Table S1. The toxicity and melanin inhibitory effect of A total of 123 plants from aerial parts (Table S1) were freshly collected from Taiwan Endemic Species Research Institute from 2012 to 2019, and on zebrafish (low and high concentration, N=3).

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Number | Name | Family | Low concentration  (100 μg/mL) | | | | | | High concentration  (≥ 10 mg/mL) | | | | | | |
| Mortality rate (%) | Non-hatching rate (%) | Malformation rate (%) | Relative melanin content (%) | SD (%) | p-value | Concentration | Mortality rate (%) | Non-hatching rate (%) | Malformation rate (%) | Relative melanin content (%) | SD (%) | p-value |
| 1 | *Cordyceps militaris* (Fr.) Link | *Cordycipitaceae* | 0 | 0 | 33 | 303.6 | 223.7 | > 0.05 | 20.4 | 100 | 0 | 0 | NA | NA | NA |
| 2 | *Coix lacryma-jobi* L. | *Poaceae* | 0 | 0 | 0 | 216.2 | 120.4 | > 0.05 | 16.5 | 100 | 0 | 0 | NA | NA | NA |
| 3 | *Codonopsis pilosula* | *Campanulaceae* | 0 | 0 | 0 | 286.5 | 50.2 | > 0.05 | 14.5 | 100 | 0 | 0 | NA | NA | NA |
| 4 | *Atractylodes lancea* | *Asteraceae* | 0 | 0 | 33 | 235.3 | 195.6 | > 0.05 | 9.1 | 100 | 0 | 0 | NA | NA | NA |
| 5 | *Notopterygium incisum* | *Apiaceae* | 0 | 0 | 0 | 203.5 | 94.5 | > 0.05 | 9.6 | 100 | 0 | 0 | NA | NA | NA |
| 6 | *Salvia japonica* Thunb. ex Murray, | *Lamiaceae* | 0 | 0 | 0 | 213.3 | 62.7 | > 0.05 | 11.7 | 100 | 0 | 0 | NA | NA | NA |
| 7 | *Wolfiporia cocos* (Schw.) Ryv. & Gilbn. | *Polyporaceae* | 0 | 0 | 0 | 150.3 | 85.6 | > 0.05 | 14.4 | 0 | 0 | 0 | 27.5 | 9.8 | \*\* |
| 8 | *Polygala tenuifolia* | *polygalaceae* | 0 | 0 | 0 | 275.3 | 107.2 | > 0.05 | 8.5 | 100 | 0 | 0 | NA | NA | NA |
| 9 | *Polygonum multiflorum* Thunb. | *Polygonaceae* | 0 | 0 | 0 | 258.3 | 39.0 | > 0.05 | 9.7 | 100 | 0 | 0 | NA | NA | NA |
| 10 | *Pinellia ternata* (Thunb.) Breit. | *Araceae* | 0 | 0 | 0 | 106.6 | 18.2 | > 0.05 | 15.8 | 0 | 0 | 0 | 39.3 | 12.9 | \*\* |
| 11 | *Platycodon grandiflorum* (Jacq.) A. DC. | *Campanulaceae* | 0 | 0 | 0 | 380.6 | 37.6 | \*\* | 9.1 | 100 | 0 | 0 | NA | NA | NA |
| 12 | *Hedyotis diffusa* Willd. | *Rubiaceae* | 0 | 0 | 0 | 345.9 | 107.9 | \* | 11.2 | 0 | 67 | 0 | NA | NA | NA |
| 13 | *Aglaia formosana* Hayata | *Meliaceae* | 0 | 0 | 0 | 320.0 | 88.0 | \* | 12.5 | 100 | 0 | 0 | NA | NA | NA |
| 14 | *Litsea hypophaea* Hayata | *Lauraceae* | 0 | 0 | 0 | 239.0 | 147.9 | > 0.05 | 18.4 | 100 | 0 | 0 | NA | NA | NA |
| 15 | *Lycopodium serratum* Thumb. | *Lycopodiaceae* | 0 | 0 | 0 | 229.4 | 114.8 | > 0.05 | 10.6 | 100 | 0 | 0 | NA | NA | NA |
| 16 | *Elephantopus mollis H.B.K.* | *Asteraceae* | 0 | 0 | 0 | 191.4 | 150.5 | > 0.05 | 8.7 | 100 | 0 | 0 | NA | NA | NA |
| 17 | *Hedyotis diffusa* Willd. | *Rubiaceae* | 0 | 0 | 0 | 253.5 | 193.1 | > 0.05 | 11.6 | 100 | 0 | 0 | NA | NA | NA |
| 18 | *Cajanus cajan* (L.) Millsp. | *Fabaceae* | 0 | 0 | 0 | 243.5 | 98.8 | > 0.05 | 12.7 | 100 | 0 | 0 | NA | NA | NA |
| 19 | *Mallotus repandus* (Willd.) Mull. Arg. | *Euphorbiaceae* | 0 | 0 | 0 | 162.9 | 61.9 | > 0.05 | 9.1 | 100 | 0 | 0 | NA | NA | NA |
| 20 | *Tithonia diversifolia* (Hemsl.) A. Gray | *Asteraceae* | 0 | 0 | 0 | 304.3 | 108.3 | > 0.05 | 12.4 | 100 | 0 | 0 | NA | NA | NA |
| 21 | *Desmodium renifolium* (L.) Schindler | *Fabaceae* | 0 | 0 | 0 | 299.5 | 47.7 | \* | 9.9 | 100 | 0 | 0 | NA | NA | NA |
| 22 | *Scutellaria barbata* D. Don | *Lamiaceae* | 0 | 0 | 0 | 285.9 | 223.4 | > 0.05 | 13 | 100 | 0 | 0 | NA | NA | NA |
| 23 | *Blumea riparia* (Blume) DC. var. megacephala Randeria | *Asteraceae* | 0 | 0 | 0 | 210.7 | 135.8 | > 0.05 | 9.8 | 100 | 0 | 0 | NA | NA | NA |
| 24 | *Cuscuta australis* R. Br. | *Convolvulaceae* | 0 | 0 | 0 | 274.7 | 178.3 | > 0.05 | 9.0 | 100 | 0 | 0 | NA | NA | NA |
| 25 | White silkworm | *Bombycoidea* | 0 | 0 | 0 | 372.2 | 143.2 | \* | 9.0 | 100 | 0 | 0 | NA | NA | NA |
| 26 | *Ludwigia octovalvis* (Jacq.) P. H. Raven | *Onagraceae* | 0 | 0 | 0 | 81.8 | 18.5 | > 0.05 | 10.2 | 100 | 0 | 0 | NA | NA | NA |
| 27 | *Eupatorium formosanum* Hayata | *Asteraceae* | 0 | 0 | 33 | 245.8 | 131.6 | > 0.05 | 14.3 | 100 | 0 | 0 | NA | NA | NA |
| 28 | *Alternanthera Payonychioide*s St. | *Amaranthaceae* | 0 | 0 | 33 | 220.0 | 165.1 | > 0.05 | 10.3 | 100 | 0 | 0 | NA | NA | NA |
| 29 | *Anoectochilus formosanus* Hayata | *Orchidaceae* | 0 | 0 | 0 | 122.8 | 23.5 | > 0.05 | 10.7 | 0 | 0 | 0 | 55.4 | 12.8 | \* |
| 30 | *Mimosa pudica* L. | *Fabaceae* | 0 | 0 | 100 | NA | NA | NA | 12.7 | 100 | 0 | 0 | NA | NA | NA |
| 31 | *Ixeris chinensis* (Thunb.) Nakai | *Arecaceae* | 0 | 0 | 0 | 36.3 | 37.1 | > 0.05 | 13.5 | 0 | 0 | 33 | 71.4 | 56.8 | > 0.05 |
| 32 | *Vernonia patula* (Dryand.) Merr. | *Asteraceae* | 0 | 0 | 0 | 92.7 | 39.0 | > 0.05 | 15.2 | 0 | 0 | 100 | 5.0 | 7.0 | \* |
| 33 | *Mikania micrantha* Kunth | *Asteraceae* | 0 | 0 | 0 | 114.0 | 38.2 | > 0.05 | 10.4 | 100 | 0 | 0 | NA | NA | NA |
| 34 | *Areca catechu* L. | *Arecaceae* | 33 | 0 | 0 | 66.2 | 61.4 | > 0.05 | 10.8 | 100 | 0 | 0 | NA | NA | NA |
| 35 | *Peperomia dindigulensis* Miq. | *Piperaceae* | 0 | 0 | 0 | 61.3 | 32.1 | > 0.05 | 11.9 | 100 | 0 | 0 | NA | NA | NA |
| 36 | *Clerodendrum cyrtophyllum* Turcz. | *Lamiaceae* | 100 | 0 | 0 | NA | NA | NA | 12.7 | 100 | 0 | 0 | NA | NA | NA |
| 37 | *Pittosporum daphniphylloide*s Hayata | *Pittosporaceae* | 0 | 0 | 0 | 92.6 | 36.6 | > 0.05 | 11.4 | 100 | 0 | 0 | NA | NA | NA |
| 38 | *Aucuba chinensis* Benth. | *Cornaceae* | 0 | 0 | 33 | 118.2 | 39.4 | > 0.05 | 12.4 | 0 | 0 | 33 | 80.5 | 28.9 | > 0.05 |
| 39 | *Solanum violaceum* Ortega | *Solanaceae* | 0 | 0 | 0 | 137.6 | 42.0 | > 0.05 | 14.5 | 100 | 0 | 0 | NA | NA | NA |
| 40 | *Lindera communis* Hemsl. | *Lauraceae* | 0 | 0 | 0 | 64.7 | 37.0 | > 0.05 | 11.4 | 100 | 0 | 0 | NA | NA | NA |
| 41 | *Glossogyne tenuifolia* (Labill.) Cass. | *Asteraceae* | 0 | 0 | 0 | 62.4 | 38.0 | > 0.05 | 11.7 | 100 | 0 | 0 | NA | NA | NA |
| 42 | *Urena lobata* L. | *Malvaceae* | 0 | 0 | 0 | 130.1 | 36.7 | > 0.05 | 15.2 | 0 | 0 | 0 | 63.0 | 19.4 | \* |
| 43 | *Machilus zuihensis* Hayata | *Lauraceae* | 0 | 0 | 33 | 96.3 | 62.0 | > 0.05 | 11.7 | 100 | 0 | 0 | NA | NA | NA |
| 44 | *Ilex asprella* (Hook. & Arn.) Champ. | *Aquifoliaceae* | 33 | 0 | 0 | 108.0 | 50.8 | > 0.05 | 15.0 | 100 | 0 | 0 | NA | NA | NA |
| 45 | *Ageratum houstonianum* Mill. | *Asteraceae* | 0 | 0 | 0 | 138.2 | 14.0 | > 0.05 | 13.4 | 100 | 0 | 0 | NA | NA | NA |
| 46 | *Polygonum orientale* | *Polygonaceae* | 0 | 0 | 0 | 117.1 | 42.4 | > 0.05 | 11.1 | 100 | 0 | 0 | NA | NA | NA |
| 47 | *Ageratum houstonianum* Mill. | *Asteraceae* | 0 | 0 | 0 | 113.7 | 36.8 | > 0.05 | 12.1 | 0 | 0 | 0 | 19.0 | 20.0 | \*\* |
| 48 | *Chromolaena odorata* (L.) R. M. King & H. Rob. | *Asteraceae* | 0 | 0 | 0 | 96.0 | 37.8 | > 0.05 | 13.5 | 100 | 0 | 0 | NA | NA | NA |
| 49 | *Amaranthus patulus* Betoloni | *Amaranthaceae* | 0 | 0 | 0 | 119.4 | 31.0 | > 0.05 | 13.0 | 100 | 0 | 0 | NA | NA | NA |
| 50 | *Celosia argentea* L. | *Amaranthaceae* | 0 | 0 | 0 | 112.7 | 48.6 | > 0.05 | 11.2 | 33 | 33 | 33 | NA | NA | NA |
| 51 | *Cleome rutidosperma* DC. | *Capparaceae* | 0 | 0 | 0 | 94.8 | 53.3 | > 0.05 | 11.4 | 100 | 0 | 0 | NA | NA | NA |
| 52 | *Coleus amboinicus* Lour. | *Lamiaceae* | 0 | 0 | 0 | 101.5 | 35.8 | > 0.05 | 14.7 | 100 | 0 | 0 | NA | NA | NA |
| 53 | *Pennisetum purpureum* Schumach. | *Poaceae* | 0 | 0 | 0 | 153.1 | 29.8 | > 0.05 | 11.5 | 0 | 0 | 0 | 49.7 | 4.1 | \*\* |
| 54 | *Litsea akoensis* Hayata var. *chitouchiaoensis* J. C. Liao | *Lauraceae* | 0 | 0 | 0 | 140.8 | 26.7 | > 0.05 | 10.8 | 0 | 100 | 0 | NA | NA | NA |
| 55 | *Houttuynia cordata* Thunb. | *Saururaceae* | 0 | 0 | 0 | 109.6 | 49.3 | > 0.05 | 11.5 | 100 | 0 | 0 | NA | NA | NA |
| 56 | *Medinilla formosana* Hayata | *Melastomataceae* | 0 | 0 | 0 | 90.8 | 23.9 | > 0.05 | 14.0 | 100 | 0 | 0 | NA | NA | NA |
| 57 | *Sedum morrisonense* Hayata | *Crassulaceae* | 0 | 0 | 33 | 93.3 | 57.7 | > 0.05 | 14.0 | 0 | 0 | 33 | 32.2 | 42.2 | > 0.05 |
| 58 | *Valeriana fauriei* Briquet | *Valerianaceae* | 0 | 0 | 0 | 106.0 | 40.1 | > 0.05 | 10.7 | 100 | 0 | 0 | NA | NA | NA |
| 59 | *Eupatorium clematideum* (Wall. ex DC.) Sch. Bip. var. *gracillimum* (Hayata) C.-I Peng & S. W. Chung | *Asteraceae* | 0 | 0 | 0 | 130.4 | 63.0 | > 0.05 | 17.0 | 100 | 0 | 0 | NA | NA | NA |
| 60 | *Celtis sinensis* Pers | *Ulmaceae* | 0 | 0 | 0 | 88.6 | 40.8 | > 0.05 | 11.7 | 0 | 0 | 33 | 58.9 | 38.2 | > 0.05 |
| 61 | *Melia azedarach* Linn. | *Meliaceae* | 0 | 0 | 0 | 144.0 | 57.3 | > 0.05 | 13.2 | 100 | 0 | 0 | NA | NA | NA |
| 62 | *Urceola rosea (*Hook. & Arn.) D.J. Middleton | *Apocynaceae* | 0 | 0 | 0 | 147.0 | 39.0 | > 0.05 | 12.7 | 100 | 0 | 0 | NA | NA | NA |
| 63 | *Sesuvium portulacastrum* (L.) L. | *Aizoaceae* | 0 | 0 | 0 | 98.3 | 64.9 | > 0.05 | 15.1 | 100 | 0 | 0 | NA | NA | NA |
| 64 | *Eleocharis tetraquetra* Nees ex Wight | *Cyperaceae* | 0 | 0 | 0 | 120.2 | 15.2 | > 0.05 | 12.1 | 0 | 100 | 0 | NA | NA | NA |
| 65 | *Excoecaria agallocha* L. | *Euphorbiaceae* | 0 | 0 | 0 | 97.9 | 34.1 | > 0.05 | 12.0 | 100 | 0 | 0 | NA | NA | NA |
| 66 | *Excoecaria kawakamii* Hayata | *Euphorbiaceae* | 0 | 0 | 0 | 158.4 | 28.9 | > 0.05 | 12.1 | 100 | 0 | 0 | NA | NA | NA |
| 67 | *Cinnamomum osmophloeum* Kanehira | *Lauraceae* | 0 | 0 | 0 | 115.3 | 81.6 | > 0.05 | 10.9 | 100 | 0 | 0 | NA | NA | NA |
| 68 | *Eriobotrya deflexa* (Hemsl.) Nakai f. *deflexa* (Hemsl.) Nakai | *Rosaceae* | 0 | 0 | 0 | 118.0 | 10.5 | > 0.05 | 16.5 | 100 | 0 | 0 | NA | NA | NA |
| 69 | *Duchesnea indica* (Andr.) Focke | *Rosaceae* | 0 | 0 | 0 | 73.0 | 14.8 | > 0.05 | 12.4 | 0 | 67 | 0 | NA | NA | NA |
| 70 | *Hibiscus taiwanensis* Hu | *Malvaceae* | 0 | 0 | 0 | 124.2 | 43.7 | > 0.05 | 10.7 | 100 | 0 | 0 | NA | NA | NA |
| 71 | *Artemisia indica* Willd. | *Asteraceae* | 0 | 0 | 0 | 106.7 | 50.1 | > 0.05 | 11.2 | 0 | 100 | 0 | NA | NA | NA |
| 72 | *Lonicera japonica* Thunb. | *Caprifoliaceae* | 0 | 0 | 0 | 170.2 | 51.1 | > 0.05 | 13.1 | 100 | 0 | 0 | NA | NA | NA |
| 73 | *Saxifraga stolonifera* Meerb. | *Saxifragaceae* | 0 | 0 | 0 | 140.7 | 22.7 | > 0.05 | 12.7 | 0 | 100 | 0 | NA | NA | NA |
| 74 | *Ajuga taiwanensis* Nakai ex Murata | *Lamiaceae* | 0 | 0 | 0 | 120.5 | 24.4 | > 0.05 | 13.9 | 100 | 0 | 0 | NA | NA | NA |
| 75 | *Bischofia javanica* Bl. | *Euphorbiaceae* | 0 | 0 | 0 | 176.3 | 21.7 | > 0.05 | 14.8 | 100 | 0 | 0 | NA | NA | NA |
| 76 | *Plantago asiatica* L. | *Plantaginaceae* | 0 | 0 | 0 | 129.7 | 35.3 | > 0.05 | 11.8 | 0 | 0 | 67 | 31.7 | 32.0 | \* |
| 77 | *Paederia foetida* L. | *Rubiaceae* | 0 | 0 | 0 | 140.7 | 17.5 | > 0.05 | 12.8 | 0 | 0 | 0 | 43.4 | 18.5 | \*\* |
| 78 | *Youngia japonica* (L.) DC. subsp. *Japonica* (L.) DC. | *Asteraceae* | 100 | 0 | 0 | NA | NA | NA | 17.5 | 100 | 0 | 0 | NA | NA | NA |
| 79 | *Kalanchoe garambiensis* Kudo | *Crassulaceae* | 0 | 0 | 33 | 59.9 | 1.6 | > 0.05 | 13.9 | 0 | 0 | 0 | 58.2 | 38.9 | > 0.05 |
| 80 | *Eclipta prostrata* (L.) L. | *Asteraceae* | 0 | 0 | 0 | 143.2 | 47.1 | > 0.05 | 14.7 | 100 | 0 | 0 | NA | NA | NA |
| 81 | *Cerbera manghas* L. | *Apocynaceae* | 0 | 0 | 0 | 126.0 | 37.1 | > 0.05 | 11.0 | 0 | 0 | 0 | 35.5 | 10.3 | \*\* |
| 82 | *Hexagonia apiaria* Pers. | *Polyporaceae* | 0 | 0 | 0 | 86.9 | 21.6 | > 0.05 | 10.7 | 0 | 0 | 0 | 34.2 | 21.3 | \* |
| 83 | *Leucaena leucocephala* (Lam.) de Wit | *Fabaceae* | 0 | 0 | 0 | 124.7 | 15.2 | > 0.05 | 10.5 | 100 | 0 | 0 | NA | NA | NA |
| 84 | *Cardiospermum halicacabum* L. | *Sapindaceae* | 0 | 0 | 0 | 138.5 | 25.0 | > 0.05 | 11.9 | 100 | 0 | 0 | NA | NA | NA |
| 85 | *Wedelia trilobata* (L.) Hitchc. | *Asteraceae* | 0 | 0 | 0 | 121.1 | 51.8 | > 0.05 | 10.7 | 0 | 100 | 0 | NA | NA | NA |
| 86 | *Pistia stratiotes* L. | *Araceae* | 0 | 0 | 0 | 160.6 | 42.5 | > 0.05 | 10.8 | 0 | 33 | 0 | 66.3 | 59.4 | > 0.05 |
| 87 | *Oxalis corymbose* DC. | *Oxalidaceae* | 0 | 0 | 0 | 105.0 | 12.9 | > 0.05 | 13.5 | 100 | 0 | 0 | NA | NA | NA |
| 88 | *Oenothera laciniate* J. Hill | *Onagraceae* | 0 | 0 | 0 | 125.5 | 78.4 | > 0.05 | 11.4 | 0 | 100 | 0 | NA | NA | NA |
| 89 | *Ipomoea cairica* (L.) Sweet | *Convolvulaceae* | 0 | 0 | 0 | 160.2 | 19.4 | > 0.05 | 11.1 | 100 | 0 | 0 | NA | NA | NA |
| 90 | *Aquilaria malaccensis* | *Thymelaeaceae* | 0 | 0 | 0 | 153.0 | 51.4 | > 0.05 | 12.9 | 100 | 0 | 0 | NA | NA | NA |
| 91 | *Aquilaria malaccensis* | *Thymelaeaceae* | 0 | 0 | 0 | 131.0 | 40.6 | > 0.05 | 12.3 | 100 | 0 | 0 | NA | NA | NA |
| 92 | *Hovenia dulcis* Thunb. | *Rhamnaceae* | 0 | 0 | 0 | 161.5 | 51.3 | > 0.05 | 11.4 | 0 | 0 | 0 | 89.4 | 25.1 | > 0.05 |
| 93 | *Shortia rotundifolia* (Maxim.) Makino | *Diapensiaceae* | 0 | 0 | 0 | 183.6 | 23.4 | \* | 13.2 | 100 | 0 | 0 | NA | NA | NA |
| 94 | *Desmodium gangeticum* (L.) DC. | *Fabaceae* | 0 | 0 | 0 | 199.0 | 22.8 | \* | 11.6 | 0 | 0 | 0 | 82.6 | 26.5 | > 0.05 |
| 95 | *Pyracantha koidzumii* (Hayata) Rehder | *Rosaceae* | 0 | 0 | 0 | 145.0 | 47.2 | > 0.05 | 14.1 | 100 | 0 | 0 | NA | NA | NA |
| 96 | *Pinus morrisonicola* Hayata | *Pinaceae* | 0 | 0 | 0 | 90.6 | 39.8 | > 0.05 | 13.5 | 100 | 0 | 0 | NA | NA | NA |
| 97 | *Myrica rubra* Sieb. & Zucc. var.*acuminata* Nakai | *Myricacea* | 0 | 0 | 0 | 106.6 | 59.8 | > 0.05 | 13.0 | 100 | 0 | 0 | NA | NA | NA |
| 98 | *Limonium sinense* (Girard) Kuntze | *Plumbaginaceae* | 0 | 0 | 0 | 120.1 | 18.6 | > 0.05 | 13.6 | 100 | 0 | 0 | NA | NA | NA |
| 99 | *Zehneria mucronata* (Bl.) Miq. | *Cucurbitaceae* | 0 | 0 | 0 | 169.5 | 35.9 | \* | 13.9 | 100 | 0 | 0 | NA | NA | NA |
| 100 | *Cycas taitungensis* C. F. Shen, K. D. Hill, C. H. Tsou & C. J. Chen | *Cycadaceae* | 0 | 0 | 0 | 121.4 | 37.3 | > 0.05 | 11.9 | 100 | 0 | 0 | NA | NA | NA |
| 101 | *Arenga tremula* (Blanco) Becc. | *Arecaceae* | 0 | 0 | 0 | 77.0 | 17.2 | > 0.05 | 10.7 | 0 | 33 | 0 | 32.8 | 30.4 | > 0.05 |
| 102 | *Siegesbeckia orientalis* L. | *Asteraceae* | 0 | 0 | 0 | 80.8 | 8.1 | > 0.05 | 13.6 | 100 | 0 | 0 | NA | NA | NA |
| 103 | *Sedum* *formosanum* N.E. Br. | *Crassulaceae* | 0 | 0 | 0 | 130.6 | 26.1 | > 0.05 | 11.0 | 0 | 0 | 0 | 16.2 | 18.4 | \*\* |
| 104 | *Calophyllum blancoi* Planchon | *Clusiaceae* | 0 | 0 | 0 | 122.6 | 18.0 | > 0.05 | 12.6 | 100 | 0 | 0 | NA | NA | NA |
| 105 | *Rhaphiolepis indica* (L.) Lindl. ex Ker var. *tashiroi* Hayata ex Matsum. & Hayata | *Rosaceae* | 0 | 0 | 0 | 135.6 | 18.1 | > 0.05 | 12.0 | 100 | 0 | 0 | NA | NA | NA |
| 106 | *Cryptocarya elliptifolia* Merr. | *Lauraceae* | 0 | 0 | 0 | 101.5 | 48.8 | > 0.05 | 12.4 | 100 | 0 | 0 | NA | NA | NA |
| 107 | *Callicarpa formosana* Rolfe var. *formosana* Rolfe | *Verbenaceae* | 0 | 0 | 0 | 110.3 | 65.1 | > 0.05 | 10.3 | 100 | 0 | 0 | NA | NA | NA |
| 108 | *Rosa laevigata* Michx. | *Rosaceae* | 0 | 0 | 0 | 155.6 | 16.6 | \* | 10.3 | 100 | 0 | 0 | NA | NA | NA |
| 109 | *Viburnum luzonicum* Rolfe | *Adoxaceae* | 0 | 0 | 0 | 117.3 | 51.4 | > 0.05 | 11.3 | 100 | 0 | 0 | NA | NA | NA |
| 110 | *Rubia akane* Nakai var. *akane* Nakai | *Rubiaceae* | 0 | 0 | 0 | 102.5 | 31.8 | > 0.05 | 11.3 | 67 | 33 | 0 | NA | NA | NA |
| 111 | *Cleyera japonica* Thunb. var. *morii* (Yamamoto) Masam. | *Theaceae* | 0 | 0 | 0 | 111.9 | 25.7 | > 0.05 | 11.4 | 0 | 100 | 0 | NA | NA | NA |
| 112 | *Berberis kawakamii* Hayata | *Berberidaceae* | 0 | 0 | 0 | 122.1 | 44.3 | > 0.05 | 11.9 | 100 | 0 | 0 | NA | NA | NA |
| 113 | *Toona sinensis* (Juss.) M. Roem. | *Meliaceae* | 0 | 0 | 0 | 94.4 | 23.2 | > 0.05 | 12.6 | 100 | 0 | 0 | NA | NA | NA |
| 114 | *Tinospora dentata* Diels | *Menispermaceae* | 0 | 0 | 0 | 55.2 | 33.9 | > 0.05 | 12.0 | 100 | 0 | 0 | NA | NA | NA |
| 115 | *Actinostemma tenerum* Griff. | *Cucurbitaceae* | 0 | 0 | 0 | 58.1 | 3.4 | > 0.05 | 11.1 | 100 | 0 | 0 | NA | NA | NA |
| 116 | *Liquidambar formosana* Hance | *Altingiaceae* | 0 | 0 | 0 | 68.0 | 49.1 | > 0.05 | 10.5 | 100 | 0 | 0 | NA | NA | NA |
| 117 | *Mahonia oiwakensis* Hayata | *Berberidaceae* | 0 | 0 | 0 | 118.5 | 57.0 | > 0.05 | 10.3 | 0 | 0 | 0 | 117.9 | 24.6 | > 0.05 |
| 118 | *Myristica ceylanica* A. DC. var. *cagayanensis* (Merr.) J. Sinclair | *Myristicaceae* | 0 | 0 | 0 | 53.2 | 38.5 | > 0.05 | 11.5 | 100 | 0 | 0 | NA | NA | NA |
| 119 | *Alpinia shimadae* Hayata | *Zingiberaceae* | 0 | 0 | 0 | 92.2 | 40.8 | > 0.05 | 14.5 | 0 | 0 | 0 | 24.6 | 13.3 | \*\* |
| 120 | *Eriobotrya deflexa* (Hemsl.) Nakai *forma koshunensis* (Kanehira & Sasaki) Li | *Rosaceae* | 0 | 0 | 0 | 103.4 | 34.9 | > 0.05 | 11.7 | 100 | 0 | 0 | NA | NA | NA |
| 121 | *Tridax procumbens* L. | *Asteraceae* | 0 | 0 | 0 | 95.8 | 64.0 | > 0.05 | 10.7 | 100 | 0 | 0 | NA | NA | NA |
| 122 | *Rhodiola rosea* L. | *Crassulaceae* | 0 | 0 | 0 | 136.7 | 63.9 | > 0.05 | NA | NA | NA | NA | NA | NA | NA |
| 123 | *Magnolia officinalis* | *Magnoliaceae* | 100 | 0 | 0 | NA | NA | NA | 10.5 | 100 | 0 | 0 | NA | NA | NA |

The relative melanin concentration was calculated from 3 zebrafishes (N=3). Results were expressed as % of control and mean ± S.E. \* p-value < 0.05, \*\* p-value < 0.01, \*\*\* p-value < 0.001, NA: not analyzed.