type of extract for the isolated compounds has not been specified. From the butanolic extract Andrade-Cetto and Wiedenfeld (2001) isolated chlorogenic acid and isoorientin (Fig. 1 compounds 1 and 2). The isolated compounds are also found in the medicinal tea.

3.1.5. Pharmacology

A hypoglycaemic effect of the water extract was demonstrated in alloxan diabetic mice (Pérez et al., 1984), in hyperglycaemic rabbits (Román-Ramos et al., 1991) and in