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Review Article

Herbal medicine for diabetes mellitus: A Review

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Abstract

Diabetes mellitus (DM) is the most common of the endocrine disorders. It is an important human ailment, afflicting many, from various walks of life in different countries. The prevalence of diabetes mellitus is expected to reach up to 4.4% in the world by 2030. Among all type of diabetes, type 2 diabetes is main complication. Currently available treatment options in modern medicine have several adverse effects. Therefore, there is a need to develop safe and effective treatment modalities for diabetes. Medical plants play an important role in the management of diabetes mellitus especially in developing countries where resources are meager. This article presents a review on some reported antidiabetic medicinal plants (with their botanical name,Family and part used)
Key Words: Diabetes, Medicinal plants, Hypoglycemic.

1.Introduction

Diabetes mellitus is a disorder that affects the body's ability to make or use insulin. Insulin is a hormone produced in the pancreas that helps transport glucose (blood sugar) from the bloodstream into the cells so they can break it down and use it for fuel. People cannot live without insulin. Diabetes results in abnormal levels of glucose in the bloodstream. This can cause severe short-term and long term consequences ranging from brain damage to amputations and heart disease.

1.2 Types and differences of diabetes: There are several forms of diabetes. Scientists are still defining and categorizing some of these variations and establishing their prevalence in the population. Types of diabetes include:

1.2.1Type 1 diabetes: An autoimmune disease in which the immune system mistakenly destroys the insulin-making beta cells of the pancreas. It typically develops more quickly than other forms of diabetes. It is usually diagnosed in children and adolescents, and sometimes in young adults. To survive, patients must administer insulin medication regularly. Type 1diabetes used to be called juvenile diabetes and insulin-dependent diabetes mellitus (IDDM). However, those terms are not accurate because children can develop other forms of diabetes, adults sometimes develop type 1, and other forms of diabetes can require insulin therapy. A variation of type 1 that develops later in life, usually after age 30, is called latent autoimmune diabetes of adulthood (LADA). Sometimes patients with autoimmune diabetes develop insulin resistance because of weight gain or genetic factors. This condition is known as double diabetes.

1.2.2Type 2 diabetes: A disorder of metabolism, usually involving excess weight and insulin resistance. In these patients, the pancreas makes insulin initially, but the body has trouble using this glucose-controlling hormone. Eventually the pancreas cannot produce enough insulin to respond to the body's need for it. Type 2 diabetes is by far the most common form of diabetes, accounting for 85 to 95% of cases in developed nations and an even higher percentage in developing nations, according to the International Diabetes Federation. This disease may take years or decades to develop. It is usually preceded by pre diabetes, in which levels of glucose (blood sugar) are above normal but not high enough yet for a diagnosis of diabetes. People with pre diabetes can often delay or prevent the escalation to type 2 diabetes by losing weight through improvements in exercise and diet, as the Diabetes Prevention Program and other

research projects have demonstrated. Type 2 diabetes used to be called adult-onset diabetes and non-insulin-dependent diabetes mellitus (NIDDM). Those terms are not accurate because children can also develop this disease, and some patients require insulin therapy.

1.2.3Gestational diabetes: A temporary metabolic disorder that any previously nondiabetic woman can develop during pregnancy, usually the third trimester. Hormonal changes contribute to this disease, along with excess weight and family history of diabetes. About 4% of pregnant women develop gestational diabetes, according to the American Diabetes Association.

1.2.4Secondary diabetes: Diabetes caused by another condition. The many potential sources of secondary diabetes range from diseases such as pancreatitis, cystic fibrosis, Down syndrome and hemochromatosis to medical treatments including corticosteroids, other immunosuppressives, diuretics and pancreatectomy.[1]

Our Vedic literatures like Charak Samhita already report the use of plants, herbs and their derivatives for treatment of diabetes mellitus. More than 400 plants have been incorporated in approximately 700 recipes which are used to treat diabetes mellitus in almost two thirds of the world population. A large number of *in vivo* studies have been conducted on animals to test the claimed activity have demonstrated the hypoglycemic property of many plants, already reported in various literatures.[2] Various medicinal plants have been reported for their anti diabetic actions are as follows.

Table.1. List of plants having Anti-diabetic activity[3-32]

Sr. no	Plant	Family	Part used
1	*Abelmoschus moschatus*	Malvaceae	mucilage
2	*Abroma augusta*	Sterculiaceae	Leaves
3	*Abrus precatorious*	Leguminosea	Seeds
4	*Abutilon indicum*	Malvaceae	Whole plant
5	*Acacia Arabica*	Rubaceae	Seeds
6	*Acacia bilimekii*	Fabaceae	Leaves
7	*Acacia catechu*	Rubaceae	Bark
8	*Acacia farnesiana*	Fabaceae	Bark
9	*Acacia nilotica*	Fabaceae	Leaves, bark
10	*Acacia pennata*	Rubaceae	Shoot tips
11	*Acanthopanax senticosus*	Araliaceae	Leaves
12	*Achyranthes aspera*	Amaranthaceae	Whole plant
13	*Achyranthes aspera*	Amaranthaceae	Whole plant
14	*Achyrocline satureioides*	Asteraceae	Aerial parts
15	*Aconitum carmichaeli*	Ranunculacea	Roots
16	*Aconitum ferox*	Ranunculacea	Root
17	*Aconitum palmatum*	Ranunculacea	Roots
18	*Acosmium panamense*	Leguminosea	Bark
19	*Acrocomia mexicana*	Leguminosea	Roots
20	*Adansonnia digitata*	Bombacaceae	Stem bark
21	*Adhatoda vasica*	Acanthaceae	Leaves
22	*Adianthum capillus*	Polypodiaceae	Whole plant
23	*Adiantum caudatum*	pteridaceae	Leaves
24	*Aegle marmelos*	Rutaceae	Flower, leaves
25	*Aerva lanata*	Amaranthaceae	Leaves
26	*Aesculus hippocastanum L.*	Hippocastanaceae	Seeds
27	*Afzelia africana*	Fabaceae	Stem bark
28	*Aframomum memegueta*	Zingiberaceae	Leaves
29	*Agapetes sikkimensis*	Ericaceae	Aerial parts

30	*Agarista mexicana*	Ericaceae	Aerial parts
31	*Agrimonia eupatoria*	Rosaceae	Leaves
32	*Agrimonia pilosa*	Rosaceae	Leaves
33	*Ajuga iva L*	Lamiaceae	Whole plant
34	*Ajuga remota*	Lamiaceae	Leaves
35	*Alangium salvifolium*	Alangiaceae	Leaves
36	*Albizia amara*	Mimosoideae	Leaves
37	*Alchemilla vulgaris*	Rosaceae	
38	*Allium cepa*	Liliaceae	Bulbs (oil), Stems, tops
39	*Allium sativum*	Liliaceae	Bulbs
40	*Aloe arborescens*	Liliaceae	Leaves
41	*Aloe barbadensis*	Liliaceae	Leaves
42	*Aloe vera*	Liliaceae	Leaves
43	*Alpinia galanga*	Zingiberaceae	Rhizome
44	*Alstonia macrophylla*	Apocynaceae	Whole plant
45	*Alstonia scholaris*	Apocynaceae	Bark
46	*Alternanthera sessillis*	Amaranthaceae	Whole plant
47	*Althaea officinalis*	Malvaceae	Leaves, whole plant
48	*Amaranthus caudatus*	Amaranthaceae	Leaves
49	*Amaranthus esculantus*	Amaranthaceae	Whole plant, oil
50	*Amaranthus spinosus*	Amaranthaceae	Stem
51	*Amomum aromaticum*	Zingiberaceae	Root
52	*Amomum subulatum*	Zingiberaceae	Root
53	*Amorphophallus konjac*	Araceae	Rhizome
54	*Amphipterygium adstringens*	Anacardiaceae	Bark
55	*Anacardium occidentale*	Anacardiaceae	Bark
56	*Anacardium occidentale*	Anacardiaceae	Leaves
57	*Andrographis lineata*	Acanthaceae	Leaves
58	*Andrographis paniculata*	Acanthaceae	Root
59	*Andrographis paniculata*	Acanthaceae	Whole plant
60	*Andropogon citratus*	Poaceae	Aerial parts
61	*Anemarrhena asphodeloids*	Annoaceace	Rhizomes
62	*Anethum graveolens*	Apiaceae	Seeds
63	*Annona muricata*	Annonaceae	Leaves
64	*Annona squamosa*	Annonaceae	Leaves
65	*Anthemis herba alba*	compositae	Aerial parts
66	*Anthocephalus indicus*	Rubiaceae	Bark
67	*Anthocleista nobilis*	Logoniaceae	Bark
68	*Anthocleista rhizophoroides*	Logoniaceae	Bark
69	*Anthocleista voglii*	Logoniaceae	Root
70	*Aporosa lanceolata*	Euphorbiaceae	Leaves
71	*Aporosa lindleyana*	Euphorbiaceae	Leaves

72	*Aquilaria agallocha*	Thymelaeaceae	Stem
73	*Aquilaria sinensis*	Thymelaeaceae	Leaves
74	*Aralia elata Seem*	Araliaceae	Root
75	*Arctostaphylos uva ursi*	Ericaceae	Fruit
76	*Areca catechu*	Arecaceae	Seeds
77	*Argyreia nervosa*	Convolvulaceae	Root
78	*Aronia melanocarpa*	Rosaceae	Fruit
79	*Artemisia absinthium*	Compositae	Leaves, aerial parts
80	*Artemisia dracunculus*	Compositae	Whole plant
81	*Artemisia herba-alba*	Compositae	Leaves
82	*Artemisia ludoviciana*	Compositae	Leaves
83	*Artemisia pallens Wall*	Compositae	Aerial parts
84	*Arthrocnemum glaucum*	Chenopodiaceae	
85	*Artocarpus altilis*	Moraceae	Leaves
86	*Artocarpus heterophyllus*	Moraceae	Leaves
87	*Asparagus gonocladus*	Aparagaceae	Bulb
88	*Asparagus racemosus*	Meliaceae	Roots
89	*Asteracantha longifolia*	Acanthaceae	Leaves
90	*Astragalus species*	Leguminosea	Roots
91	*Asystasia gangetica*	Acanthaceae	Leaves
92	*Atractylode japonica*	Compositae	Rhizomes
93	*Auricularia auricula-juda*	Primulaceae	Fruit
94	*Avena sativa*	Poaceae	Whole plant
95	*Averrhoa bilimbi*	Oxalidaceae	Leaves
96	*Averrhoa carambola*	Oxalidaceae	Leaves
97	*Azadirachta indica*	Meliaceae	Seed oil, leaves
98	*Baccharis salicifolia*	Asteraceae	Leaves
99	*Baccharis trimera*	Myrtaceae	Leaves
100	*Bacopa monnieri*	Scrophulariaceae	Aerial parts
101	*Balanites aegyptiaca*	Simarubiacea	Fruit
102	*Bambusa arundinaceae*	Bambusaceae	Seeds
103	*Bambusa vulgaris*	Gramineae	Leaves
104	*Barleria lupulina*	Acanthaceae	Aerial Part
105	*Barleria noctiflora*	Acanthaceae	Whole plant
106	*Barleria prionotis*	Acanthaceae	Leaf, bark, root
107	*Barringtonia acutangula*	Lecythidaceae	Stem bark
108	*Basella rubra*	Basellaceae	Leaves
109	*Bauhinia candicans*	leguminoseae	Leaves
110	*Bauhinia divaricata*	leguminoseae	Leaves
111	*Bauhinia forficate*	Caesalpinaceae	Leaves
112	*Bauhinia rectusa*	leguminoseae	Seeds
113	*Bauhinia variegata*	Caesalpiniaceae	Bark

114	*Bauhinia variegata*	Caesalpinaceae	Flowers
115	*Benincasa hispida*	Cucurbitaceae	Fruit
116	*Berberis aristata*	Berberidaceae	Stem bark
117	*Berberis vulgaris*	Berberidaceae	Root
118	*Bergenia stacheyi*	Saxifragaceae	Root
119	*Bergia capensis*	Elatinaceae	
120	*Beta vulgaris*	Chenopodiaceae	Root bark
121	*Bhighia sapida*	sapindaceae	Unripe fruits & seeds
122	*Bidens pilosa*	Asteraceae	Whole plant
123	*Billia hippocastanum*	Hippocastanaceae	Aerial parts
124	*Biophytum sensitivum*	Oxalidaceae	Leaves
125	*Bixa orellana*	Bixaceae	Leaves
126	*Blighia sapida*	sapindaceae	Fruit
127	*Boerhaavia diffusa*	Nyctaginaceae	Root
128	*Bombax ceiba*	Bombacaceae	Seed
129	*Boswellia serrata*	Frankincense	Whole plant
130	*Bougainvillea glabra*	Rubiaceae	Leaves
131	*Bougainvillea spectabilis*	Rubiaceae	Seeds
132	*Bouvardia ternifolia*	Rubiaceae	Leaves
133	*Brassica juncea*	Brassicaceae	Seeds
134	*Brassica juncea Coss*	Brassicaceae	Leaves
135	*Brassica napiformis*	Brassicaceae	
136	*Brassica nigra*	Brassicaceae	Seeds
137	*Brassica oleraccia*	Brassicaceae	Leaves
138	*Brassica rapa*	Brassicaceae	Root
139	*Brickellia cavanillesii*	Asteraceae	Aerial parts
140	*Brickellia squarrosa*	Asteraceae	Aerial parts
141	*Brickellia veronicaefolia*	Asteraceae	Whole plant
142	*Brickellia veronicaefolia*	Asteraceae	Aerial parts
143	*Bridelia ndellensis*	Euphorbiaceae	Leaves
144	*Brophyllum pinnatum*	Crassulaceae	Leaves
145	*Bryonia alba L.*	Cucurbitaceae	Roots
146	*Bryonia cretica*	Cucurbitaceae	Aerial parts
147	*Buchanania axillaries*	Anacardiaceae	
148	*Buddleia americana Linn.*	Buddleaceae	Whole plant
149	*Bumelia sartorum*	Sapotaceae	Root bark
150	*Butea monosperma*	Fabaceae	Fruit, Leaves, root
151	*Caesalpinia bonducella*	Leguminosae	Seeds
152	*Caesalpinia crista*	Fabaceae	Seeds
153	*Caesalpinia decapetala*	Leguminosae	Seeds
154	*Caesalpinia digyna*	Leguminosae	Roots
155	*Caesalpinia sappan*	Fabaceae	Stem

156	*Caeseria esculanta*	Caesalpinoideace	Roots
157	*Cajanus cajan*	Fabaceae	Seeds
158	*Calamintha macrostema*	Lamiaceae	Root, stem
159	*Calamintha officinalis*	Lamiaceae	Aerial parts
160	*Calamintha umbrossa*	Lamiaceae	Whole plant
161	*Calea zacatechichi Schlecht*	Asteraceae	
162	*Callistemon lanceolatus*	Myrtaceae	Aerial parts
163	*Calotropis procera*	Asclepiadaceae	Latex
164	*Camellia sinensis*	Theaceae	Leaves
165	*Canarium schweinfurthi*	Burseraceae	Stem bark
166	*Canarium zeylanicum*	Burseraceae	Bark
167	*Canavalia ensiformis*	Leguminosae	Seeds
168	*Cannabis indica*	Cannabinaceae	Whole plant, Leaves
169	*Canscora decussata*	Gentianaceae	
170	*Capparis decidua*	Capparaceae	Fruits, seeds
171	*Capparis incana*	Capparaceae	Leaves, bark
172	*Capparis moon*	Capparaceae	Fruit
173	*Capparis sepiaria*	Capparaceae	Leaves
174	*Capravia biflora*	Scrophulariaceae	Leaves
175	*Cardiospermum helicacabum*	Sapindaceae	Leaves
176	*Carica papaya*	Caricaceae	Fruit
177	*Carissa carandas*	Apocynaceae	Fruit
178	*Carissa edulis*	Apocynaceae	Leaves
179	*Carmona retusa*	Boraginaceae	Leaves, root
180	*Carum carvi*	Apiaceae	Seeds
181	*Casearia esculenta*	Flacourtiaceae	Root
182	*Caseria esculenta*	salicaceae	Root
183	*Caseria glauca*	salicaceae	Bark
184	*Caseria zeylanica*	Flacourtiaceae	Stem bark, root bark
185	*Cassia alta*	Fabaceae	Leaves
186	*Cassia auriculata*	Leguminoseae	Roots
187	*Cassia fistula*	Leguminoseae	Seeds
188	*Cassia glauca*	Caesalpiniaceae	Leaves
189	*Cassia occidentalis*	Caesalpiniaceae	
190	*Cassia siamea*	Fabaceae	Leaves
191	*Cassia sophora*	Caesalpiniaceae	Leaves, root, bark, seeds
192	*Castela texana*	Simaroubaceae	Leaves
193	*Catharanthus roseus*	Apocynaceae	Flower, Leaves, Stem & Root
194	*Cecropia obtusifolia*	Moraceae	Leaves
195	*Cecropia peltata L*	Moraceae	Leaves
196	*Cedronella canariensis*	Lamiaceae	Aerial parts
197	*Ceiba pentandra*	Malvaceae	Roots, Leaves

198	*Centella asiatica*	Apiaceae	Whole plant
199	*Centratherum anthelminticum*	Asteraceae	Seed
200	*Cephalandra indica*	Cucurbitaceae	Leaves, fruit, root, bark
201	*Cephalanthus glabratus*	Rubiaceae	wood
202	*Chamaemelum nobile*	Compositae	Leaves
203	*Cichorium intybus*	Asteraceae	Seeds
204	*Cinnamomum cassia*	Lauraceae	Leaves, bark
205	*Cinnamomum tamala*	Lauraceae	Bark
206	*Cinnamomum zeylanicum*	Lauraceae	bark
207	*Cinnamomumaromaticum*	Fabaceae	Bark
208	*Cistanche tubulosa*	Scrophulariaceae	Whole plant
209	*Citrullus colocynthis Schrad*	Cucurbitaceae	Fruits
210	*Citrullus lanatus*	Cucurbitaceae	Pulp
211	*Citrus aurantum*	Rutaceae	Peels
212	*Citrus limetta*	Rutaceae	Peels
213	*Citrus maxima*	Rutaceae	Peels
214	*Citrus sinensis*	Rutaceae	Peels
215	*Clausena anisata*	Rutaceae	Leaves
216	*Cleome aspera*	Capparidaceae	Whole plant
217	*Cleome droserifolia Delile*	Capparidaceae	Whole plant
218	*Clerodendranthus spicatus*	Lamiaceae	
219	*Clerodendron phlomoides*	Verbenaceae	Whole plant
220	*Clitoria ternatea*	Fabaceae	Seeds
221	*Cnidosculus aconitifolius*	Euphorbiaceae	Leaves
222	*Coccina grandis*	Cucurbitaceae	Whole plant
223	*Coccina indica*	Cucurbitaceae	Leaves
224	*Cocculs cardifolia*	Menispermaceae	Stem, leaves, root
225	*Cocculus villosus*	Menispermaceae	Roots, leaves
226	*Cocos nucifera L.*	Arecaceae	Fiber
227	*Coffea arabica*	Rubiaceae	Seeds
228	*Cogniauxia podoleana*	Cucurbitaceae	
229	*Coix lachryma*	Poaceae	Seed
230	*Combretum micranthum*	Combretaceae	Leaves
231	*Commelina communis*	Commelinaceae	Leaves
232	*Convallaria majalis*	Asparagaceae	Bulb
233	*Convolvulus althaeoides*	Convolvulaceae	Aerial parts
234	*Corchorus olitorius*	Tiliaceae	Leaves
235	*Cordia dichotoma*	Boraginaceae	Stem bark
236	*Cordia morelosana*	Boraginaceae	Leaves
237	*Cordia myxa*	Boraginaceae	Stem bark
238	*Coriandrum sativum*	Apiaceae	Seeds
239	*Coriandum sativum*	Apiaceae	Whole plant

240	*Corni fructus*	Cornaceae	Whole plant
241	*Cornus officinalis*	Cornaceae	Fruit, seeds
242	*Coscinium fenestratum*	Menispermaceae	Stem bark
243	*Costus schlechteri*	Costaceae	
244	*Costus speciosus*	Costaceae	Rhizome
245	*Costus specious*	Zingiberaceae	Leaves
246	*Cotoneaster aitchisoni*	Rosaceae	Aerial parts
247	*Coutarea latiflora*	Rubiaceae	Bark
248	*Couterea hexandra*	Rubiaceae	
249	*Crataegus mexicana*	Rosaceae	Root
250	*Crataegus pubescens*	Rosaceae	Whole plant
251	*Crotolaria medicaginea*	Fabaceae	Seeds
252	*Croton cajucara Benth*	Euphorbiaceae	Bark
253	*Cryptolepis sanguinolenta*	Apocynaceae	Stem
254	*Cryptostegia grandiflora*	Asclepiadaceae	Aerial parts
255	*Cucumis callosus*	Cucurbitaceae	Seeds
256	*Cucumis metuliferus*	Cucurbitaceae	Fruit
257	*Cucumis sativus*	Cucurbitaceae	Fruit
258	*Cucumis trigonus*	Cucurbitaceae	Fruit
259	*Cucurbita ficifolia Bouché*	Cucurbitaceae	Fruit
260	*Cuminum cyminum*	umbelliferae	Seeds
261	*Cuminum cyminum L*	Apiaceae	Seeds
262	*Cuminum nigrum*	umbelliferae	Flowers,Seeds
263	*Cuminum nigrum*	Apiaceae	Seeds
264	*Curcuma longa*	Zingiberaceae	Rhizome
265	*Cyamopsis tetragonoloba*	Papilionaceae	Beans
266	*Cyamposis tetragonolobus*	Leguminasae	Fruits, seeds
267	*Cyathea divergens*	Cyatheaceae	Bark
268	*Cyclanthera pedata*	Cucurbitaceae	Shoot, leaves
269	*Cymbalaria muralis*	Scrophulariaceae	Whole plant
270	*Cynodon dactylon*	Roaceae	Whole Plant
271	*Cyperus iria*	Cyperaceae	Root
272	*Dalbergia Sissoo*	Fabaceae	Bark
273	*Daucus carota*	Apiaceae	Root
274	*Decalepis hamiltonii*	Apocynaceae	Tuber
275	*Decalepis root*	Apocynaceae	Root
276	*Delonix regia*	Fabaceae	Leaves
277	*Dendrobium loddigesii*	Orchidaceae	Stem
278	*Dendrobium nobile*	Orchidaceae	Stem
279	*Descurainia sophia*	Brassicaceae	Whole plant
280	*Desmodium gangeticum*	Fabaceae	Whole plant
281	*Desmodium motorium*	Fabaceae	Leaves

282	*Dillenia indica*	Dilleniaceae	Leaves
283	*Dioscorea asclepiadea*	Discoreaceae	Tuber
284	*Diospyros lotus*	Ebenaceae	Fruit
285	*Diospyros melanoxylon*	Ebenaceae	Bark
286	*Diospyros peregrina*	Ebenaceae	Fruit
287	*Diospyros peregrina*	Ebenaceae	Bark
288	*Dipteracanthus prostratus*	Acantheaceae	Whole plant
289	*Discorea japonica*	Discoreaceae	Tubers
290	*Discorea batalas*	Discoreaceae	Tubers
291	*Discorea bulbifera*	Discoreaceae	Bulb
292	*Discorea dumentorum*	Discoreaceae	Tubers
293	*Discorea gracillima*	Discoreaceae	Bulb
294	*Discorea hispida Den nst*	Dioscoreaceae	Tubers
295	*Discorea rhizoma*	Dioscoreaceae	Tubers
296	*Dodonaea viscosa*	Sapindaceae	Leaves
297	*Eclipta alba*	Asteraceae	Leaves
298	*Egyptian morus alba*	Moraceae	Stem bark
299	*Elaeocarpus ganitrus*	Elaeocarpaceae	Bark
300	*Elaeocarpus serratus*	Elaeocarpaceae	Fruit
301	*Elaeodendron glaucum*	Celastraceae	Bark
302	*Elephantopus scaber*	Asteraceae	Whole plant
303	*Eleusine coracana*	Poaceae	Seeds
304	*Eleytherine americana*		Bulb
305	*Embelia madagascariensis*	Myrsinaceae	Leaves
306	*Emblica officinalis*	Phyllanthaceae	Seeds
307	*Enicostemma hyssopifolium*	Gentianaceae	Whole plant
308	*Enicostemma littorale*	Gentianaceae	Leaves
309	*Ensete superbum*	Musaceae	
310	*Ephedra distachya*	Ephedereaceae	Aerial stems
311	*Ephedra elata*	Ephedereaceae	Aerial stems
312	*Equisetum myriochaetum*	Equisetaceae	Aerial parts
313	*Eriobotrya japonica*	Rosaceae	Seeds
314	*Eriodendron anfractuosum*	Bombaceae	Gum, Unripe Fruits, Seeds, Flowers, Roots
315	*Eruka sativa*	Brassicaceae	Seeds
316	*Erythrina indica*	Fabaceae	Leaves
317	*Erythrina variegata*	Fabaceae	Leaves
318	*Eucalyptus citriodora*	Myrtaceae	Leaves
319	*Eucalyptus globules*	Myrtaceae	Leaves
320	*Eugenia jambolana*	Myrtaceae	Fruit
321	*Euphorbia antiquorum*	Euphorbiaceae	Leaves, fruit
322	*Euphorbia prostrate*	Euphorbiaceae	Whole plant

323	*Evolvulus alsinoides*	Convolvulaceae	Whole plant
324	*Eysenhardtia polystachya*	Fabaceae	Root
325	*Feronia elephantum*	Rutaceae	Fruit
326	*Ficus bengelensis*	Moraceae	Root bark, stem bark
327	*Ficus carica*	Moraceae	Leaves
328	*Ficus glomerata*	Moraceae	Bark
329	*Ficus hispida*	Moraceae	Leaves
330	*Ficus racemosa*	Moraceae	Bark
331	*Ficus religiosa*	Moraceae	Root bark, stem bark, aerial roots
332	*Ficus retusa*	Moraceae	Leaves
333	*Ficus sycomorus*	Moraceae	Leaves
334	*Fraxinus alba Marshall*	Oleaceae	Leaves
335	*Fraxinus excelsior*	Oleaceae	Seeds
336	*Fumaria officinalis L*	Fumariaceae	Aerial parts
337	*Fumaria parviflora*	Papaveracea	Whole plant
338	*Galega officinalis*	Leguminoseae	Leaves
339	*Ganoderma lucidum*	Ganodermataceae	Fruit juice
340	*Garcinia kola Heckel*	Guttifere	Seeds
341	*Gelsemium sempervirens*	Logoniaceae	
342	*Geranium maculatum*	Geraniaceae	Root
343	*Ginkgo biloba*	Ginkgoacea	Whole plant
344	*Ginseng Radix*	Araliaceae	Root
345	*Glossostemon bruguieri*	Sterculiaceae	Root mucilage
346	*Glycine max*	Leguminoseae	Seeds
347	*Gmelina arborea*	Verbenaceae	Root bark, stem bark
348	*Gongronema latifolium*		Leaves
349	*Grewia asiatica*	Tiliaceae	Bark
350	*Grewia flavensis*	Tiliaceae	Leaves
351	*Grifola frondosa*	Meripilaceae	Fruit
352	*Guaiacum coulteri*	Zygophyllaceae	Bark
353	*Guazuma ulmifolia*	Sterculiaceae	Bark
354	*Gymnema sylvestre*	Asclepiadaceae	Leaves, whole plant
355	*Gynandropsis gynandra*	Capparidaceae	Root
356	*Gynostemma pentaphyllum*	Cucurbitaceae	Stem, leaves
357	*Gynura procumbens*	Asteraceae	Leaves
358	*Gynura procumbens*	Asteraceae	Leaves
359	*Haematoxylon brasiletto*	Fabaceae	Aerial parts
360	*Haloxylon salicorlicum Bunge*	Chenopodiaceae	Whole plant
361	*Hamada salicornica*	Hamamelidaceae	Whole plant
362	*Hamiltonia suaveolens*	Rubiaceae	Root
363	*Hedychium gardnerianum*	Zingiberaceae	Leaf
364	*Hedychium spicatum*	Zingiberaceae	Rhizome

365	*Helicteres isora*	Sterculiaceae	Root
366	*Heritiera minor*	Sterculiaceae	Aerial parts
367	*Heterophragma quadriloculare*	Bignoniaceae	Aerial parts
368	*Hexachlamys edulis*	Myrtaceae	
369	*Hibiscus rosa-sinesis*	Malvaceae	Flowers
370	*Hintonia latiflora*	Rubiaceae	Leaves
371	*Hintonia standleyan*	Rubiaceae	Stem bark
372	*Holarrhena antidysenterica*	Apocynaceae	Seeds
373	*Holostemma annularis*	Apocynaceae	Root
374	*Hoodia curror*	Apocynaceae	Stem
375	*Hordeum vulgare*	Gramineae	Seeds
376	*Humulus lupulus*	Cannabinaceae	Strobiles
377	*Hybanthus enneaspermus*	Violaceae	Leaves
378	*Hydnocarpus wightiana*		Seeds
379	*Hydrangea paniculata*	Hydrangeaceae	Bark
380	*Hydrolea zeylanica*	Hydrangeaceae	Whole plant
381	*Hygrophylla longifolia*	Acanthaceae	Whole plant
382	*Hypericum perforatum*	Hypericaceae	Leaves
383	*Hypoxis hemerocallidea*	Hypoxidaceae	Fruits
384	*Hyptis suaveolens*	Lamiaceae	Aerial parts
385	*Hyssopus officinalis*	Lamiaceae	Leaves
386	*Ibervillea sonorae*	Curcurbitaceae	Root, aerial parts, bark
387	*Ichnocarpus frutescens*	Apocynaceae	Root
388	*Inula racemoma*	Tubuliflorae	Roots
389	*Ipomea aquatica*	Convolvulaceae	Whole plant
390	*Ipomoea batatus*	Convolvulaceae	Leaves
391	*Ipomoia digitata*	Convolvulaceae	Root
392	*Isoplexis canariensis*	Scrophulariaceae	Leaves
393	*Isoplexis isabelliana*	Scrophulariaceae	Leaves
394	*Jacobinia suberecta*	Acanthaceae	Whole plant
395	*Jatropha curcas*	Euphorbiaceae	Leaves
396	*Jatropha glandulifera*	Euphorbiaceae	Tubers
397	*Juglans mandshurica*	Juglandaceae	Leaves
398	*Juglans regia L.*	Juglandaceae	Leaves
399	*Juniperus communis*	Cupressaceae	Berries
400	*Justicia beddomej*	Acanthaceae	Leaves
401	*Kalanchoe lacinata*	Crassulaceae	Leaves
402	*Kalanchoe pinata*	Crassulaceae	Leaves
403	*Kalanchoe verticulata*	Crassulaceae	Leaves
404	*Kalopanax pictus Nakai*	Araliaceae	Stem bark
405	*Kickxia ramosissima*	Scrophulariaceae	Aerial parts
406	*Kochia scoparia*	Chenopodiaceae	Whole plant

407	*Krameria triandra*	krameriaceae	Root
408	*Kyllinga triceps*	Cyperaceae	Root
409	*Lagerstroemia parviflora*	Lythraceae	Aerial parts
410	*Lagerstroemia speciosa*	Lythraceae	Bark, Root, Seed, Leave & ripe fruits
411	*Lantana camara*	Verbenaceae	Leaves
412	*Larrea tridentata*	Zygophyllaceae	Root, stem, bark, leaf
413	*Lasia spinosa*	Araceae	Rhizome
414	*Launaea nudicaulis*	Asteraceae	Roots
415	*Laurus nobilis*	Lauraceae	Leaf
416	*Lavandula multifida*	Lamiaceae	Flower
417	*Lavandula stoechas*	Lamiaceae	Leaves, flower
418	*Lawsonia inermis*	Lythraceae	Leaves
419	*Leea crispa*	Vitaceae	Aerial parts
420	*Leea indica*	Vitaceae	Leaves
421	*Leonotis leonurus*	Lamiaceae	Leaves
422	*Lepechinia caulescens*	Labiatae	Whole plant
423	*Lepidium ruderale*	Crucifarae	Aerial part
424	*Lepidium sativum*	Brassicaceae	Seeds
425	*Lepidium sativum*	Brassicaceae	Leaves
426	*Leucaena leucocephala*	Leguminoseae	Seeds
427	*Ligustrum lucidum*	Lamiaceae	Fruit
428	*Lillum auratum*	Liliaceae	Bulb
429	*Lillum speciosum*	Liliaceae	Bulb
430	*Limonia acidissima*	Rutaceae	Fruit
431	*Linum usitatissimum*	Linaceae	Seeds
432	*Liriope spicata*	Liliaceae	Root
433	*Lithospermum erythrorhizon*	Boraginaceae	Seeds
434	*Litsea coreana*	Lauraceae	Leaves
435	*Lodoicea sechellarum*	Palmae	Fruit
436	*Lophophora williamsii*	Cactaceae	Aerial parts
437	*Loranthus curviflorus*	Loranthaceae	
438	*Loranthus micranthus*	Loranthaceae	
439	*Luffa acutangula*	Cucurbitaceae	Fruit
440	*Luffa aegayptiac*	Cucurbitaceae	Aerial parts
441	*Luffa cylindrica*	Cucurbitaceae	Seeds, leaves, flowers
442	*Luffa echinata*	Cucurbitaceae	Aerial parts
443	*Luffa tuberosa*	Cucurbitaceae	Fruit
444	*Lupin marmalades*	Papilionaceae	Seeds
445	*Lupus albus*	Papilionaceae	Seeds
446	*Lycium barbarum*	Solanaceae	Fruit
447	*Lycium shawii*	Solanaceae	Aerial parts
448	*Lycopersicon esculantum*	Solanaceae	Seeds

449	*Lycopus virginicus*	Lamiaceae	
450	*Lycoris radiata*	Amaryllidaceae	Bulb
451	*Lycoris squamigera*	Amaryllidaceae	Bulb
452	*Lygodium flexuosum*	Lycopodiaceae	Whole plant
453	*Lyophyllum decastes*	Lyophyllaceae	Fruit
454	*Lysiloma acapulcense*	Fabaceae	Leaves
455	*Lythrum salicaria*	Lythraceae	Stem flower
456	*Macaranga tanarius*	Euphorbiaceae	Seeds
457	*Madhuca longifolia*	Sapotaceae	Bark
458	*Mallotus philipensis*	Euphorbiaceae	Stem
459	*Malmea depressa*	Annonaceae	Root
460	*Malva verticillata*	Malvacées	Seeds
461	*Mangifera indica*	Anacardiaceae	Leaves
462	*Maprounea africana*	Euphorbiaceae	Roots
463	*Marrubium vulgare*	Lamiaceae	Whole plant
464	*Matricaria frigidum*	Asteraceae	Whole plant
465	*Matthiola livida*	Boraginaceae	Whole plant
466	*Mazus surculosus*	Scrophulariaceae	Whole plant
467	*Medicago sativa*	Leguminoseae	Flower
468	*Megacarpaea polyandra*	Brassicaceae	Whole plant
469	*Melanthera scandens*	Asteraceae	Leaves
470	*Melhania incana*	Malvaceae	Leaves
471	*Melia azaderachta*	Meliaceae	Leaves
472	*Melia dubia*	Meliaceae	Fruit
473	*Memecylon umbellatum*	Melastomaceae	Leaves
474	*Mentha longfolia*	Lamiaceae	Whole plant
475	*Merremia emarginata*	Convolvulaceae	Whole plant
476	*Mimosa pudica*	fabaceae	Whole plant
477	*Mimusops elengi*	Sapotaceae	Leaves
478	*Momordica balsamina*	Meliaceae	Fruit
479	*Momordica charantia*	Meliaceae	Fruits, seeds, leaves
480	*Momordica cochinchinemis*	Meliaceae	Fruits
481	*Momordica cymbalaria*	Meliaceae	Fruit
482	*Momordica dioica*	Meliaceae	Fruit
483	*Momordica foetida*	Meliaceae	Aerial parts
484	*Morinda citrifolia*	Rubiaceae	Fruit
485	*Morinda lucida*	Rubiaceae	Leaves
486	*Moringa oleifera*	Moringaceae	Flowers
487	*Morus alba*	Moraceae	Leaves, root bark
488	*Morus australis*	Moraceae	Root
489	*Morus insigni*	Moraceae	Leaves
490	*Morus nigra*	Moraceae	Leaves

491	*Morus rubra*	Moraceae	Leaves
492	*Mprinda lucida*	Rubiaceae	Root
493	*Mucuna pruriens*	Leguminoseae	Seeds
494	*Murraya koienigii*	Rutaceae	Leaves
495	*Murraya paniculata*	Rutaceae	Leaves
496	*Musa balbisiana*	Musaceae	Flowers
497	*Musa paradisiaca*	Musaceae	Flowers
498	*Musa sapientum*	Musaceae	Flowers, fruits
499	*Myrcia multiflora*	Myrtaceae	Leaves
500	*Myrcia uniflora*	Myrtaceae	Leaves
501	*Myrtus communis*	Myrtaceae	Leaves, stem
502	*Narcissus tazetta*	Amaryllidaceae	Bulb
503	*Nasturtium officinale*	Brassicaceae	Aerial parts
504	*Nauclea orientalis*	Rubiaceae	Stem bark
505	*Nelumbo nucifera*	Nymphaeaceae	Flowers, rhizome
506	*Nepeta ciliaris*	Lamiaceae	Whole plant
507	*Nigella sativa*	Ranunculaceae	Seeds
508	*Nyctanthes arbor-tristis*	Oleaceae	Root
509	*Nymphaea nouchali*	Nymphaeceae	Roots
510	*Ocimum album*	Lamiaceae	Leaves
511	*Ocimum americanum*	Lamiaceae	Seeds
512	*Ocimum basilicum*	Lamiaceae	Leaves
513	*Ocimum gratissimum*	Lamiaceae	Leaves
514	*Ocimum sanctum Linn*	Lamiaceae	Leaves
515	*Ocimum tenuiflorum*	Lamiaceae	Leaves
516	*Olea europaea*	Oleaceae	Leaves
517	*Ophiopogonis tube*	Liliaceae	Rhizomes
518	*Opuntia dillenii*	Cactaceae	Fruit
519	*Opuntia dillenii*	Cactaceae	Fruit
520	*Opuntia ficus indica*	Cactaceae	Stem
521	*Opuntia ficus indica*	Cactaceae	Aerial parts
522	*Opuntia imbricata*	Cactaceae	Fruit
523	*Opuntia lindheimeri*	Cactaceae	Aerial parts
524	*Opuntia sterptacanthas*	Cactaceae	Sap
525	*Opuntia streptacantha*	Cactaceae	Aerial parts
526	*Opuntia vulgaris*	Cactaceae	Aerial parts
527	*Orchis latifolia*	Orchidaceae	Root
528	*Orchis mascula*	Orchidaceae	Root
529	*Origanum syriacum*	Lamiaceae	Leaves
530	*Origanum vulgare*	Lamiaceae	Leaves
531	*Orthosiphon aristatus*	Lamiaceae	Leaves
532	*Orthosiphon spiralis*	Lamiaceae	Leaves

533	*Orthosiphon stamineus*	Lamiaceae	Leaves
534	*Oryza saliva*	Gramineae	Roots
535	*Osbeckia octandra*	Melastomaceae	Whole plant
536	*Ossimum gratissium*	Labiatae	Leaves
537	*Otholobium pubescens*	Fabaceae	
538	*Otostegia persica*	Lamiaceae	Aerial parts
539	*Ougeinia oojeinensis*	Leguminosae	Bark
540	*Pachycereus marginatus*	Cactaceae	Root, pulp
541	*Paeonia emodi*	Ranunculaceae	Whole plant
542	*Paeonia lactiflora*	Ranunculaceae	Roots
543	*Paeonia moutan*	Ranunculaceae	Whole plant
544	*Paeonia veitchii*	Ranunculaceae	Roots
545	*Panax ginseng*	Araliaceae	Roots
546	*Panax japonicus*	Araliaceae	Roots
547	*Panax quinquefolium*	Araliaceae	Roots
548	*Pandanus odorus*	Pandanaceae	Roots
549	*Pandanus odorus*	Pandanaceae	Root
550	*Panicum miliaceum*	Poaceae	Whole plant
551	*Parinari excelsa*	Chrysobalanaceae	Bark
552	*Parmentiera edulis*	Bignoniaceae	Fruit
553	*Parthenium hysterophorus*	Asteraceae	Leaves
554	*Paspalum serobiculatum*	Poaceae	Grains
555	*Passiflora foetida*	Passifloraceae	Whole plant
556	*Paullinia cupana*	Sapindaceae	Leaves
557	*Pedicularis rhinanthoides*	Scrophulariaceae	Whole plant
558	*Peganum harmala*	Zygophyllaceae	Seeds
559	*Peporimia pellucida*	Piperaceae	
560	*Pergularia tomentosa*	Asclepiadaceae	Stem
561	*Periploca laevigata*	Apocynaceae	
562	*Persea americana*	Lauraceae	Fruit
563	*Persea gratissima*	Lauraceae	Seed, bark
564	*Petiveria alleaceae*	Phytolacaceae	Leaves, stem powder
565	*Peumus boldus*	Monimiaceae	Leaves
566	*Phalaris canariensis*	Poaceae	Seeds
567	*Phaseolus vulgaris*	Leguminoseae	Seeds
568	*Phlomis persica*	Lamiaceae	Aerial part
569	*Phoebe wightii*	Lauraceae	Aerial parts
570	*Phoradendron tomentosum*	Viscaceae	Flower
571	*Phyllanthus amarus*	Euphorbiaceae	Whole plant
572	*Phyllanthus carolinensis*	Euphorbiaceae	Leaves, stem
573	*Phyllanthus emblica*	Euphorbiaceae	Fruit
574	*Phyllanthus fraternus*	Euphorbiaceae	Leaves

575	*Phyllanthus niruri*	Euphorbiaceae	Aerial parts
576	*Phyllanthus urinaria Linn.*	Euphorbiaceae	Leaves
577	*Physalis alkekengi*	Solanaceae	Fruit
578	*Physalis philadelphica*	Solanaceae	Bark, leaf
579	*Picea mariana*	Pinaceae	Fruit
580	*Picrorrhiza kurroa*	Scrophulariaceae	Rhizome
581	*Pimenta officinalis*	Myrtaceae	Leaves, fruit
582	*Pinus maritime*	Piperaceae	Bark
583	*Pinus pinaster*	Piperaceae	Bark
584	*Pinus teocote*	Piperaceae	Aerial parts
585	*Piper aduncum*	Piperaceae	Leaves
586	*Piper betle*	Piperaceae	Leaves
587	*Piper cubela*	Piperaceae	Whole plant
588	*Piper longum*	Piperaceae	Whole plant
589	*Piper nigrum*	Piperaceae	Whole plant
590	*Piper retrofractum*	Piperaceae	Fruits
591	*Piper sarmentosum*	Piperaceae	Whole plant
592	*Pisum sativum*	Fabaceae	Fruit
593	*Plantago himalacia*	Plantaginaceae	Whole plant
594	*Plantago major*	Plantaginaceae	Whole plant
595	*Plantago ovata*	Plantaginaceae	Husk
596	*Plantago psyllium*	Plantaginaceae	Leaves
597	*Pleurostylia opposite*	Celastraceae	
598	*Plumbago zeylanica*	Plumbaginaceae	Leaves
599	*Plumeria rubra*	Apocynaceae	Stem
600	*Poa pratensis*	Poaceae	Whole plant
601	*Polygala javana*	Polygalaceae	Leaves
602	*Polygala senega*	Polygalaceae	Rhizome
603	*Polygalia erioptera*	Polygalaceae	
604	*Polygonatum odorantum*	Asparagaceae	Rhizome
605	*Polygonatum officinale*	Liliaceae	Rhizome
606	*Polygonum*	Polygonaceae	Aerial parts
607	*Polygonum cuspidatum*	Polygonaceae	Rhizome
608	*Pongamia pinnata*	Leguminoseae	Bark
609	*Portulaca oleraceae*	Portulaceae	Aerial part
610	*Potamogeton crispus*	Potamogetonaceae	Whole plant
611	*Poterium ancisroides*	Rosaceae	Leaves
612	*Poterium spinosum*	Rosaceae	Stem, bark
613	*Pouteria tomentosa*	Sapotaceae	Aerial parts
614	*Prunella vulgaris*	Lamiaceae	Whole plant
615	*Prunus amygdalus*	Rosaceae	Seeds
616	*Prunus davidiana*	Rosaceae	Stem

617	*Prunus persica*	Rosaceae	Leaves
618	*Psacalium decompositum*	Asteraceae	Root
619	*Psacalium decompositum*	Asteraceae	Root
620	*Psacalium peltatum*	Asteraceae	
621	*Psacalium peltatum Cass.*	Asteraceae	Root
622	*Pseudarthria viscida*	Fabaceae	Root
623	*Psidium guajava*	Myrtaceae	Juice
624	*Psittacanthus calyculatus*	Loranthaceae	Aerial parts
625	*Pterocarpus marsupium*	Leguminoseae	Heart-wood, wood
626	*Pterocarpus santalinus*	Leguminoseae	Fruits
627	*Punica granatum*	Punicaceae	Flowers
628	*Pyrus communis*	Rosaceae	
629	*Quercus lineata*	Fagaceae	Bark
630	*Quercus robur*	Fagaceae	Gall
631	*Quercus spicata*	Fagaceae	Bark
632	*Radix glyzyrrhizae*	Fabaceae	Root
633	*Raphanus sativus*	Brassicaceae	Whole plant
634	*Rauwolfia serpentine*	Apocynaceae	Leaves, roots
635	*Ravenala madagascariensis*	Steriliziaceae	Flower, root
636	*Rehmania glutinosa*	Scrophulariaceae	Rhizome
637	*Retama raetam*	Fabaceae	Whole plant
638	*Rhamnus purshiana*	Rhamnaceae	Bark
639	*Rhazya stricta*	Apocynaceae	Leaves, seeds
640	*Rheum officinale*	Polygonaceae	Root
641	*Rheum palmatum*	Polygonaceae	Root
642	*Rheum tanguticum*	Polygonaceae	Root
643	*Rhizophora mangle*	Rhizophoraceae	Bark
644	*Rhizophora mucronata*	Rhizophoraceae	Aerial parts
645	*Rhodiola sachalinensis*	Crassulaceae	Root
646	*Rhododendron tomentosum*	Ericaceae	Fruit
647	*Rhus coriaria*	Anacardiaceae	Fruit
648	*Ricinus communis*	Euphorbiaceae	Leaves
649	*Rosa brunonii*	Rosaceae	Aerial parts
650	*Rosa canina*	Rosaceae	Fruit
651	*Rosa centifolia*	Rosaceae	Aerial parts
652	*Rubia cardifolia*	Rubiaceae	Roots
653	*Rubus ulmifolius*	Rosaceae	Leaves
654	*Rumex abyssinicus*	Polygonaceae	Root
655	*Russelia equisetiformis*	Scrophulariaceae	Root
656	*Ruta graveolens*	Rutaceae	Leaves
657	*Saccharum officianarum*	Poaceae	Leaves
658	*Sageretia parviflora*	Rhamnaceae	Root

659	*Salacia chinensis*	Hippocrateaceae	Root, stem , leaves
660	*Salacia oblonga*	Hippocrateaceae	Root bark
661	*Salacia reticulata*	Hippocrateaceae	Root
662	*Salmalia malabarica*	Bombacaceae	Sepals
663	*Salpianthus arenarius*	Nyctaginaceae	Flower
664	*Salpianthus macrodonthus*	Nyctaginaceae	Flower
665	*Salvia aegyptiaca*	Lamiaceae	Whole plant
666	*Salvia canariensis*	Lamiaceae	Aerial parts
667	*Salvia fruticosa*	Lamiaceae	Leaves
668	*Salvia lavandifolia*	Lamiaceae	Whole plant
669	*Salvia leucantha*	Lamiaceae	Leaves
670	*Salvia miltiorrhiza*	Lamiaceae	Root
671	*Salvia officinalis*	Lamiaceae	Leaves
672	*Samanea saman*	Fabaceae	Bark
673	*Sansevieria roxburghiana*	Ruscaceae	Rhizome
674	*Sapindus laurifolia*	Sapindaceae	Fruits
675	*Sapindus mukorossi*	Sapindaceae	Fruits
676	*Sarcopoterium spinosum*	Rosaceae	Root
677	*Schisandra chinensis*	Magnoliaceae	Leaves
678	*Schleichera oleosa*	Sapindaceae	Stem bark
679	*Scilla sibirica*	Hyacinthaceae	Bulb
680	*Scindapsus officinalis*	Araceae	Fruit
681	*Scoparia dulcis*	Scrophulariacea	Whole plant
682	*Scrophularia deserti*	Scrophularinaceae	Aerial parts
683	*Scutia myrtina*	Rhamnaceae	Whole plant
684	*Securigera securidacea*	Fabaceae	Seeds
685	*Selaginella tamariscina*	Lycopodiaceae	Whole plant
686	*Serenoa serrulata*	Arecaceae	Fruit
687	*Sesamum indicum*	pedaliaceae	Seeds
688	*Sesbania grandifolia*	Fabaceae	Bark
689	*Sesbania sesban*	Fabaceae	Leaves
690	*Setaria italica*	Poaceae	Seeds
691	*Sida cordifolia*	Malvacées	Aerial part and root
692	*Smallanthus sonchifolius*	Asteraceae	Root
693	*Smilax canariensis*	Smilacaceae	Aerial parts
694	*Smilax china*	Smilacaceae	Rhizome
695	*Smilax glabra*	Smilacaceae	Rhizome
696	*Solanum diversifolium*	Solanaceae	Leaves
697	*Solanum Iycocarpum*	Solanaceae	Fruit
698	*Solanum nigrum*	Solanaceae	Whole plant
699	*Solanum verbascifolium*	Solanaceae	Leaves
700	*Solanum xanthocarpum*	Solanaceae	Fruit

701	*Solenostemon rotundifolius*	Lamiaceae	Tuber
702	*Soymida febrifuga*	Meliaceae	Bark
703	*Spathodea campanulata Buch*	Bignoniaceae	Stem bark
704	*Spergularia purpurea*	Caryophyllaceae	Leaves, flower
705	*Sphaeranthus indicus*	Asteraceae	Whole plant
706	*Spinacea oleracea*	Salsolaceae	Leaves
707	*Spondias dulcis*	Anacardiaceae	Stem bark
708	*Stachytarpheta indica*	Verbenaceace	Leaves
709	*Stachyurus himalacius*	Stachyuraceae	
710	*Stenocereus marginatus*	Cactaceae	Aerial parts
711	*Sterculia guttata*	Sterculiaceae	Leaves
712	*Stereospermum suaveolens*	Bignoniaceae	Root
713	*Stevia rebaudiana*	Asteraceae	Leaves
714	*Strobilanthes crispus*	Acanthaceae	Leaves
715	*Strychnos nux vomica*	Loganiaceae	Fruit
716	*Strychnos potatorum*	Loganiaceae	Seeds
717	*Suaeda fruticosa*	Chenopodiaceae	Aerial parts
718	*Swertia chirayita*	Gentianaceae	Whole plant
719	*Swertia japonica*	Gentianaceae	Whole plant
720	*Swertia mussotii*	Gentianaceae	Whole plant
721	*Swertia punicea*	Gentianaceae	Whole plant
722	*Swietenia humilis*	Meliaceae	Seeds
723	*Swietenia macrophylla*	Meliaceae	Seeds
724	*Symplocos cochinchinensis*	Symplocaceae	Leaves
725	*Symplocos Paniculata*	Symplocaceae	Leaves, stem
726	*Symplocos theaefolia*	Symplocaceae	Root, leaves
727	*Syringa vulgaris*	Lamiaceae	Bud
728	*Syzygium cordatum*	Myrtaceae	Leaves
729	*Syzygium cumini*	Myrtaceae	Fruit
730	*Syzygium jambolanum*	Myrtaceae	Fruit
731	*Syzygium malaccense*	Myrtaceae	Stem bark
732	*Syzygium samarangens*	Myrtaceae	Stem bark
733	*Tagetes erecta*	Asteraceae	Leaves, flower
734	*Talinum portulacifolium*	Portulacaceae	Leaves
735	*Tamarindus indica*	Caesalpinaceae	Seeds
736	*Tapinanthus bangwensis*	Loranthaceae	Leaves
737	*Taraxacum officinale*	Asteraceae	Aerial parts
738	*Taxus yunnanensis*	Taxaceae	Wood
739	*Tecoma mollis*	Bignoniaceae	Whole plant
740	*Tecoma stans*	Bignoniaceae	Leaves
741	*Tectona grandis*	Verbenaceae	Root
742	*Telfaria occidentalis*	Cucurbitaceae	Leaves, seeds

743	*Terminalia arjuna*	Combretaceae	Stem bark
744	*Terminalia bellerica*	Combretaceae	Fruit
745	*Terminalia catappa*	Combretaceae	Fruit
746	*Terminalia chebula*	Combretaceae	Seeds
747	*Terminalia superba*	Combretaceae	Leaves
748	*Tetrastigma leucostaphylum*	Vitaceae	
749	*Teucrium cubens*	Lamiaceae	Aerial parts
750	*Teucrium cubense*	Lamiaceae	Leaves
751	*Teucrium oliverianum*	Lamiaceae	Aerial parts
752	*Teucrium polium*	Lamiaceae	Leaves
753	*Teucrium royleanum*	Lamiaceae	Whole plant
754	*Theobroma cacao*	Sterculiaceae	Cocoa beans
755	*Thespesia populnea*	Malvaceae	Bark, leaves
756	*Thryallis glanea*	Malpighiaceae	Aerial parts
757	*Tillandsia usneoides L.*	Bromeliaceae	Whole plant
758	*Tinospora cordifolia*	Menispermaceae	Stem
759	*Tinospora crispa*	Menispermaceae	Stem
760	*Tournefortia hartwegiana*	Boraginaceae	Leaves
761	*Tournefortia hirsutissima*	Boraginaceae	
762	*Tournefortia hirsutissima Linn*	Boraginaceae	Whole plant
763	*Tournefortia petiolaris*	Boraginaceae	Bark
764	*Tragia involucrate*	Euphorbiaceae	Whole plant
765	*Trema orientalis*	Ulmaceae	Stem bark
766	*Tremella mesenterica*	Combretaceae	Fruit
767	*Tribulus terrestris*	Zygophyllaceae	Stem, leaves
768	*Trichosanthes diocia*	Cucurbitaceae	Whole plant
769	*Trichosanthes kirilowii*	Cucurbitaceae	Aerial parts
770	*Trigonella foenum graecum*	Leguminoseae	Seeds
771	*Triticum repens*	Gramineae	Rhizomes
772	*Turnera diffusa*	Turneracea	Leaves
773	*Uncaria tomentosa*	Rubiaceae	Leaves
774	*Urginea indica*	Hyacinthaceae	Bulb
775	*Urtica dioica*	Urticaceae	Leaves
776	*Vaccinium angustifolium*	Ericaceae	Fruit
777	*Vaccinium leschenaultii*	Ericaceae	Aerial parts
778	*Vaccinium myrtillus*	Ericaceae	Leaves
779	*Vaccinium oxycoccus*	Ericaceae	Leaves
780	*Vaccinium vitis idaea*	Ericaceae	Leaves
781	*Vateria copallifera*	Dipterocarpaceae	Fruit
782	*Vernonia amygdalina*	Asteraceae	Leaves
783	*Viburnum opulus*	Caprifoliaceae	Fruit
784	*Vinca erecta*	Apocynaceae	Whole plant

785	*Vinca major*	Apocynaceae	Whole plant
786	*Viscum album*	Loranthaceae	Whole plant
787	*Vitex negundo Linn*	Verbenaceae	Leaves
788	*Wattakaka volubilis*	Asclepiadaceae	Leaves
789	*White lupin bran*	Papilionaceae	Fiber
790	*Withania coagulans*	Solanaceae	Fruit
791	*Withania somnifera*	Solanaceae	Leaves
792	*Xanthium strumarium*	Asteraceae	Roots, seeds
793	*Xanthocercis zambesiaca*	Leguminaceae	Root, Leaves
794	*Xanthoxalis corniculata*	Oxilidaceae	
795	*Zea mays*	Poaceae	Fruit
796	*Zingiber officinale*	Zinziberaceae	Rhizome
797	*Zingiber zerumbet*	Zinziberaceae	Leaf
798	*Zizyphus mauritiana*	Rhamnaceae	Fruits, leaves
799	*Zizyphus rugosa*	Rhamnaceae	Fruits, leaves
800	*Zizyphus sativa*	Rhamnaceae	
801	*Zizyphus spina-christi*	Rhamnaceae	leaves
802	*Zygophyllum gaetulum*	Zygophyllaceae	Aerial parts

2.Conclusion

Diabetes is a metabolic disorder which can be considered as a major cause of high economic loss which can in turn impede the development of nations. Moreover, uncontrolled diabetes leads to many chronic complications such as blindness, heart failure, and renal failure. In order to prevent this alarming health problem, the development of research into new hypoglycaemic and potentially anti diabetic agents is of great interest. In conclusion, this paper has presented a list of anti-diabetic plants used in the treatment of diabetes mellitus. It showed that these plants have hypoglycaemic effects.

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