**SUPPLEMENTARY MATERIALS**

**Table S1.** Plant material collected in the municipalities of Arjona and Turbaco (Bolivar-Colombia), from plant species found in the Colombian Caribbean Region.

|  |  |  |  |
| --- | --- | --- | --- |
| **LIFFUC\* Code** | **Scientific Name (common name) / Family** | **No. de Voucher** | **Collected amount (g)** |
| FD-I-39C | *Acacia collinsii* Staff (Cachito) / Fabaceae | COL 538416 | 100 |
| FD-I-1H | *Ambrosia cumanensis* H.B.K (artemisa) / Asteraceae | COL 538448 | 110 |
| FD-I-3S | *Annona squamosa* L. (Anón) / Annonaceae | JBC 4431 | 100 |
| FD-I-4H | *Annona muricata* L. (Guanabana) / Annonaceae | JBC 1618 | 100 |
| FD-I-4S | 100 |
| FD-I-48S | *Annona cherimolia* L*.* (Chirimoya) / *Annonaceae* | COL 538420 | 100 |
| FD-I-49H | *Azadirachta indica* A. Juss (Nim, Neem) / Meliaceae | COL 538417 | 120 |
| FD-I-49T | *Bauhinia guianensis* Aubl. (Escalera de mono) / Fabaceae | JBC 12012 | 100 |
| FD-I-6H | *Bursera graveolens* Kunth. (Caraña) / Burseraceae | JBC 5115 | 100 |
| FD-I-40H | *Bursera simaruba* L (Almácigo) / Burseraceae | JBC 4458 | 116 |
| FD-I-59Fr | *Caesalpinia coriaria* Jacq. Willd (Dividivi) / Fabaceae | COL 538422 | 100 |
| FD-I-28H | *Capparis odoratissima* Jacq. (Olivo) / Capparidaceae | JBC 1492 | 100 |
| FD-I-8H | *Carica papaya* L. (Papaya) / Caricaceae | JBC 12016 | 100 |
| FD-I-42H | *Cardiospermum grandiflorum* Sw. (Topo-topo) / Sapindaceae | JBC 1452 | 100 |

\* C: stem bark; Fl: flowers; Fr: fruit; H: leaves; R: root; S: seed; T: stem

**Table S1. *Cont.***

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **LIFFUC\* Code** | | **Scientific Name (common name) / Family** | | **No. de Voucher** | | **Collected amount (g)** |
| FD-I-9H | | *Cassia fistula* L*.* (Cañafistula) / Fabaceae | | JBC 1390 | | 100 |
| FD-I-29S | | Cavanillesia platanifolia Bonpl. (Bongo, macondo) / Bombacaceae | | JBC 47576 | | 112 |
| FD-I-43H | | *Cecropia peltata* L. (Guarumo) / Urticaceae | | JBC 1383 | | 100 |
| FD-I-56T | | *Ceratopteris pteridioides* Hooker. (Cola de caballo) / Parkeriaceae | | HUA 166134 | | 100 |
| FD-I-10H | | *Chenopodium ambrosioides* L. (Paico, hierbasanta) / Chenopodiaceae | | JBC 4005 | | 111 |
| FD-I-11S | | *Chrysobalanus icaco* L*.* (Icaco) / Chrysobalanaceae | | JBC 12015 | | 100 |
| FD-I-41C | | *Cochlospermum vitifolia* Willd. (Papayuelo ) / Cochlospermaceae | | JBC 917 | | 100 |
| FD-I-44H | | *Coccoloba uvifera* L. (Uvita de Playa) / Polygonaceae | | JBC 4593 | | 100 |
| FD-I-65H | | *Cordia dentata* Poir. (Uvita, sauco) / Boraginaceae | | JBC 2507 | | 100 |
| FD-I-64H | *Crataeva tapia* L. (Naranjuelo) / Capparaceae | | JBC 12017 | | 110 | |
| FD-I-46Fr | *Crescentia cujete* L. (Totumo) / Bignoniaceae | | JBC 3234 | | 100 | |
| FD-I-12C | *Croton malambo* Karst*.* (Malambo) / Euphorbiaceae | | JBC 12008 | | 100 | |
| FD-I-57S | *Crotalaria retusa* L. (Cascabel) / Fabaceae | | JBC12007 | | 113 | |
| FD-I-35H | *Cymbopogon citratus* Staff. (Hierba limón) / Poaceae | | COL 538447 | | 100 | |

\* C: stem bark; Fl: flowers; Fr: fruit; H: leaves; R: root; S: seed; T: stem.

**Table S1.** *Cont*.

|  |  |  |  |
| --- | --- | --- | --- |
| **LIFFUC\* Code** | **Scientific Name (common name) / Family** | **No. de Voucher** | **Collected amount (g)** |
| FD-I-37C | *Diospyros inconstans* Jacq. (Caimitillo) / Ebenaceae | JBC1438 | 123 |
| FD-I-13H | *Eryngium foetidum* L*.* (Cilantro) / Apiaceae | COL 538419 | 100 |
| FD-I-50H | *Guayacum officinalis* L. (Guayacan) / Zygophyllaceae | JBC 12002 | 112 |
| FD-I-14H | *Guazuma ulmifolia* Lam*.* (Guácimo) / Sterculiaceae | JBC 569 | 100 |
| FD-I-51H | *Gustavia superba* Kunth. (Membrillo) / Lecythidaceae | JBC 1382 | 100 |
| FD-I-65H | *Heliotropium indicum* L. (Rabo de alacrán) / Boraginaceae | JBC 3691 | 100 |
| FD-I-52H | *Hippomane mancinella* L. (Manzanillo) / Euphorbiaceae | JBC 2478 | 100 |
| FD-I-52Fr | 103 |
| FD-I-52S | 100 |
| FD-I-16H | *Hyptis capitata* Jacq*.* (Botón negro) / Lamiaceae | JBC 2478 | 100 |
| FD-I-53C | *Hura crepitans* L. (Ceiba blanca) / Euphorbiaceae | JBC 788 | 100 |
| FD-I-66Fr | *Luffa cylindrica* M. Roem (Estropajo) / Cucurbitaceae | JBC 278 | 106 |

\* C: stem bark; Fl: flowers; Fr: fruit; H: leaves; R: root; S: seed; T: stem

**Table S1.** *Cont*.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **LIFFUC\* Code** | **Scientific Name (common name) / Family** | **No. de Voucher** | **Collected amount (g)** | |
| FD-I-47S | *Inga vera* Willd. (Guama) / Leguminosae | JBC 17149 | 100 | |
| FD-I-60T | [*Lygodium venustum*](http://www.tropicos.org/Name/26606127) Sw. (Bejuco de alambre) / Lygodiaceae | COL 538416 | 100 | |
| FD-I-33C | *Maclura tinctoria* L. (Palo de Mora) / Moraceae | JBC 12013 | 107 | |
| FD-I-34H | *Mammea americana* L. (Mamey) / Calophyllaceae | JBC 467 | 102 | |
| FD-I-34S | 100 | |
| FD-I-17H | *Momordica charantia* L*.* (Balsamina) / Cucurbitaceae | JBC 793 | 100 |
| FD-I-17S | 110 | |
| FD-I-18H | *Muntingia calabura* L.(Niguito) / Elaeocarpaceae | JBC 12014 | 100 | |
| FD-I-30H | *Murraya paniculata* L. / Rutaceae | COL 538418 | 100 | |
| FD-I-21H | *Pedilanthus tithymaloides* L. *Poit.* (Pitamorreal) / Euphorbiaceae | JBC 1018 | 109 | |
| FD-I-22H | *Piper peltatum* L. (Santa María) / Piperaceae | JBC 1438 | 100 | |
| FD-I-23C | *Psidium guajava* L*.* (Guayaba) / Myrtaceae | JBC 12009 | 101 | |
| FD-I-36S | *Ricinus communis* L. (Higuerilla) / Euphorbiaceae | JBC 465 | 100 | |

\* C: stem bark; Fl: flowers; Fr: fruit; H: leaves; R: root; S: seed; T: stem.

**Table S1.** *Cont*.

|  |  |  |  |
| --- | --- | --- | --- |
| **LIFFUC\* Code** | ***Scientific Name (common name) / Family*** | **No. de Voucher** | **Collected amount (g)** |
| FD-I-54H | *Ruellia tuberosa* L. (Campana) / Acanthaceae | JBC 3932 | 101 |
| FD-I-31H | *Sarcostemma clausum Jacq*. (Bejuco de sapo) / Asclepiadaceae | JBC 2502 | 100 |
| FD-I-55S | *Simarouba amara* Aubl. (Aceituno, olivo) / Simaroubaceae | JBC 467 | 104 |
| FD-I-61S | *Sterculia apetala* Jacq. H. Karst (Camajuro) / Sterculiaceae | COL 538417 | 100 |
| FD-I-25H | *Tabebuia ochracea* L*.* (Polvillo) / Bignoniaceae | JBC 5153 | 100 |
| FD-I-26C | *Tabernaemontana cymosa.* (Bola de Puerco) /Apocynanceae | JBC 3243 | 105 |
| FD-I-26H | 100 |
| FD-I-26S | 100 |
| FD-I-26F | 100 |
| FD-I-32F | Thevetia peruviana Pers. (Cavalonga) / Apocynanceae | JBC 66 | 100 |
| FD-I-38C | *Trichilia hirta* L. (Jobo macho) / Meliaceae | JBC 4330 | 100 |
| FD-I-38S | 117 |

\* C: stem bark; Fl: flowers; Fr: fruit; H: leaves; R: root; S: seed; T: stem.

**Table S2.** Larvicidal activity of ethanol soluble extracts (200 ppm) against III and IV instar *Aedes aegypti* larvae*.*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SPECIES**  **(Scientific name / common name)** | **PLANT ORGAN** | **% OF LARVAE MORTALITY\*** | | | | | | |
| **1 HOUR** | **6 HOURS** | **12 HOURS** | **24 HOURS** | **36 HOURS** | **48 HOURS** | **ACTIVITY** |
| *Mammea americana* / Mamey | Seeds | 43.3 | 70 | 83.3 | 93.3 | 96.7 | 100 | HIGH |
| *Tabernaemontana cymosa* /Bola de puerco | Seeds | 10 | 50 | 85 | 100 | 100 | 100 | HIGH |
| *Carica papaya* / Papaya | Seeds | 0 | 10 | 55 | 85 | 93 | 100 | HIGH |
| *Annona squamosa* / Anón | Seeds | 0 | 0 | 60 | 100 | 100 | 100 | HIGH |
| *Annona muricata* / Guanábana | Seeds | 0 | 0 | 46 | 80 | 100 | 100 | HIGH |
| *Annona cherimolia* / Chirimoya | Seeds | 0 | 0 | 36 | 90 | 100 | 100 | HIGH |
| *Momordica charantia* /Balsamina | Seeds | 0 | 0 | 5 | 11 | 39 | 87 | HIGH |
| *Trichilia hirta* /jobo macho | Seeds | 0 | 0 | 0 | 10 | 35 | 85 | HIGH |
| *Cassia fistula* /Cañafístula | Leaves | 0 | 0 | 2 | 9 | 25 | 83 | HIGH |
| *Crotón malambo* / malambo | Stem bark | 0 | 0 | 12 | 25 | 54 | 82 | HIGH |
| *Cymbopogon citratus* / Hierba limón | Leaves | 0 | 0 | 3 | 15 | 44 | 81 | HIGH |
| *Hyptis capitata* /Botón negro | Leaves | 0 | 0 | 2 | 13 | 64 | 81 | HIGH |

\* The percentage of larval mortality is an average of three experimental replicates under the same conditions. The extracts are organized in decreasing order of larvicidal activity at 48h.

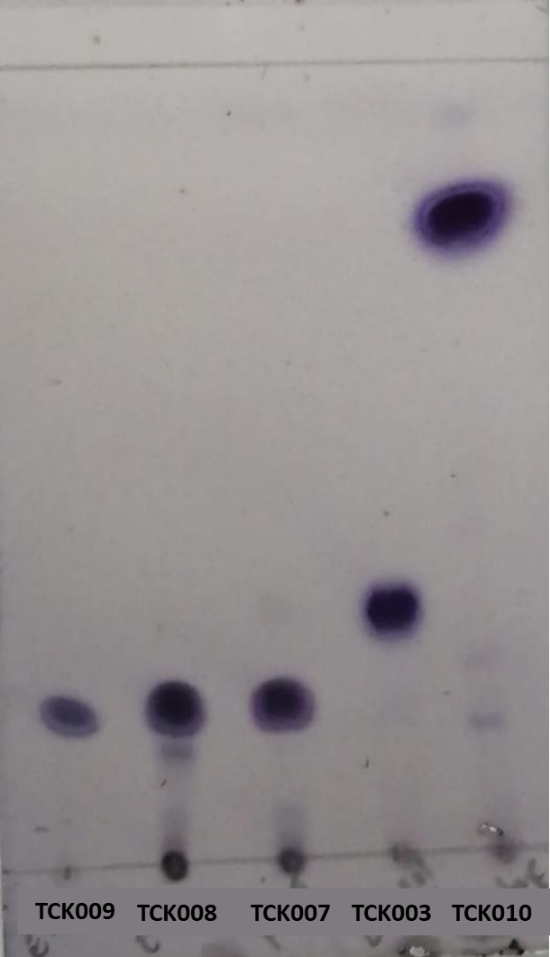
**Table S2.** *Cont.*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SPECIES**  **(Scientific name / common name)** | **PLANT ORGAN** | **% OF LARVAE MORTALITY\*** | | | | | | |
| **1 HOUR** | **6 HOURS** | **12 HOURS** | **24 HOURS** | **36 HOURS** | **48 HOURS** | **ACTIVITY** |
| *Piper peltatum* /Santa maría | Seeds | 0 | 0 | 0 | 5 | 36 | 83 | HIGH |
| *Tagetes erecta* / Flor de Muerto | Flowers | 0 | 0 | 0 | 11 | 45 | 82 | HIGH |
| *Heliotropium indicum* /Rabo de alacrán | Leaves | 0 | 0 | 0 | 13 | 35 | 81 | HIGH |
| *Phoradendron quadrangulare/*caga de pajarito | Leaves | 0 | 0 | 2 | 14 | 33 | 83 | HIGH |
| *Sarcostemma clausum* / Bejuco sapo | Leaves | 0 | 0 | 0 | 17 | 30 | 35 | LOW |
| *Cavanillesia platanifolia* / Macondo | Seeds | 0 | 0 | 0 | 18 | 23 | 28 | LOW |
| *Chenopodium ambrosioides* / Hierba Santa | Leaves | 0 | 0 | 0 | 5 | 10 | 20 | LOW |
| *Hippomane mancinella* / Manzanillo | Leaves | 0 | 0 | 0 | 12 | 17 | 17 | LOW |
| *Ambrosia cumanensis* / Artemisa | Leaves | 0 | 0 | 0 | 10 | 17 | 17 | LOW |
| *Bursera graveolens* / Caraña | Stem bark | 0 | 0 | 0 | 0 | 5 | 17 | LOW |
| *Thevetia peruviana* / Cabalonga | Flowers | 0 | 0 | 0 | 3 | 10 | 13 | LOW |
| *Hippomane mancinella* / Manzanillo | Seeds | 0 | 0 | 0 | 10 | 13 | 13 | LOW |
| *Ruellia tuberosa* / Campana | Leaves | 0 | 0 | 3 | 5 | 7 | 12 | LOW |
| *Hura crepitans* / Ceiba blanca | Stem bark | 0 | 0 | 0 | 7 | 10 | 10 | LOW |

\* The percentage of larval mortality is an average of three experimental replicates under the same conditions. The extracts are arranged in the table in decreasing order of larvicidal activity at 48h. **Table S3.** Evaluation of the Ichthyotoxic activity against *Poecillia reticulata* fish of plant extracts at 200 ppm.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **SPECIES**  **(Scientific name / common name)** | **PLANT ORGAN** |  | **% OF MORTALITY** | | | | | |
| **0.5\*** | | **1** | **6** | **12** | **24** | **30** | |
| *Mammea americana* /Mamey | Seeds | 100 | | 100 | 100 | 100 | 100 | 100 | |
| *Cassia fistula* /Cañafistula | Leaves | 100 | | 100 | 100 | 100 | 100 | 100 | |
| *Croton malambo* / malambo | Stem bark | 60 | | 100 | 100 | 100 | 100 | 100 | |
| *Momordica charantia* /Balsamina | Seeds | 40 | | 100 | 100 | 100 | 100 | 100 | |
| *Trichilia hirta* / jobo macho | Seeds | 20 | | 80 | 100 | 100 | 100 | 100 | |
| *Tabernaemontana cymosa* /Bola de puerco | Seeds | 0 | | 100 | 100 | 100 | 100 | 100 | |
| *Annona cherimolia* /Chirimoya | Seeds | 0 | | 0 | 100 | 100 | 100 | 100 | |
| *Annona muricata* / Guanabana | Seeds | 0 | | 0 | 100 | 100 | 100 | 100 | |
| *Annona squamosa* / Anón | Seeds | 0 | | 0 | 100 | 100 | 100 | 100 | |
| *Carica papaya* /Papaya | Seeds | 0 | | 0 | 30 | 50 | 80 | 100 | |
| *Piper peltatum* /Santa maria | Seeds | 0 | | 0 | 0 | 20 | 40 | 100 | |
| Control (DMSO 0.05 ppm) |  | 0 | | 0 | 0 | 0 | 0 | 0 | |

The extracts are arranged in the table in decreasing order of Ichthyotoxic activity at 48h. \*The time of exposure is expressed in hours.

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**Figure S1.** Comparative Thin layer chromatographic (TLC) of isolated terpenoids and sterols from *T. cymosa.* Chemical identification using Vanillin-Sulfuric acid (H2SO4) reagent.



**Figure S2.** 1H NMR spectra of 6-Enyl-6-Formyl-Voacangine



**Figure S3.** 1H-1H COSY spectra of 6-Enyl-6-Formyl-Voacangine.



**Figure S4.** 13C NMR spectra of 6-Enyl-6-Formyl-Voacangine.



**Figure S5.** DEPT spectra of 6-Enyl-6-Formyl-Voacangine.



**Figure S6.** HSQC spectra of 6-Enyl-6-Formyl-Voacangine.



**Figure S7.** HMBC spectra of 6-Enyl-6-Formyl-Voacangine.