

Table S1. Terpene and flavonoid concentrations in ethyl acetate extracts of *S. semiatrata* collected from 10 sites in Oaxaca. Abbreviations: n.i.-non- identified.

| Location | Terpenoids                      |              |           |           |              |              |           | Flavonoids   |              |             |
|----------|---------------------------------|--------------|-----------|-----------|--------------|--------------|-----------|--------------|--------------|-------------|
|          | (µg compound/mg extract ± S.D.) |              |           |           |              |              |           | Quercetin    | Catechin     | Naringenin  |
|          | Oleanolic Acid                  | Stigmasterol | 7-Keto    | α-amyrin  | Ursolic Acid | β-sitosterol | Carnosol  |              |              |             |
| APO      | 79.60±0.33                      | 3.80±0.02    | 6.16±0.86 | 2.94±0.90 | 0.33±0.05    | 0.35±0.12    | 0.57±0.18 | 30.92 ± 1.48 | 10.19 ± 0.63 | 0.48 ± 0.22 |
| TIL      | 84.84±2.63                      | 3.14±0.15    | 5.77±0.09 | 2.11±0.37 | 2.48±0.21    | 1.24± 0.20   | 0.21±0.00 | 32.26±1.23   | 10.09±0.74   | 0.24± 0.11  |
| AMA      | 80.76±1.73                      | 10.46±1.82   | 6.22±0.07 | 6.02±0.17 | 0.56±0.02    | 1.14±0.21    | 0.28±0.07 | 34.81± 0.53  | 10.41± 0.13  | 0.30±0.00   |
| MIA      | 61.47±5.72                      | 74.26±3.12   | 6.33±0.35 | 7.19±0.53 | 5.10±0.72    | 0.20±0.01    | 0.11±0.07 | 29.04±0.58   | 10.02± 0.08  | 0.23± 0.00  |
| YOD      | 70.32±3.08                      | 1.27±0.30    | 6.91±0.07 | 8.00±0.70 | n.i.         | 1.16±0.13    | 0.18±0.01 | 22.35±0.31   | 10.98±0.40   | 0.27±0.01   |
| ALB      | 66.74±0.40                      | 4.52±0.90    | 8.01±0.08 | n.i.      | 1.75±0.29    | 0.50±0.04    | 0.05±0.20 | 1.23±0.32    | 11.30±0.78   | 0.19± 0.00  |
| NOX      | 59.20±1.80                      | n.i.         | 7.54±0.32 | 6.88±1.13 | 3.95±0.80    | 1.49±0.06    | 0.48±0.07 | 28.31±2.80   | 9.30± 0.99   | 0.23±0.00   |
| HUA      | 89.60±11.21                     | n.i.         | 7.62±0.02 | n.i.      | n.i.         | 1.20±0.30    | 0.36±0.19 | 16.28±2.86   | 11.02±1.01   | 0.23± 0.00  |
| SOS      | 66.62±0.80                      | 14.81±0.35   | 7.47±0.56 | n.i.      | 1.95±0.32    | 1.78±0.89    | 0.14±0.01 | 0.35±0.0     | 10.21±0.44   | 0.25±0.00   |
| OZO      | 63.32±5.70                      | 9.04±0.65    | 4.76±0.45 | n.i.      | 0.91±0.07    | 2.29± 0.48   | 0.02±0.00 | 1.90±0.08    | 9.52±0.71    |             |

Table S2. Pearson correlation matrix between flavonoid and terpene concentrations in ethyl acetate extract of *S. semiatrata*.

| Variable(1) | Variable(2)    | Pearson | p-value       |
|-------------|----------------|---------|---------------|
| Quercetin   | Catechin       | -0.36   | 0.0651        |
| Quercetin   | Naringenin     | 0.42    | <b>0.0276</b> |
| Quercetin   | 7-keto         | -0.39   | <b>0.0463</b> |
| Quercetin   | Ursolic Acid   | -0.35   | 0.0769        |
| Quercetin   | Oleanolic acid | 0.35    | 0.0712        |
| Quercetin   | α-amyrin       | 0.07    | 0.7322        |

|              |                     |       |               |
|--------------|---------------------|-------|---------------|
| Quercetin    | $\beta$ -sitosterol | 0.25  | 0.2023        |
| Quercetin    | Carnosol            | 0.50  | <b>0.0073</b> |
| Quercetin    | Stigmasterol        | -0.55 | <b>0.0031</b> |
|              |                     |       |               |
| Catechin     | Naringenin          | -0.12 | 0.5372        |
| Catechin     | 7-keto              | 0.14  | 0.4737        |
| Catechin     | Ursolic Acid        | -0.38 | 0.0478        |
| Catechin     | Oleanolic acid      | 0.17  | 0.3856        |
| Catechin     | $\alpha$ -amyrin    | -0.22 | 0.2741        |
| Catechin     | $\beta$ -Sitosterol | -0.18 | 0.3817        |
| Catechin     | Carnosol            | -0.44 | <b>0.0208</b> |
| Catechin     | Stigmasterol        | -0.10 | 0.6296        |
|              |                     |       |               |
| Naringenin   | 7-keto              | -0.51 | <b>0.0069</b> |
| Naringenin   | Ursolic Acid        | -0.36 | 0.0628        |
| Naringenin   | Oleanolic acid      | 0.28  | 0.1635        |
| Naringenin   | $\alpha$ -amyrin    | 0.13  | 0.5041        |
| Naringenin   | $\beta$ -Sitosterol | -0.20 | 0.3225        |
| Naringenin   | Carnosol            | 0.60  | 0.0009        |
| Naringenin   | Stigmasterol        | -0.09 | 0.6474        |
|              |                     |       |               |
| 7-keto       | Ursolic Acid        | -0.05 | 0.8043        |
| 7-keto       | Oleanolic acid      | -0.30 | 0.1311        |
| 7-keto       | $\alpha$ -amyrin    | -0.36 | 0.0643        |
| 7-keto       | $\beta$ -Sitosterol | 0.26  | 0.1966        |
| 7-keto       | Carnosol            | -0.18 | 0.3640        |
| 7-keto       | Stigmasterol        | -0.26 | 0.1957        |
|              |                     |       |               |
| Ursolic Acid | Oleanolic acid      | -0.60 | <b>0.0010</b> |
| Ursolic Acid | $\alpha$ -amyrin    | 0.28  | 0.1577        |

|                     |                     |       |               |
|---------------------|---------------------|-------|---------------|
| Ursolic Acid        | $\beta$ -Sitosterol | 0.02  | 0.9356        |
| Ursolic Acid        | Carnosol            | -0.19 | 0.3408        |
| Ursolic Acid        | Stigmasterol        | 0.65  | <b>0.0002</b> |
|                     |                     |       |               |
| Oleanolic acid      | $\alpha$ -amyrin    | -0.36 | 0.0644        |
| Oleanolic acid      | $\beta$ -Sitosterol | -0.20 | 0.3165        |
| Oleanolic acid      | Carnosol            | 0.26  | 0.1862        |
| Oleanolic acid      | Stigmasterol        | -0.40 | <b>0.0379</b> |
|                     |                     |       |               |
| $\alpha$ -amyrin    | $\beta$ -Sitosterol | -0.40 | <b>0.0405</b> |
| $\alpha$ -amyrin    | Carnosol            | 0.13  | 0.5171        |
| $\alpha$ -amyrin    | Stigmasterol        | 0.33  | 0.0960        |
| $\beta$ -Sitosterol | Carnosol            | -0.22 | 0.2683        |
| $\beta$ -Sitosterol | Stigmasterol        | -0.01 | 0.9525        |
| Carnosol            | Stigmasterol        | -0.35 | 0.0703        |