Table 1.
*IN VITRO*- Inhibitory activities (as IC\textsubscript{50} values) of plant extracts reported to exert pancreatic alpha-amylase inhibitory activity.

| Family name     | Plant species                                      | Extraction method     | IC\textsubscript{50} value | Type of amylase | Ref   |
|-----------------|----------------------------------------------------|-----------------------|-----------------------------|-----------------|-------|
| Acanthaceae     | *Andrographis paniculata* (Burm. F.) Nees          | Ethanol Extract       | 50.9 mg/ml                  | PPA             | (118) |
| Actinidiaceae   | *Actinidia deliciosa*                              | 90% Methanol Extract  | 42.9 µg/ml                  | PPA             | (178) |
| Alliaceae       | *Allium Akaka* Gmel. (leaves)                      | 90% Ethanol Extract   | 16.74 mg/ml                 |                 | (15)  |
|                 | *Allium sativum* L. (corms)                        |                       | 17.95 mg/ml                 |                 |       |
|                 | *Allium porrum* L. (leaves)                        |                       | 15.73 mg/ml                 |                 |       |
|                 | *Allium cepa* L. (bulbs)                           |                       | 16.36 mg/ml                 |                 |       |
| Alliaceae       | *Allium cepa* L. (skin)                            | Ethyl alcohol Extract | >3 mg/ml                    | PPA             | (46)  |
| Anacardiaceae   | *Rhus coriaria* L. (fruits)                        | 1. Methanol Extract   | 105.6 µg/ml                 |                 | (18)  |
|                 |                                                    | 2. Ethyl acetate      | 28.7 µg/ml                  |                 |       |
|                 |                                                    | 3. n-Hexane Extract   | 123.1 µg/ml                 |                 |       |
| Annonaceae      | *Annona crassifolia* Mart.                         | Poliamide- Purified   | 1.3 mg of sample dw/ml of reaction | PPA             | (56)  |
| Asteraceae      | *Pteronia divaricata*                              | Acetone Extract       | 36.30 µg/ml                 | PPA             | (34)  |
| Asteraceae      | *Matricaria chamomilla* L.                         | Hot water Extract     | 5.2 mg/ml                   | PPA             | (179) |
| Bixaceae        | *Bixa orellana* L. (leaves)                        | Methanol Extract      | 49 µg/ml                    | HPA             | (29)  |
| Celastraceae    | *Elaeodendron transvaalense*                       | Acetone Extract       | 1.12 µg/ml                  | PPA             | (34)  |
| Combretaceae    | *Terminalia bellerica* (fruit)                     | Methanolic Extract    | 87.3 µg/ml                  | PPA             | (180) |
| Crassulaceae    | *Rhodiola* spp.:                                   | Water Extract         | 1. 98.1 µg total phenolic/ml| PPA             | (114) |
|                 | 1. *Rhodiola rosea*                                | Ethanol Extract       | 1. 120.9 µg total phenolic/ml|                 |       |
|                 | 2. *Rhodiola crenulata*                            |                       | 2. 173.4 µg total phenolic/ml|                 |       |
| Crassulaceae    | *Rhodiola rosea* L.                                | Water Extract         | IC\textsubscript{50} (100 µg/ml) | PPA             | (115) |
| Ebenaceae       | *Euclea undulate* var. myrtina Thunb.              | Acetone Extract       | 2.80 µg/ml                  | PPA             | (34)  |
|                 | *Diospyros peregrina* Gurke (fruit)                | Hidroalcoholic Extract| 136.5 µg/ml                 | PPA             | (181) |
| Elaeocarpaceae  | *Aristotelia chilensis* (fruits)                   | Crude Extract         | 41.5 mg of extract/L        | PPA             | (120) |
| Ericaceae       | *Arbutus andrachne* L.                             | 50% Methanol-         | 0.44 mg/ml                  | PPA             | (150) |
| Family         | Species                          | Method                        | Concentration       | Assay(s) | Reference |
|----------------|----------------------------------|-------------------------------|---------------------|----------|-----------|
| Ericaceae      | Vaccinium arctostaphylos         | Methanol/glacial acetic acid/water Extract | 1.91 mg/ml          | PPA      | (182)     |
| Fabaceae       | Vigna angularis                  | 40% Ethanol Extract           | 0.78 mg/ml          | PPA      | (152)     |
| Fabaceae       | Trigonella foenum- graecum (Seed)| Petroleum ether Extract       | 1.3 mg/ml           | -        | (149)     |
| Fagaceae       | Castanea                         | 75% Aqueous ethanol Extract   | 7.5 and 18.2 µg/ml  | HPA and PPA | (43)     |
|                |                                  | 50% Aqueous acetonitrile Extract | 13.1 µg/ml         | PPA      |           |
| Fagaceae       | Castanea                         | Ethanol Extract               | 19.5 µg/ml          | PPA      | (183)     |
| Fagaceae       | Castanea                         | 60% aqueous ethanol (Sephadex LH-20 column) | 5.71 µg/ml and 1.89 µg/ml | PPA and HPA |           |
| Fagaceae       | Castanea                         | 75% Aqueous ethanol Extract   | 650 µg/ml           | PPA      | (44)     |
| Gentianaceae   | Erythraea centarium              | Chloroform.Extract            | 64.9 µg/ml          | PPA      | (48)     |
| Hypericaceae   | Hypericum triquetifolium Turra   | 50% Methanol-aqueous Extract  | 0.32 mg/ml          | PPA      | (150)     |
| Lamiaceae      | Ocimum tenuflorum (L.)           | Aqueous Extract               | 1.55 µg/ml          | PPA      | (30)     |
| Lamiaceae      | Marrubium radiatum.              | Methanol Extract              | 61.1 µg/ml          | PPA      | (48)     |
|                | Salvia acutabulosa L.            | Methanol Extract              | 91.2 µg/ml          | PPA      |           |
|                | Calaminthia origanifolia Vis.    | Chloroform Extract            | 91.6 µg/ml          | PPA      |           |
|                | Satureja thymbra L.              | Chloroform Extract            | 94.1 µg/ml          | PPA      |           |
| Lamiaceae      | Ocimum basilicum L. (leaves)     | Aqueous Extract               | 42.50 mg/ml         | PPA      | (14)     |
| Lauraceae      | Cinnamomum verum Persl. (bark)  | Isopropanol Extract           | 1.0 µg/ml           | HPA      | (29)     |
| Lauraceae      | Cinnamomun cassia Blume          | Aqueous Extract               | 1. 1.77 mg/ml       | PPA      | (65)     |
| Family          | Species                                      | Extract Type                   | Concentration          | Notes       |
|-----------------|----------------------------------------------|--------------------------------|------------------------|-------------|
| **Leguminosae** | *Trigonella foenum-graecum* L. (seed)        | Ethanol Extract                | 1.87 mg/ml             | -           |
|                 |                                              |                                |                        | (70)        |
| **Malvaceae**   | *Theobroma grandiflorum* (Wild. ex Spreng) Schum | Polyamide- Purified Extract    | 1.1 mg of sample dw/ml of reaction | PPA         |
|                 |                                              |                                |                        | (56)        |
| **Moraceae**    | *Ficus bengalensis* L. (fruit pulp)          | Cold- water Extract           | 4.4 µg/ml              | HPA         |
|                 |                                              |                                |                        | (29)        |
| **Myrtaceae**   | *Ugni molinae* Turcz (stems)                 | Crude Extract                  | 56.6 mg of extract/L | PPA         |
|                 |                                              |                                |                        | (120)       |
| **Myrtaceae**   | *Syzygium cumini* (L.) Skeels                | Polyamide- Purified Extract    | 4.28 µg/ml             | PPA         |
| **Myrtaceae**   | *Campomanesia phaea* Berg.                   | 1.0 mg of sample dw/ml of reaction |                        | (56)        |
| **Myrtaceae**   | *Syzygium cumini* L. Skeels (seeds)          | Cold water Extract            | 10 µg/ml               | PPA         |
| **Myrtaceae**   | *Syzygium cumini* L. Skeels (seeds)          | Cold- water and hot-water Extract | 42.1 and 4.1 µg/ml | HPA         |
| **Nyctaginaceae** | *Bougainvillea spectabilis*                   | Chloroform Extract            | 3.20 µg/ml             | PPA         |
| **Nymphaeaceae**| *Nelumbo nucifera* (leaves)                  | 15% Aqueous- ethanol Extract   | 0.82 mg/ml             | -           |
| **Oleaceae**    | *Olea europaea* L.                           | Ethanol Extract                | 0.02 mg/ml             | HPA         |
| **Oleaceae**    | *Olea europea* L.                            | Hot water Extract             | 70.2 mg/ml             |             |
| **Oleaceae**    | *Olea europaea* L.                           | Methanol- water Extract       | 1. 269 µg/ml           |
|                 |                                              |                                | 2. 276 µg/ml           |
|                 |                                              |                                | 3. 331 µg/ml           |
|                 |                                              |                                | 4. 1392 µg/ml          |
|                 |                                              |                                | 5. 258 µg/ml           |
|                 |                                              |                                | 6. 304 µg/ml           |
|                 |                                              |                                | 7. > 2000 µg/ml        |
|                 |                                              |                                | 8. 372 µg/ml           | PPA         |
|                 |                                              |                                |                        | (40)        |
| **Phyllantaceae** | *Phyllanthus amarus* Schum. (whole plant)    | Hexane Extract                 | 32 µg/ml               | PPA         |
| **Phyllantaceae** | *Emblica officinalis* (fruit)                | Methanolic Extract            | 94.3 µg/ml             | PPA         |
| **Phyllantaceae** | *Phyllanthus amarus*                         | Ethanol Extract                | 36.05 µg/ml            | PPA         |
|                 |                                              |                                |                        | (180)       |
| **Phyllantaceae** | *Phyllanthus amarus*                         | Ethanol Extract                | 1. 36.05 µg/ml         | PPA         |
|                 |                                              |                                |                        | (185)       |
| Family            | Genus/Species            | Type of Extract/Extraction Method                  | Concentration (µg/ml) | Source |
|-------------------|--------------------------|---------------------------------------------------|------------------------|--------|
| Pineaceae         | *Pinus maritime* (bark)  | Hexane Extract                                    | 2. 48.92 µg/ml         | PPA (170) |
|                   |                          | 70% Ethanol Extract                               | 1.69 µg/ml             |        |
| Poaceae           | *Sorghum bicolor* cultivars | 70% Ethanol Extract                               | 1. 4.5 µg/ml  
2. 2.9 µg/ml  
3. 11.8 µg/ml  
4. 9.0 µg/ml | PPA (186) |
|                   | 1. Mongdang-susu         |                                                  |                        |        |
|                   | 2. Me-susu               |                                                  |                        |        |
|                   | 3. Susongsaeng-susu      |                                                  |                        |        |
|                   | 4. Sikyung-susu          |                                                  |                        |        |
| Poaceae           | *Sorghum bicolor* bran   | Methanolic Extract                                | 1. 1.4 µg/ml  
2. 11.4 µg/ml | PPA (187) |
|                   | 1. Sumac sorghum         |                                                  |                        |        |
|                   | 2. Black sorghum         |                                                  |                        |        |
| Rosaceae          | *Rosa gallica* (petals)  | 50% Aqueous ethanol Extract.                     | 20, 26 and 34 µg/ml    | PPA (138) |
| Rosaceae          | *Sorbus aucuparia*, variety Sahharnaj   | 80% acetonitrile- ultra pure water Extract       | 4.5 µg of gallic acid equivalent/ml  
21.0 µg of gallic acid equivalent/ml | PPA (76) |
|                   | *Rubus idaeus* L., variety Glen Ample |                                            |                        |        |
| Rosaceae          | *Sarcopoterium spinosum* L. | 50% Methanol-aqueous Extract.                 | 0.14 mg/ml             | PPA (150) |
| Rubiaceae         | *Asperula glomerata* (M. Bieb) | Methanol Extract                               | 209.7 µg/ml            | PPA (48) |
| Rutaceae          | *Murraya koenigii* (L.) | Chloroform Extract                               | 1.96 µg/ml             | PPA (30) |
| Rutaceae          | *Murraya koenigii* L. Spreng (leaves) | Isopropanol Extract                           | 10 µg/ml               | PPA (29) |
| Santalaceae       | *Osyris alba* L.         | 50% Methanol-aqueous Extract.                 | 0.081 mg/ml            | PPA (150) |
| Sapindaceae       | *Nephelium lappaceum* L. (rind) | Ethanol Extract                              | 70.8 µg/ml             | PPA (188) |
| Schisandraceae    | *Schizandra chinensis* Bail. (pulp/skin) | Water Extract                           | < 1 mg/ml              | PPA (132) |
| Theaceae          | *Camellia sinensis* (L.) *Ktze. (leaf) | Ethanol Extract                               | 1.54 mg/ml             |        |
| Thymelaceae       | *Gnidia glauca leaf and flower* | Petroleum ether Extract                        | 34.88 and 31.82 µg/ml  | PPA (16) |
|                   | *Gnidia glauca flower*   | Ethyl acetate Extract                          | 33.84 µg/ml            |        |
|                   |                          | Methanol Extract                                | 33.92 µg/ml            |        |
|                | Common Name                     | Extract         | Concentration            | Method            | Enzyme(s) | (Ref) |
|----------------|---------------------------------|-----------------|--------------------------|-------------------|-----------|-------|
| Umbelliferae   | *Bunium persicum* Boiss. (seeds) | 1. Methanol Extract | 170.4 µg/ml              | -                 | (18)      |
|                |                                 | 2. Ethyl acetate Extract | > 250 µg/ml               | -                 |           |
|                |                                 | 3. n-Hexane Extract | 138.3 µg/ml              | -                 |           |
| Urticaceae     | *Urtica dioica* L. (lea)        | Ethanol Extract | 1.89 mg/ml               | -                 | (70)      |
| Zigophyllaceae | *Balanites aegyptiaca* Del. (Fruits) | Powdered Extract | 12 mg/ml                 | -                 | (149)     |
| Zingiberaceae  | *Zinger officinale* var. Rubra  | Aqueous Extract | 1. 3.51 µg/ml            | PPA               | (122)     |
|                | *Zinger officinale* Roscoe      |                 | 2. 3.14 µg/ml            |                   |           |
| Zingiberaceae  | *Curcuma longa* L. (rhizome)    | Isopropanol Extract | 10 µg/ml                 | PPA               |           |
| Zingiberaceae  | *Curcuma longa* L. (rhizome)    | Isopropanol and acetone Extract | 0.16 and 7.4 µg/ml | HPA               | (29)      |

PPA: Porcine pancreatic alpha-amylase; HPA: Human pancreatic alpha-amylase