

1 **SUPPLEMENTAL DATA FILE**

2

3 **Oxygen radical-generating metabolites secreted by eutypa and Esca fungal**  
4 **consortia**

5

6 **Gabriel Perez-Gonzalez<sup>1</sup>, Dana Sebestyen<sup>1</sup>, Elsa Petit<sup>2</sup>, Jody Jellison<sup>3</sup> Laura Mugnai<sup>4</sup>, Eric Gelhaye<sup>5</sup>,**  
7 **Norman Lee<sup>6</sup>, Sibylle Farine<sup>7</sup>, Christophe Bertsch<sup>7</sup>, Barry Goodell<sup>1\*</sup>**

8

9 <sup>1</sup>Department of Microbiology, University of Massachusetts, Amherst, MA 01003, U.S.A

10 <sup>2</sup> Stockbridge School of Agriculture, University of Massachusetts, Amherst, MA 01003, U.S.A

11 <sup>3</sup> Center for Agriculture, Food and the Environment, University of Massachusetts, Amherst, MA 01003  
12 U.S.A.

13 <sup>4</sup>Department of Agricultural, Food, Environmental and Forestry Science and Technology, University of  
14 Florence, Firenze 50144, Italy

15 <sup>5</sup>Université de Lorraine, INRAE, Interactions Arbres-Microorganismes, F-54000 Nancy, France

16 <sup>6</sup>Chemical Instrumentation Center (CIC), Boston University, Boston, MA 02215, U.S.A

17 <sup>7</sup>Laboratoire Vigne Biotechnologies et Environnement EA-3991. Université de Haute-Alsace, Colmar  
18 68008, France

19

20 \*Corresponding author: Barry Goodell; Email: bgoodell@umass.edu

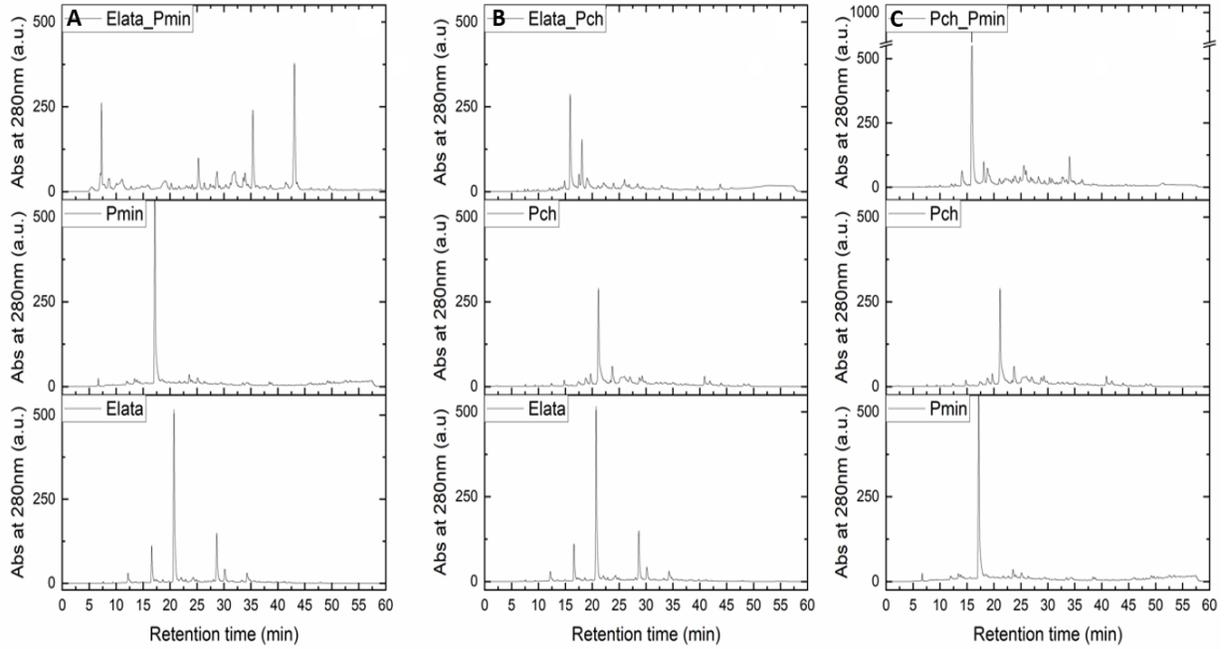
21

22

23 **Appendix A. Supplementary data**

24

25



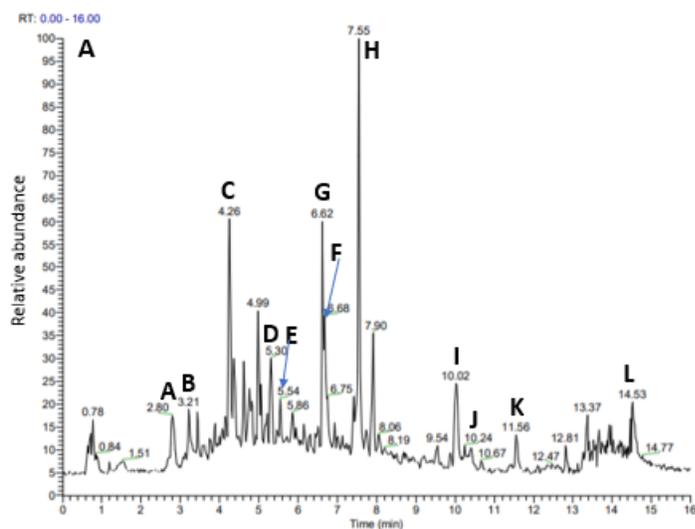
26

27 **Fig. S1** HPLC chromatograms of Elata\_Pmin (A), Elata\_Pch (B) and Pch\_Pmin (C) fungal  
 28 metabolites with their respective single culture chromatograms. All absorbance values for  
 29 metabolites were read at 280nm.

30

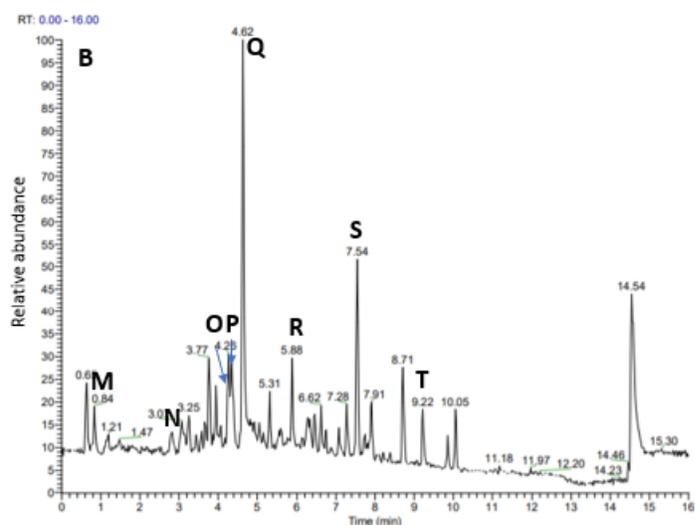
31

32



Compound	Formula
A Loganetin	C <sub>11</sub> H <sub>16</sub> O <sub>5</sub>
B Terrein <sup>a</sup>	C <sub>8</sub> H <sub>10</sub> O <sub>3</sub>
C Guaietolin	C <sub>11</sub> H <sub>16</sub> O <sub>4</sub>
D Polygonolide	C <sub>12</sub> H <sub>12</sub> O <sub>4</sub>
E Genipin	C <sub>11</sub> H <sub>14</sub> O <sub>5</sub>
F 3,4',5-Biphenyltriol	C <sub>12</sub> H <sub>10</sub> O <sub>3</sub>
G Acetamidrid	C <sub>10</sub> H <sub>11</sub> ClN <sub>4</sub>
H Pyochelin <sup>a</sup>	C <sub>14</sub> H <sub>16</sub> N <sub>2</sub> O <sub>3</sub> S <sub>2</sub>
I Biocytin	C <sub>16</sub> H <sub>28</sub> N <sub>4</sub> O <sub>4</sub> S
J Artemotil	C <sub>17</sub> H <sub>28</sub> O <sub>5</sub>
K Tretinoin	C <sub>20</sub> H <sub>28</sub> O <sub>2</sub>
L 2,2',3,4',5,5',6-Heptachloro-4-biphenylol	C <sub>12</sub> H <sub>3</sub> Cl <sub>7</sub> O

<sup>a</sup>Known iron reducer



Compound	Formula
M 2-Mercaptoethanol	C <sub>2</sub> H <sub>6</sub> OS
N Dimethyl (3-oxocyclohexyl)malonate	C <sub>11</sub> H <sub>16</sub> O <sub>5</sub>
O Guaietolin	C <sub>11</sub> H <sub>16</sub> O <sub>4</sub>
P Streptol	C <sub>7</sub> H <sub>12</sub> O <sub>5</sub>
Q 3,4-dihydroxybenzoic acid <sup>a</sup>	C <sub>7</sub> H <sub>6</sub> O <sub>4</sub>
R 4-oxo-5-phenylpentanoic acid	C <sub>11</sub> H <sub>12</sub> O <sub>3</sub>
S Pyochelin <sup>a</sup>	C <sub>14</sub> H <sub>16</sub> N <sub>2</sub> O <sub>3</sub> S <sub>2</sub>
T 2-(4-hydroxy-1,3-thiazol-2-yl)-1-phenylethan-1-one	C <sub>11</sub> H <sub>10</sub> NO <sub>2</sub> S

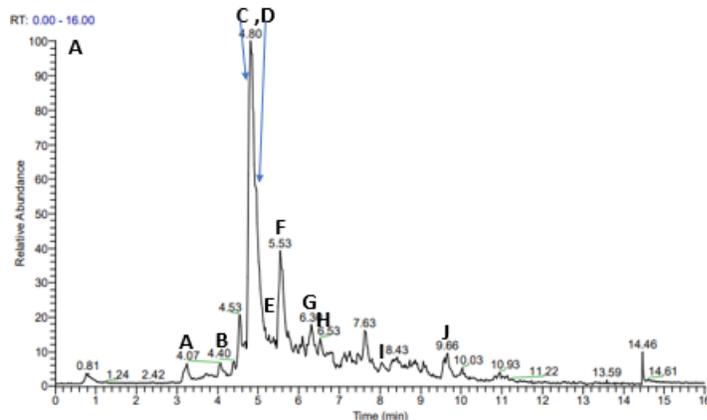
<sup>a</sup>Known iron reducer

33

34 **Fig. S2** Total Ion Current (TIC) chromatogram (left) and LMW phenolics produced (right) for  
 35 *Eutypa lata* metabolite extracts in negative (A) and positive (B) ionization mode. Peaks were  
 36 selected by largest area and peak height.

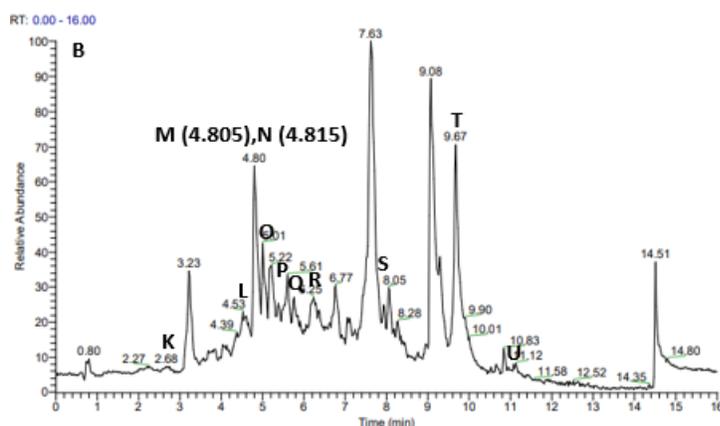
37

38



Compound	Formula
A Citrazinc acid	C <sub>6</sub> H <sub>5</sub> NO <sub>4</sub>
B 7-Hydroxy-4-methylcoumarin	C <sub>10</sub> H <sub>8</sub> O <sub>3</sub>
C Sinapic acid methyl ester <sup>a</sup>	C <sub>12</sub> H <sub>16</sub> O <sub>5</sub>
D Dihydroferulic acid <sup>a</sup>	C <sub>10</sub> H <sub>12</sub> O <sub>4</sub>
E 4-hydroxy-3-(3-methylbut-2-enyl)benzoic acid	C <sub>13</sub> H <sub>16</sub> O <sub>3</sub>
F Homovanillic acid	C <sub>9</sub> H <sub>10</sub> O <sub>4</sub>
G (2R)-7-hydroxy-8-(2-hydroxyethyl)-5-methoxy-2-methyl-2,3-dihydrochromen-4-one	C <sub>13</sub> H <sub>16</sub> O <sub>5</sub>
H 2-[2-[(Z)-pent-2-enyl]-3-[3,4,5-trihydroxy-6-(hydroxymethyl)oxan-2-yl]oxycyclopentyl]acetic acid	C <sub>18</sub> H <sub>30</sub> O <sub>8</sub>
I Estrone-3-(beta-D-glucuronide)	C <sub>14</sub> H <sub>16</sub> O <sub>8</sub>
J Testosterone sulfate	C <sub>19</sub> H <sub>28</sub> O <sub>5</sub> S

<sup>a</sup>Known iron reducer



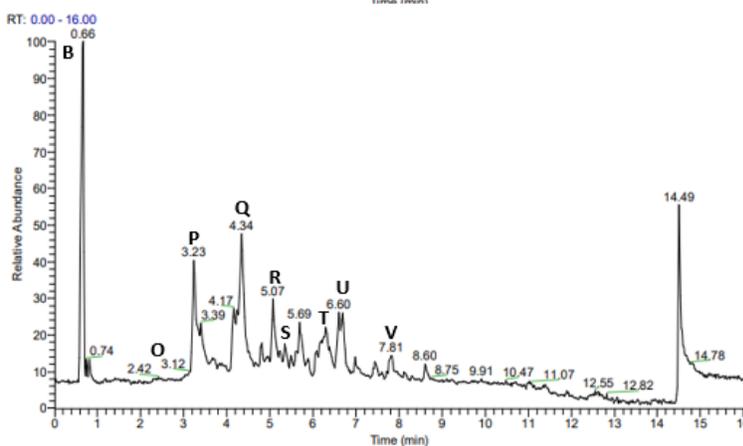
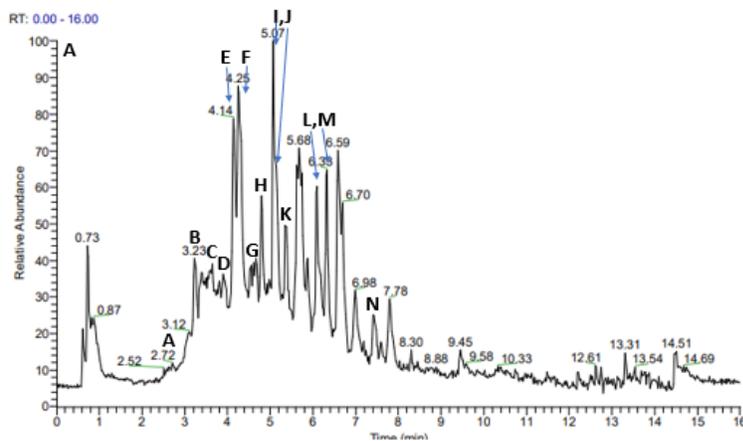
Compound	Formula
K Guvacoline	C <sub>7</sub> H <sub>11</sub> NO <sub>2</sub>
L L-(-)-Methionine	C <sub>5</sub> H <sub>11</sub> NO <sub>2</sub> S
M 3-Methoxybenzaldehyde	C <sub>8</sub> H <sub>8</sub> O <sub>2</sub>
N 1-[3-ethyl-2,4-dihydroxy-6-methoxyphenyl]butan-1-one	C <sub>13</sub> H <sub>18</sub> O <sub>4</sub>
O Jasmonic acid	C <sub>12</sub> H <sub>12</sub> O <sub>3</sub>
P Myristicin	C <sub>11</sub> H <sub>12</sub> O <sub>3</sub>
Q 2-Hydroxybenzothiazole	C <sub>7</sub> H <sub>6</sub> NOS
R Benzothiazole	C <sub>7</sub> H <sub>6</sub> N <sub>2</sub> S
S 1-Dodecanoyllysolecithin	C <sub>20</sub> H <sub>42</sub> NO <sub>2</sub> P
T Eucalyptol	C <sub>10</sub> H <sub>18</sub> O
U 2-[1-(2H-1,3-benzodioxol-5-yl)propan-2-yl]-6-methoxy-4-(prop-2-en-1-yl)phenol	C <sub>20</sub> H <sub>22</sub> O <sub>4</sub>

39

40 **Fig. S3** Total Ion Current (TIC) chromatogram (left) and LMW phenolics produced (right) for  
 41 *Phaeomonilla chlamydospora* metabolite extracts in negative (A) and positive (B) ionization  
 42 mode. Peaks were selected by largest area and peak height.

43

44



Compound	Formula	
A	D-pantothenic acid	$C_{12}H_{17}NO_5$
B	Citrazinc acid	$C_6H_5NO_4$
C	3-Coumaric acid	$C_9H_8O_3$
D	Lignicol	$C_{11}H_{12}O_6$
E	Phenylacetic acid	$C_8H_8O_2$
F	Caffeic acid*	$C_8H_6O_4$
G	Gallic acid*	$C_7H_6O_5$
H	Sinapic acid methyl ether*	$C_{12}H_{14}O_5$
I	Homogentisic acid*	$C_8H_8O_4$
J	(4S,5Z,6S)-4-(2-methoxy-2-oxoethyl)-5-[2-[(E)-3-phenylprop-2-en-1-yl]oxyethylidene]-6-[[2S,3R,4S,5S,6R]-3,4,5-trihydroxy-6-(hydroxymethyl)oxan-2-yl]oxy-4H-pyran-3-carboxylic acid	$C_{28}H_{30}O_{13}$
K	4-hydroxy-3-(3-methylbut-2-enyl)benzoic acid	$C_{12}H_{14}O_3$
L	2-Hydroxybenzothiazole	$C_7H_5NOS$
M	2-[2-[(Z)-pent-2-enyl]-3-[3,4,5-trihydroxy-6-(hydroxymethyl)oxan-2-yl]oxycyclopentyl]acetic acid	$C_{28}H_{30}O_8$
N	Nordentatin	$C_{19}H_{20}O_4$

\*Known iron reducer

Compound	Formula	
O	N-Methyl-2-pyrrolidone	$C_5H_9NO$
P	Sorbic acid	$C_6H_8O_2$
Q	Sinapinic acid*	$C_{11}H_{12}O_5$
R	4-Methoxycinnamic acid	$C_{10}H_{10}O_3$
S	Tropine	$C_8H_{15}NO$
T	Benzothiazole	$C_7H_5NS$
U	L-Iditol	$C_6H_{14}O_6$
V	1-Dodecanoyllysocithin	$C_{20}H_{42}NO_7P$

\*Known iron reducer

45

46 **Fig. S4** Total Ion Current (TIC) chromatogram (left) and LMW phenolics produced (right) for  
 47 *Phaeoacremonium minimum* metabolite extracts in negative (A) and positive (B) ionization  
 48 mode. Peaks were selected by largest area and peak height.

49