**Supplementary files**

**Table S1.** Primer sequences for RT-PCR. All primers were designed using PrimerPlus3 (Cambridge, MA, USA) and BLASted in NCBI Nucleotide database (Bethesda, MD, USA)

| Gene | Forward 5'→ 3' | Reverse 5'→3' |
|---|---|---|
| *Actb* | TGTCACCAACTGGGACGATA | GGGGTGTTGAAGGTCTCAAA |
| *Sod1* | CGGATGAAGAGAGGCATGTT | CACCTTTGCCCAAGTCATCT |
| *Sod2* | CCGAGGAGAAGTACCACGAG | GCTTGATAGCCTCCAGCAAC |
| *Cat* | CACCTGAAGGACCCTGACAT | CCATTCGCATTAACCAGCTT |
| *Nrf2* | GTCAGCTACTCCCAGGTTGC | ATCAGGGGTGGTGAAGACTG |
| *Hmox-1* | GAAGAAGATTGCGCAGAAGG | GAAGGCGGTCTTAGCCTCTT |
| *Gclc* | CACTGAGCTGGGAAGAGACC | GCCGCCATTCAGTAACAACT |
| *Gadd45* | TCTGTTGCGAGAACGACATC | TCCCGGCAAAAACAAATAAG |
| *Nqo1* | CCAATCAGCGCTTGACACTA | ACCACCTCCCATCCTTTCTT |

**Table S2.** Compounds identified in *O. robusta* extract in positive ion mode

| Compound | Formula | Adduct | *m/z* | Retention time (min) |
|---|---|---|---|---|
| **Lactones** | | | | |
| D-glucaro-1,5-lactone | $C_6H_8O_7$ | $M+NH_4$ | 210.0584 | 5.636 |
| **Benzene and derivatives** | | | | |
| Phenylethyl alcohol | $C_8H_{10}O$ | M+H | 123.0808 | 17.928 |
| Methyl phenylacetate | $C_9H_{10}O_2$ | M+H | 151.0741 | 0.429 |
| **Hydroxy acids and derivatives** | | | | |
| (Â±)-Malic Acid | $C_4H_6O_5$ | $M+NH_4$ | 152.0549 | 0.3005 |

**Table S3.** Compounds identified in *O. robusta* extract in negative ion mode

| Compound | Formula | Adduct | *m/z* | Retention time (min) |
|---|---|---|---|---|
| **Organooxygen compounds** | | | | |
| Glucose-1,3-mannose oligosaccharide | $C_{12}H_{22}O_{11}$ | M+Cl | 377.0885 | 0.919 |
| Sucrose | $C_{12}H_{22}O_{11}$ | M-H | 341.1121 | 0.997 |
| Fagopyritol B3 | $C_{24}H_{42}O_{21}$ | M-H | 665.2215 | 0.997 |

| | | | | |
|---|---|---|---|---|
| Amylopectin | $C_{30}H_{52}O_{26}$ | M-H | 827.275 | 1.228 |
| Maltohexaose | $C_{36}H_{62}O_{31}$ | M-H | 989.3259 | 1.306 |
| Maltoheptaose | $C_{42}H_{72}O_{36}$ | M-H | 1151.377 | 1.357 |
| beta-D-Xylopyranosyl-(1->5)-alpha-L-arabinofuranosyl-(1->5)-L-arabinose | $C_{15}H_{26}O_{13}$ | 3M-H | 1241.398 | 1.357 |
| Maltooctaose | $C_{48}H_{82}O_{41}$ | M-H | 1313.422 | 1.408 |
| Maltononaose | $C_{54}H_{92}O_{46}$ | M-H | 1475.48 | 1.486 |
| **Coumarins and derivatives** | | | | |
| 9-Hydroxy-4-methoxypsoralen 9-glucoside | $C_{18}H_{18}O_{10}$ | M+FA-H | 439.0885 | 0.919 |
| **Imidazopyrimidines** | | | | |
| Cis-zeatin | $C_{10}H_{13}N_5O$ | M-H | 218.1082 | 6.125 |
| Gibberellin A94 | $C_{19}H_{22}O_6$ | M-$H_2O$-H | 327.1286 | 14.605 |