Supplementary Materials:

Text S1. Parameters for xcms processing

xSet function: method="centWave"; prefilter=c(5,5000), ppm=5, snthresh=10, peakwidth=c(5,30), noise=1000000.

Group function: bw=5, minfrac=0.001, mzwid=0.015.

Figure S1. PCA plots with QC samples included. A) negative ionization mode. B) positive ionization mode.
Table S1. Twenty most abundant metabolites by peak area in positive ionization mode, produced by virulent strains of *Ilyonectria*. (Significantly different from avirulent strains by a Kruskal-Wallis test with Benjamini-Hochberg p value correction, p < 0.05).

| m/z [M+H]+ | Rt (min) | Formula  | p-value |
|------------|----------|----------|---------|
| 205.1951   | 4.43     | C_{15}H_{24} | 0.002   |
| 205.1951   | 3.55     | C_{15}H_{24} | 0.011   |
| 221.1899   | 4.47     | C_{15}H_{24}O | 0.003   |
| 233.0807   | 2.77     | C_{13}H_{24}O_{4} | 0.002   |
| 235.0964   | 2.68     | C_{13}H_{24}O_{4} | 0.005   |
| 253.1796   | 4.38     | C_{18}H_{24}O_{3} | 0.002   |
| 333.133    | 3.17     | C_{18}H_{24}O_{6} | 0.002   |
| 349.0834   | 2.99     | C_{18}H_{24}ClO_{5} | 0.002   |
| 351.0992   | 3.67     | C_{18}H_{24}ClO_{5} | 0.002   |
| 365.0785   | 3.19     | C_{18}H_{24}ClO_{6} | 0.002   |
| 365.0786   | 2.65     | C_{18}H_{24}ClO_{6} | 0.002   |
| 367.0937   | 3.32     | C_{18}H_{24}ClO_{6} | 0.002   |
| 383.089    | 2.92     | C_{18}H_{24}ClO_{7} | 0.002   |
| 383.0891   | 2.57     | C_{18}H_{24}ClO_{7} | 0.002   |
| 388.2115   | 3.02     | C_{22}H_{29}NO_{5} | 0.011   |
| 406.105    | 3.19     | C_{20}H_{21}NClO_{6} | 0.002   |
| 496.3631   | 3.74     | C_{24}H_{48}N_{2}O_{4} | 0.031   |
| 498.3787   | 3.93     | C_{24}H_{48}N_{2}O_{4} | 0.049   |
| 500.3943   | 4.17     | C_{24}H_{48}N_{2}O_{4} | 0.031   |
| 518.3241   | 3.62     | C_{20}H_{30}N_{2}O_{2} | 0.002   |
Table S2. Twenty most abundant metabolites by peak area in negative ionization mode, produced by virulent strains of *Ilyonectria*. (Significantly different from avirulent strains by a Kruskal-Wallis test with Benjamini-Hochberg p value correction, p < 0.05).

| m/z [M-H] | Rt (min) | Formula       | p-value |
|-----------|----------|---------------|---------|
| 201.1124  | 2.45     | C_{10}H_{18}O_{4} | 0.001   |
| 259.0610  | 3.07     | C_{14}H_{12}O_{5} | 0.002   |
| 275.0561  | 2.94     | C_{20}H_{31}NO_{8} | 0.002   |
| 275.1864  | 2.72     | C_{14}H_{28}O_{5} | 0.024   |
| 349.0847  | 3.67     | C_{18}H_{19}ClO_{5} | 0.001   |
| 363.0641  | 3.19     | C_{18}H_{20}ClO_{6} | 0.001   |
| 363.0641  | 3.65     | C_{18}H_{21}ClO_{6} | 0.001   |
| 365.0795  | 2.99     | C_{18}H_{20}ClO_{6} | 0.001   |
| 367.0951  | 3.34     | C_{18}H_{21}ClO_{6} | 0.001   |
| 379.0588  | 3.18     | C_{18}H_{21}ClO_{7} | 0.001   |
| 379.0590  | 2.95     | C_{18}H_{21}ClO_{7} | 0.001   |
| 381.0746  | 2.74     | C_{18}H_{21}ClO_{7} | 0.001   |
| 383.0899  | 2.87     | C_{18}H_{21}ClO_{7} | 0.001   |
| 383.0903  | 3.21     | C_{18}H_{21}ClO_{7} | 0.001   |
| 393.1111  | 4.08     | C_{20}H_{22}ClO_{6} | 0.001   |
| 397.0694  | 2.74     | C_{18}H_{21}ClO_{6} | 0.001   |
| 399.0851  | 2.65     | C_{18}H_{21}ClO_{6} | 0.001   |
| 526.0942  | 2.88     | C_{23}H_{31}NSClO_{9} | 0.001   |
| 540.3541  | 3.74     | C_{20}H_{31}NO_{8} | 0.024   |
| 542.3698  | 3.93     | C_{20}H_{31}NO_{8} | 0.030   |