

FIG. S1 Map of Germany showing the locations of strawberry fields from which gray mold isolates were collected for this study. Region codes are: N1: Stader Geest; N2: Langförden/Vechta (both Northern Germany); M: Koblenz-Ahrweiler (Middle Germany); S: Breisgau region (Southern Germany).

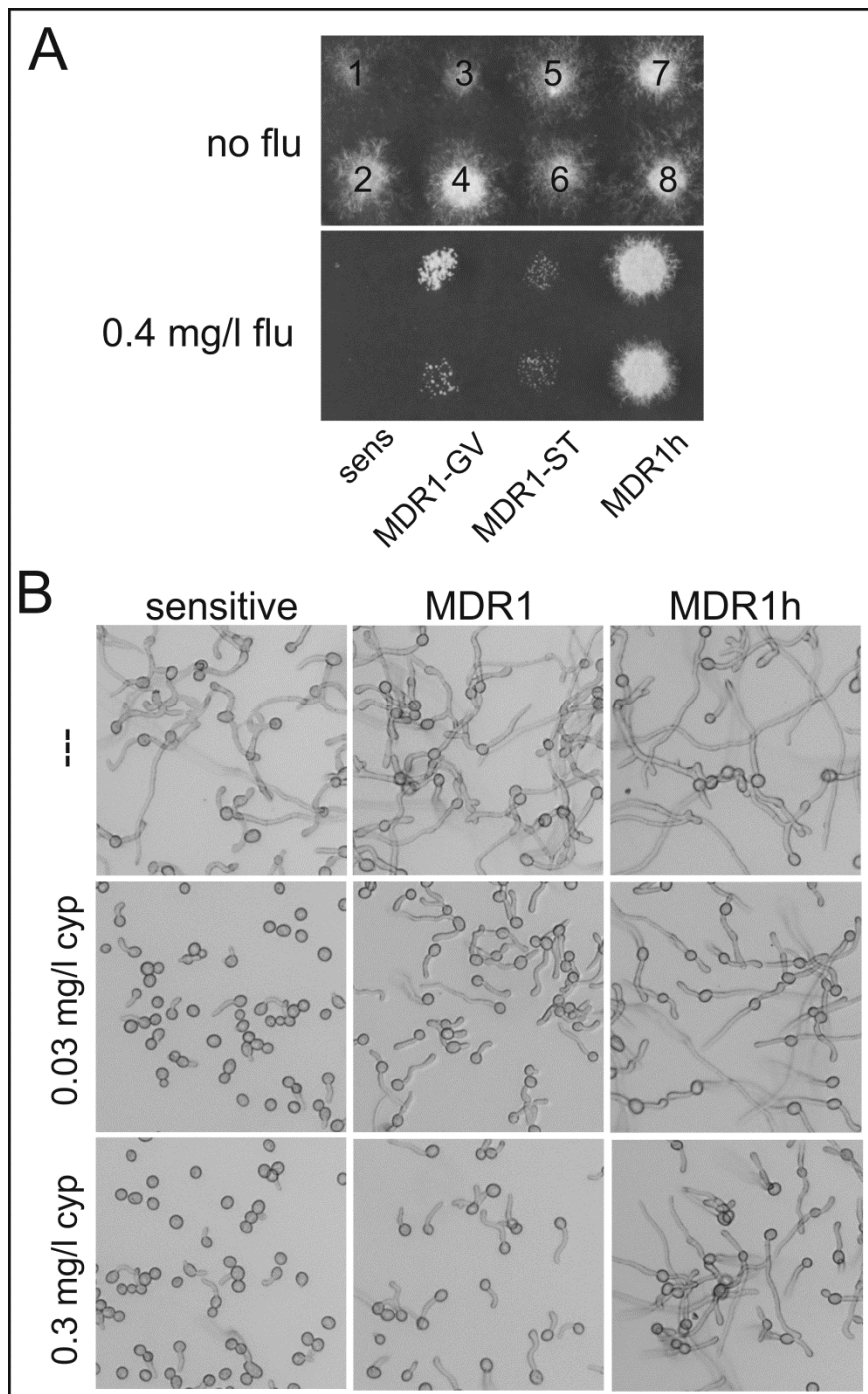
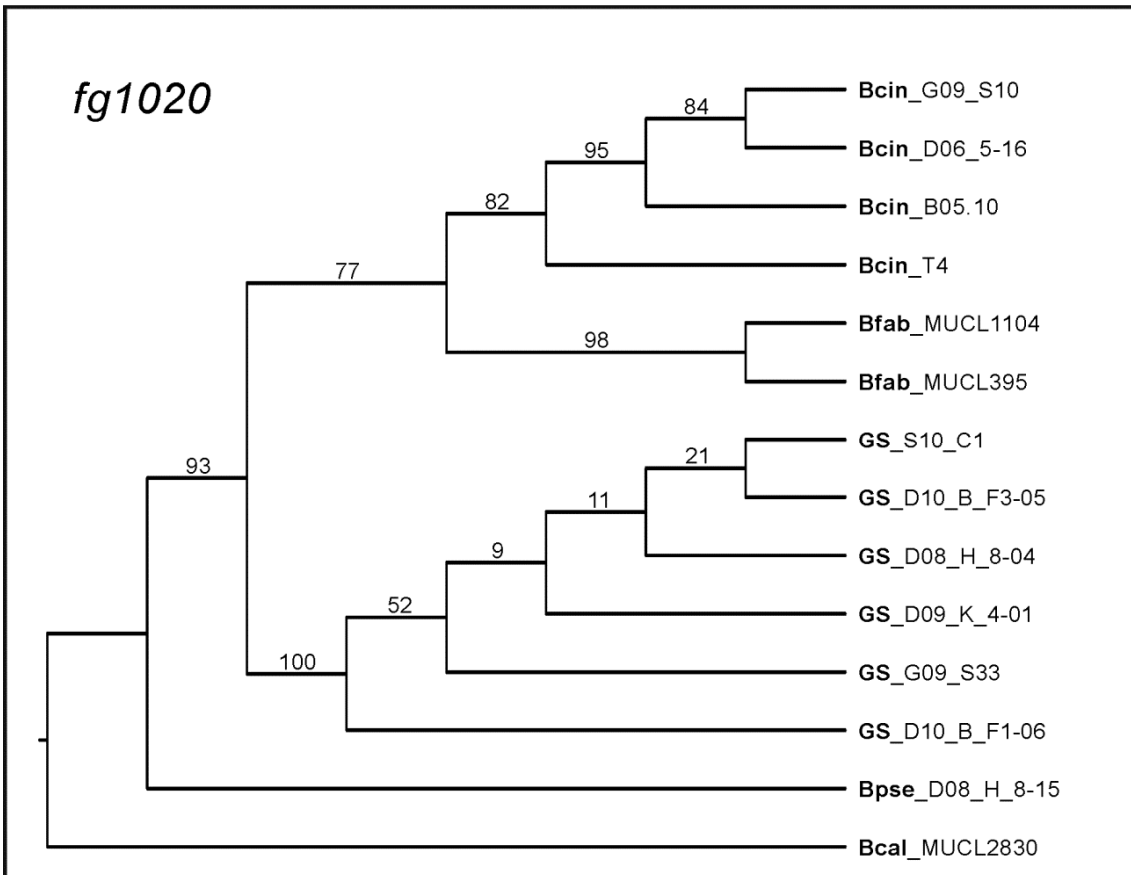
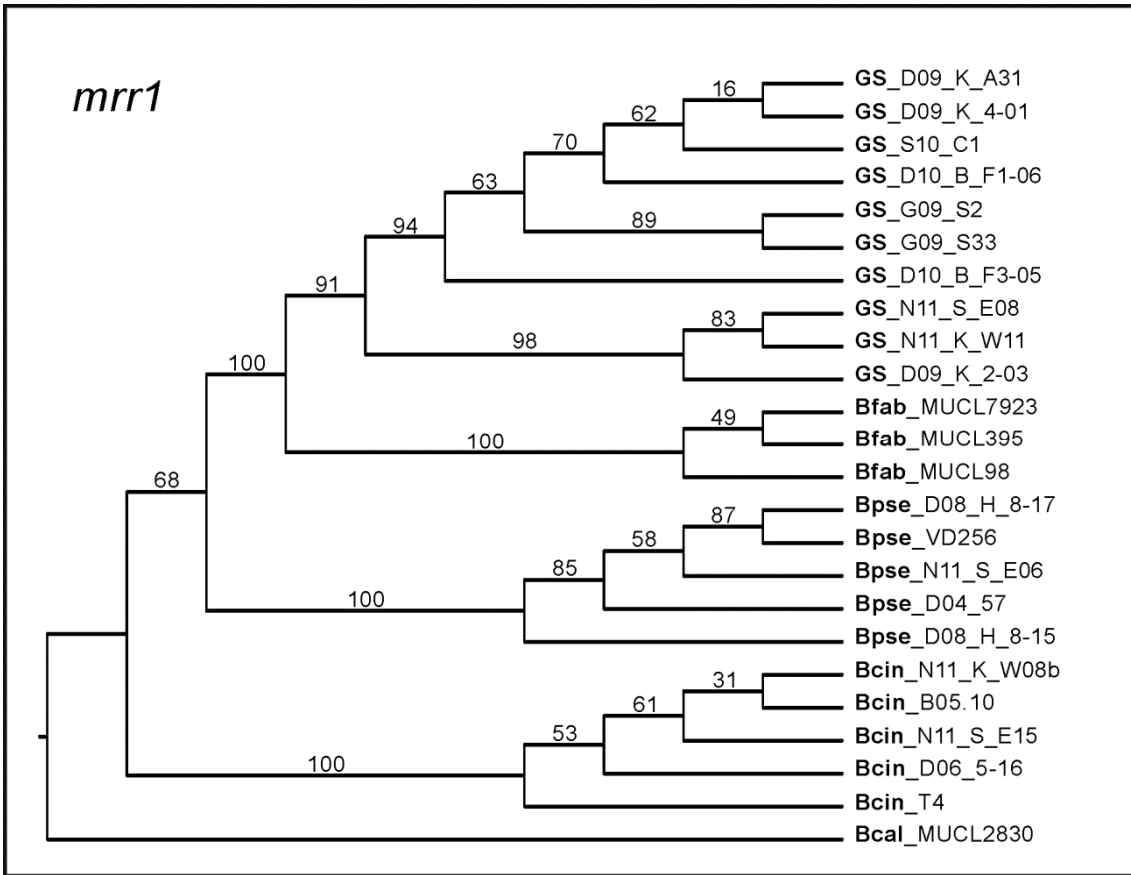


FIG. S2 Germination and growth inhibition of sensitive, MDR1 and MDR1h isolates by fludioxonil (flu) and cyprodinil (cyp). A. Growth of sensitive isolates (1, 2), isolates with MDR1 phenotype (3-4: from grapes [GV]; 5-6: from strawberries [ST]), and isolates with MDR1h phenotype (7-8) on HA agar plates (3 days). Strains and isolates were inoculated as 5 μ l suspensions containing 2×10^5 conidia ml^{-1} . 1: B0510; 2: D09_K-2-3; 3: D10_5-8; 4: D06_5-16; 5: D09_K_2-17; 6: D09_K_3-1; 7: D09_K_1-01; 8: D09_K_4-04.

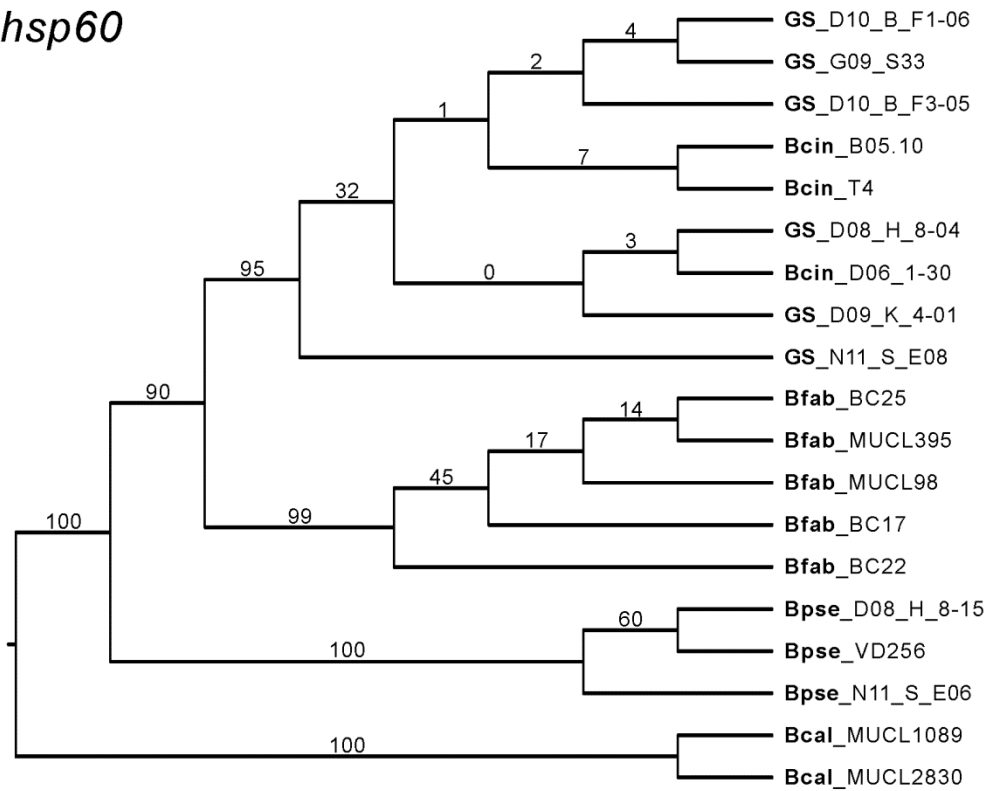
B. Germination of sensitive isolates in liquid Gamborg minimal medium containing no or 0.03 and 0.3 mg/l^{-1} cyprodinil, after 16 h. Sensitive isolate: D09_K-2-3; MDR1 isolate: D06_5-16; MDR1h isolate: D09_K_4-05.

<i>B. cinerea</i> (strain T4)	1483 ACC TAT CTC GCA GGT TCT GAT 495 T Y L A G S D
<i>Botrytis group S</i> (non-MDR1h)	ACC TAT GTC ACA TGT TCT GAT T Y V T C S D
<i>Botrytis group S</i> (MDR1h)	ACC TAT G-- -CA TGT TCT GAT T Y - A C S D

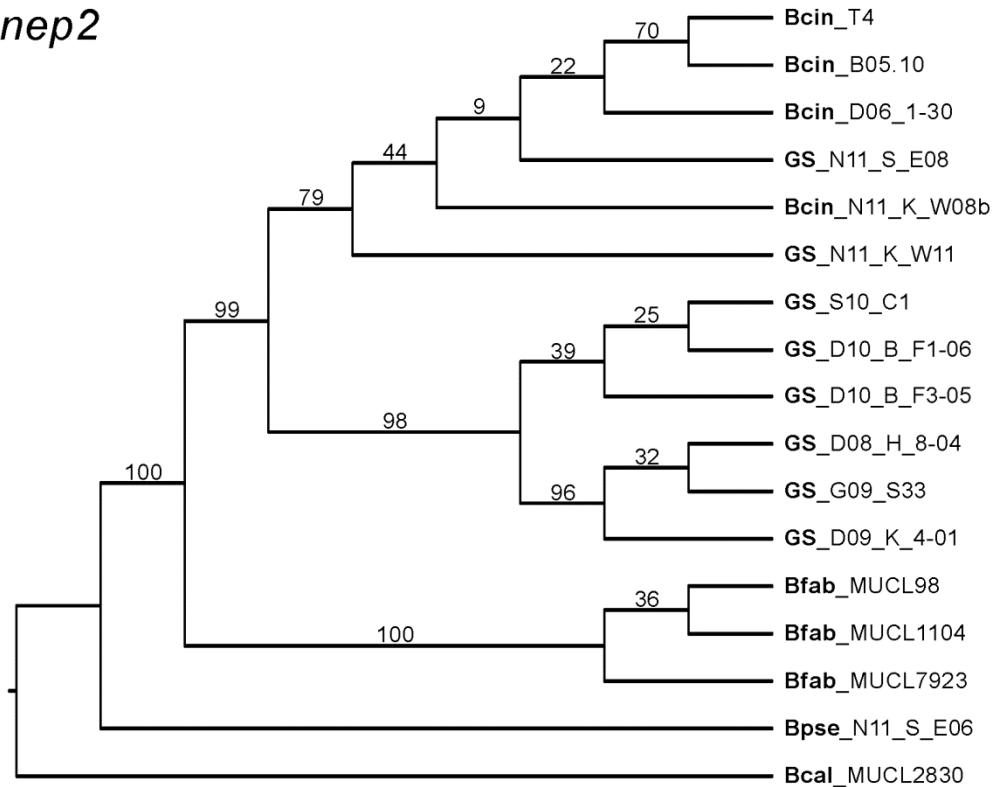
FIG. S4 Alignment of an *mrr1* region showing sequence polymorphisms between 15 *B. cinerea* isolates including strain T4, seven non-MDR1h group S isolates, and eight MDR1h group S isolates. *Botrytis* group S-specific nucleotides and amino acids are shown in blue, and the changes in MDR1h isolates indicated in red. The MDR1h-related triplet deletion is Δ L497 (compared to sensitive *B. cinerea* strain T4), or Δ L497, T498A (compared to sensitive *Botrytis* group S strains).



hsp60



nep2



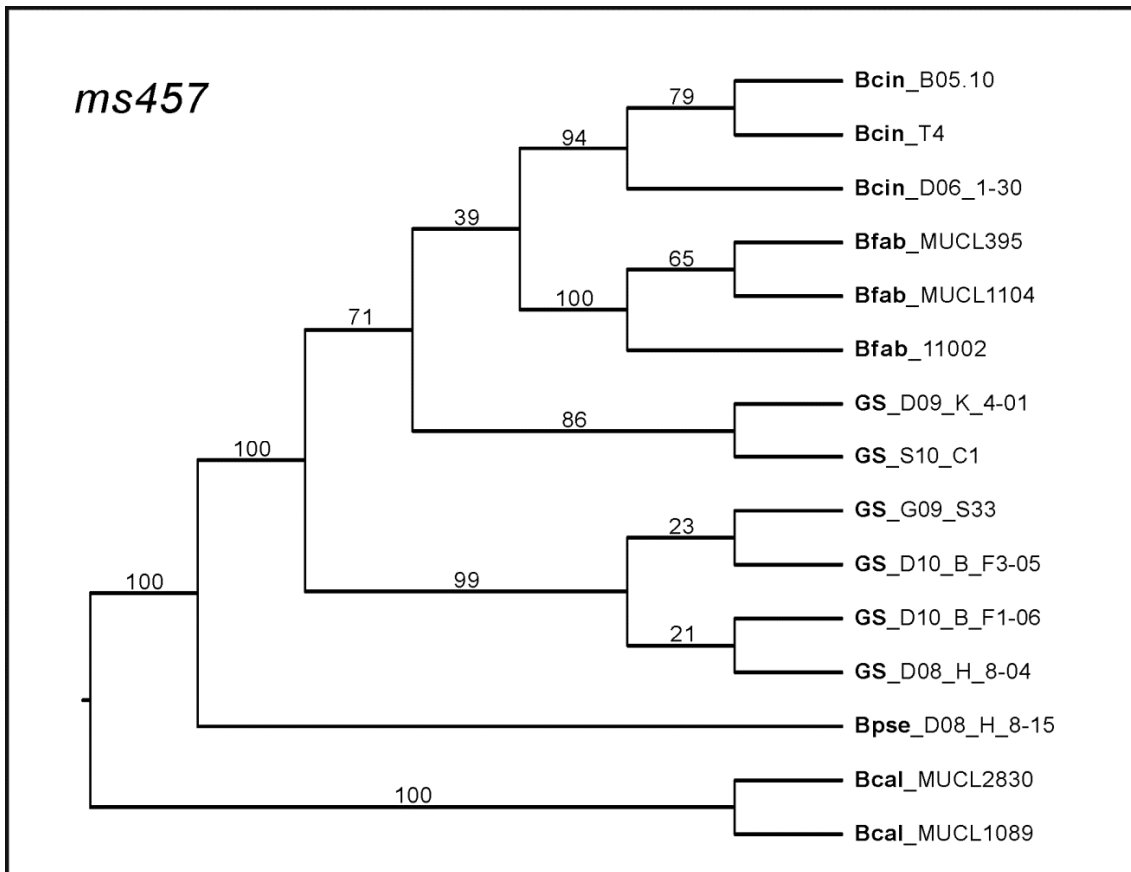


FIG. S5 Cladograms based on maximum likelihood analysis of *mrr1*, *fg1020*, *hsp60*, *nep2*, and *ms547* of different *Botrytis* ssp. and group S isolates. Isolates/ Strains used for these alignments are listed in Tables S1 and S2, or from refs. (12, 38, 50).

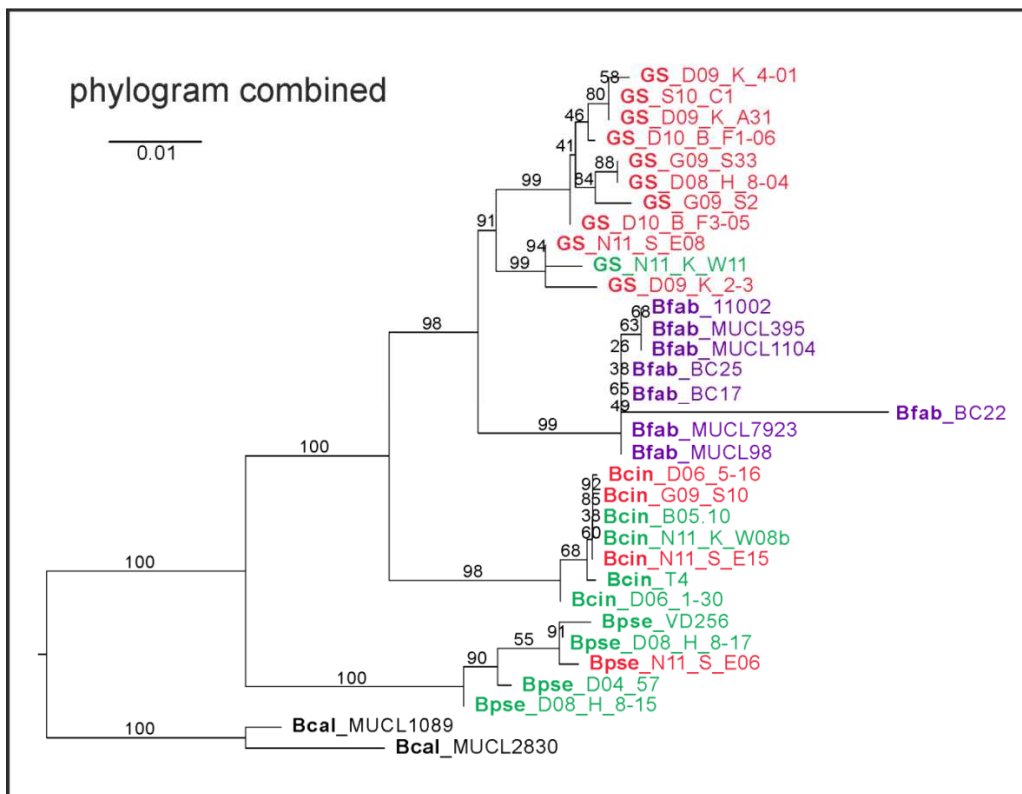
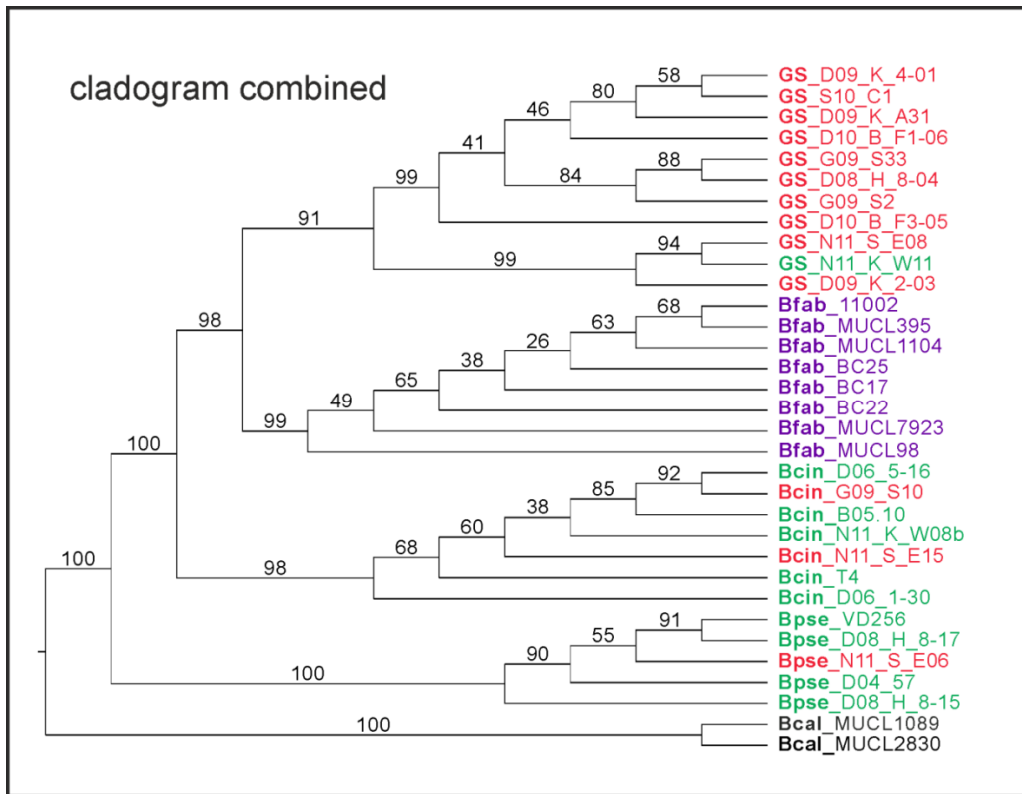


FIG. S6 Cladogram and phylogram based on a combined maximum likelihood analysis of *mrr1*, *fg1020*, *hsp60*, *nep2*, and *ms547* of different *Botrytis* ssp. and group S isolates or strains (cf. Tables S1 and S2, and refs. 12, 38, 50). Species/ group abbreviations for the isolates are shown in bold (GS: Group S; Bcin: *B. cinerea*; Bfab; *B. fabae*; Bpse: *B. pseudocinerea*; Bcal: *B. calthae*) followed (for most GS, Bcin and Bpse isolates) by an underline and a letter indicating the country of origin (D: Germany; G: Greece; N: Norway; S: Spain). Colors indicate the host plants strawberry (red), grapevine (green), faba bean (purple), and *Caltha palustris* (black).

Table S1 Origin of strawberry isolates analyzed in this study.

Region: N1: Stader Geest (three sampling sites); N2, Langförden/Vechta (one sampling site); M, Koblenz-Ahrweiler (four sampling sites); S, Breisgau (four sampling sites: a, Schupfholz; b, Denzlingen; c, Buchholz; d, Neuenburg). Fen, fenhexamide; Ipr, iprodione; Car, carbendazim; Bos, boscalid; Azo, azoxystrobin; Cyp, cyprodinil; IGS type, IGS-RFLP (*Hinf1*) pattern; 21bp repeat, *mrr1* 21 bp repeat; *mrr1* Δ 3bp deletion. *hch* type, *hch* *HhaI* digestion pattern; MAT, mating type specific PCR. *Isolates described in ref. (18).

Fungicide treatments: T1 (2011): Signum; Switch; Teldor; Flint; Switch. T2 (2011): Switch; Signum; Switch; Teldor; Flint; Switch; Switch; Signum. T3 (2008): Teldor+Ortiva; Switch; Signum; Switch; Teldor+Ortiva. T4 (2009): Signum; Switch; Ortiva+Teldor; Switch; Ortiva+Teldor. T5 (2009): Rovral; Signum; Ortiva+Teldor; Rovral; Flint; Ortiva; Rovral; Teldor; Signum; Teldor+Ortiva. T6 (2009): Signum; Teldor+Ortiva; Switch; Teldor+Ortiva; Switch; Teldor+Ortiva; Signum. T7 (2010): Flint; Signum; Switch; Teldor+Flint; Switch; Switch. T8 (2010): Switch; Switch. T9 (2010): Flint; Signum; Switch; Teldor+Flint; Switch; Switch.

No.	Isolate name	Origin	Fungicide sensitivity/ resistance						MDR	IGS type	21bp repeat	<i>mrr1</i> Δ 3bp	<i>hch</i> type	MAT type
			Fen	Ipr	Car	Bos	Azo	Cyp						
1	D08_H_8-06a	N1a/2008/n.a.	S	S	S	S	S	S	MDR1	0	yes	no	2	2
2	D08_H_8-06b	N1a/2008/n.a.	S	R	R	S	R	R	MDR1h	3	yes	yes	2	1
3	D08_H_8-07a	N1a/2008/n.a.	S	R	S	S	R	S	MDR1h	3	yes	yes	2	2
4	D11_H_R.1-10	N1b/2011/T1	R	S	S	S	R	S	MDR1h	n.a.	yes	yes	n.a.	n.a.
5	D11_H_R.1-2	N1b/2011/T1	S	R	S	S	S	S	MDR1	n.a.	no	n.a.	n.a.	2
6	D11_H_R.1-3	N1b/2011/T1	R	S	S	S	R	S	no	n.a.	no	n.a.	2	n.a.
7	D11_H_R.1-4	N1b/2011/T1	S	R	S	S	R	S	MDR1	n.a.	yes	n.a.	n.a.	n.a.
8	D11_H_R.1-6	N1b/2011/T1	R	S	S	S	R	R	MDR1	n.a.	yes	no	n.a.	n.a.
9	D11_H_R.1-7	N1b/2011/T1	R	R	S	S	R	R	MDR1	n.a.	yes	no	n.a.	n.a.
10	D11_H_R.1-9	N1b/2011/T1	R	S	S	S	R	S	MDR1	n.a.	yes	no	n.a.	n.a.
11	D11_H_R.2-10	N1b/2011/T1	S	S	S	S	R	S	no	n.a.	yes	n.a.	n.a.	n.a.
12	D11_H_R.2-3	N1b/2011/T1	R	R	R	S	R	S	MDR1	n.a.	yes	no	n.a.	n.a.
13	D11_H_R.2-4	N1b/2011/T1	R	R	R	S	R	R	MDR1h	n.a.	yes	yes	n.a.	n.a.
14	D11_H_R.2-6	N1b/2011/T1	R	S	S	S	S	S	MDR1h	n.a.	yes	yes	n.a.	n.a.
15	D11_H_R.2-8	N1b/2011/T1	R	R	R	S	R	S	MDR1	n.a.	yes	no	n.a.	n.a.
16	D11_H_R.3-8	N1b/2011/T1	R	S	R	R	R	R	MDR1h	n.a.	yes	yes	n.a.	n.a.
17	D11_H_R.3-9	N1b/2011/T1	R	S	S	S	R	S	no	n.a.	yes	n.a.	n.a.	n.a.
18	D11_H_R.4-4	N1b/2011/T1	S	R	R	S	R	S	no	n.a.	no	n.a.	2	n.a.
19	D11_H_R.4-7	N1b/2011/T1	S	R	R	S	R	S	MDR1	n.a.	no	n.a.	2	n.a.
20	D11_H_BI.119.01	N1c/2011/T2	R	R	R	S	R	S	MDR1	n.a.	yes	no	n.a.	n.a.
21	D11_H_BI.119.02	N1c/2011/T2	S	S	S	R	R	S	no	n.a.	yes	n.a.	n.a.	n.a.
22	D11_H_BI.119.03	N1c/2011/T2	S	R	S	R	R	S	no	n.a.	yes	no	n.a.	n.a.
23	D11_H_BI.119.04	N1c/2011/T2	R	S	R	S	R	S	MDR1h	n.a.	yes	yes	n.a.	n.a.
24	D11_H_BI.119.05	N1c/2011/T2	R	R	R	R	R	R	MDR1h	n.a.	yes	yes	n.a.	n.a.
25	D11_H_BI.119.06	N1c/2011/T2	S	S	S	S	R	S	MDR1	n.a.	yes	n.a.	n.a.	n.a.
26	D11_H_BI.119.08	N1c/2011/T2	R	S	R	R	R	S	MDR1h	n.a.	yes	yes	n.a.	n.a.
27	D11_H_BI.119.09	N1c/2011/T2	R	S	R	S	R	S	MDR1	n.a.	no	n.a.	2	n.a.
28	D11_H_BI.119.10	N1c/2011/T2	R	S	S	R	R	S	no	n.a.	yes	no	n.a.	n.a.
29	D11_H_BI.119.11	N1c/2011/T2	S	S	S	S	R	R	MDR1h	n.a.	yes	yes	n.a.	n.a.
30	D11_H_BI.119.12	N1c/2011/T2	R	R	R	S	R	R	MDR1	n.a.	yes	no	n.a.	n.a.
31	D11_H_BI.119.13	N1c/2011/T2	R	R	R	S	R	S	MDR1	n.a.	yes	no	n.a.	n.a.
32	D11_H_BI.119.14	N1c/2011/T2	R	R	R	S	R	R	MDR1h	n.a.	yes	yes	n.a.	n.a.
33	D11_H_BI.119.15	N1c/2011/T2	R	R	S	S	R	R	MDR1	n.a.	yes	n.a.	n.a.	n.a.
34	D11_H_BI.119.16	N1c/2011/T2	R	R	S	S	R	S	MDR1h	n.a.	yes	yes	n.a.	n.a.
35	D11_H_BI.119.17	N1c/2011/T2	S	S	S	S	R	S	MDR1	n.a.	yes	no	n.a.	n.a.
36	D11_H_BI.119.18	N1c/2011/T2	R	R	R	S	R	S	MDR1	n.a.	yes	no	n.a.	n.a.
37	D11_H_BI.119.19	N1c/2011/T2	S	S	S	S	R	S	MDR1	n.a.	yes	n.a.	n.a.	n.a.
38	D11_H_BI.119.20	N1c/2011/T2	S	S	S	S	R	S	MDR1	n.a.	yes	n.a.	n.a.	n.a.
39	D11_H_BI.119.21	N1c/2011/T2	R	R	R	S	R	R	MDR1h	n.a.	yes	yes	n.a.	n.a.
40	D11_H_BI.119.22	N1c/2011/T2	R	S	S	R	R	S	MDR1h	n.a.	yes	n.a.	n.a.	n.a.
41	D11_H_BI.119.23	N1c/2011/T2	S	S	S	R	R	S	no	n.a.	yes	no	n.a.	n.a.
42	D11_H_BI.119.24	N1c/2011/T2	S	S	S	S	R	S	MDR1	n.a.	no	n.a.	2	n.a.
43	D11_H_BI.119.25	N1c/2011/T2	R	R	R	S	R	S	MDR1h	n.a.	yes	yes	n.a.	n.a.
44	D11_H_BI.119.26	N1c/2011/T2	S	S	R	S	R	S	MDR1h	n.a.	yes	n.a.	n.a.	n.a.
45	D11_H_BI.119.27	N1c/2011/T2	S	S	R	S	R	S	no	n.a.	yes	n.a.	n.a.	n.a.

46	D11_H	Bl.119.28	N1c/2011/T2	S	S	R	S	R	R	no	n.a.	yes	n.a.	n.a.	n.a.
47	D11_H	Bl.119.29	N1c/2011/T2	R	S	R	S	R	R	MDR1	n.a.	yes	no	n.a.	n.a.
48	D11_H	Bl.119.30	N1c/2011/T2	S	S	R	S	R	S	MDR1	n.a.	no	n.a.	2	n.a.
49	D08_H	8-01	N2/2008/T3	S	S	S	S	S	S	MDR1	0	yes	no	2	2
50	D08_H	8-03	N2/2008/T3	S	S	S	S	S	S	MDR1	0	yes	no	2	2
51	D08_H	8-04	N2/2008/no	S	S	S	S	R	S	no	3	yes	no	2	2
52	D08_H	8-13	N2/2008/T3	S	S	S	S	S	S	no	0	no	no	1	1
53	D08_H	8-15	N2/2008/T3	S	S	S	S	S	S	no	0	no	no	1	2
54	D08_H	8-16	N2/2008/T3	S	R	S	S	R	R	MDR1h	13	yes	yes	2	2
55	D08_H	8-17	N2/2008/T3	S	S	S	S	S	S	no	0	no	no	1	2
56	D08_H	8-18*	N2/2008/T3	S	S	R	S	S	S	no	0	no	n.a.	n.a.	2
57	D08_H	8-19	N2/2008/T3	S	R	R	S	R	S	MDR1h	3	yes	yes	2	1
58	D08_H	8-20	N2/2008/T3	S	R	S	S	R	R	MDR1h	3	yes	yes	2	1
59	D08_H	8-21*	N2/2008/T3	S	n.a.	R	S	R	S	MDR1	3	yes	no	2	1
60	D08_H	8-22*	N2/2008/T3	S	S	S	S	S	S	no	0	no	n.a.	2	1
61	D09_K	1-01	Ma/2009/T4	R	R	S	S	R	R	MDR1h	3	yes	yes	2	1
62	D09_K	1-02	Ma/2009/T4	R	R	R	S	R	R	MDR1h	3	yes	yes	2	1
63	D09_K	1-03	Ma/2009/T4	R	R	S	S	S	R	MDR1	3	yes	no	2	2
64	D09_K	1-04	Ma/2009/T4	R	R	R	S	R	R	MDR1h	3	yes	yes	2	1
65	D09_K	1-05	Ma/2009/T4	R	R	R	S	R	S	MDR1	3	yes	n.a.	2	1
66	D09_K	1-06	Ma/2009/T4	R	R	S	S	S	S	MDR1h	3	yes	yes	2	2
67	D09_K	1-07	Ma/2009/T4	S	S	S	S	S	S	no	0	no	no	2	2
68	D09_K	1-08	Ma/2009/T4	R	R	S	S	R	S	MDR1h	3	yes	yes	2	2
69	D09_K	1-09	Ma/2009/T4	R	R	S	S	R	R	MDR1h	0	yes	yes	2	1
70	D09_K	1-10	Ma/2009/T4	R	R	S	S	R	R	MDR1h	3	yes	yes	2	1
71	D09_K	2-01	Mb/2009/T5	R	R	R	S	R	R	MDR1h	3	yes	yes	2	2
72	D09_K	2-02	Mb/2009/T5	S	R	R	S	S	n.a.	no	0	no	n.a.	2	2
73	D09_K	2-03	Mb/2009/T5	S	S	S	S	S	S	no	4	yes	no	2	1
74	D09_K	2-04	Mb/2009/T5	S	S	R	S	R	R	no	5	no	no	2	1
75	D09_K	2-05	Mb/2009/T5	S	S	R	S	R	R	no	0	no	n.a.	2	2
76	D09_K	2-06	Mb/2009/T5	R	R	S	S	R	R	MDR1h	3	yes	yes	2	1
77	D09_K	2-07	Mb/2009/T5	R	S	S	S	S	S	MDR1	0	no	no	2	2
78	D09_K	2-08	Mb/2009/T5	R	S	S	S	R	R	MDR1	3	yes	no	2	2
79	D09_K	2-09	Mb/2009/T5	R	R	R	S	R	R	MDR1h	3	yes	yes	2	2
80	D09_K	2-10	Mb/2009/T5	S	S	R	S	R	S	no	13	no	no	2	2
81	D09_K	3-01	Mc/2009/T6	R	R	R	S	R	R	MDR1	3	yes	no	2	2
82	D09_K	3-03	Mc/2009/T6	R	R	S	S	R	R	MDR1h	3	yes	yes	2	1
83	D09_K	3-04	Mc/2009/T6	R	R	R	S	R	R	MDR1	14	yes	no	2	1
84	D09_K	3-05	Mc/2009/T6	R	R	R	S	R	R	MDR1h	3	yes	yes	2	1
85	D09_K	3-06	Mc/2009/T6	R	R	R	S	R	R	MDR1h	3	yes	yes	2	1
86	D09_K	3-07	Mc/2009/T6	R	R	S	S	R	S	MDR1h	3	yes	yes	2	1
87	D09_K	3-08	Mc/2009/T6	R	R	S	S	R	S	MDR1h	3	yes	yes	2	1
88	D09_K	3-09	Mc/2009/T6	R	R	S	S	R	R	MDR1h	14	yes	yes	2	2
89	D09_K	3-10	Mc/2009/T6	R	R	R	S	R	R	MDR1h	3	yes	yes	2	1
90	D09_K	4-01	Md/2009/T5	R	R	S	S	R	R	MDR1h	3	yes	yes	2	2
91	D09_K	4-02	Md/2009/T5	S	S	S	S	S	S	MDR1	0	yes	no	2	1
92	D09_K	4-03	Md/2009/T5	R	S	S	S	S	R	MDR1	3	yes	no	2	1
93	D09_K	4-04	Md/2009/T5	R	R	S	S	R	R	MDR1h	0	yes	yes	2	2
94	D09_K	4-05	Md/2009/T5	R	R	R	S	R	S	MDR1h	3	yes	yes	2	1
95	D09_K	4-06	Md/2009/T5	R	R	R	S	R	R	MDR1h	3	yes	yes	2	1
96	D09_K	4-08	Md/2009/T5	R	R	S	S	S	R	MDR1h	3	yes	yes	2	2
97	D09_K	4-09	Md/2009/T5	S	R	S	S	R	R	MDR1h	3	yes	yes	2	1
98	D09_K	4-10	Md/2009/T5	R	R	R	S	R	R	MDR1h	3	yes	yes	2	2
99	D10_B	S1-03	Sa/2010/n.a.	R	S	S	S	S	S	no	0	yes	n.a.		1
100	D10_B	S1-04	Sa/2010/n.a.	R	S	S	S	R	R	no	0	no	n.a.	2	1
101	D10_B	S1-05	Sa/2010/n.a.	R	R	S	S	R	R	MDR1h	3	yes	yes	2	1
102	D10_B	S1-15	Sa/2010/n.a.	R	S	R	S	R	R	MDR1	0	no	n.a.	2	2
103	D10_B	S1-17	Sa/2010/n.a.	R	S	S	S	R	R	MDR1	0	no	n.a.	2	1+2
104	D10_B	S1-19	Sa/2010/n.a.	S	S	S	S	R	R	MDR1	0	no	n.a.	2	2
105	D10_B	S1-24	Sa/2010/n.a.	R	R	R	S	R	R	MDR1h	3	yes	yes	2	1
106	D10_B	S1-27	Sa/2010/n.a.	R	S	S	S	R	S	no	0	no	n.a.	2	1
107	D10_B	S1-28	Sa/2010/n.a.	R	R	R	S	R	R	MDR1h	3	yes	yes	2	1
108	D10_B	S3-02	Sb/2010/T7	R	R	R	S	R	S	MDR1h	3	yes	yes	2	1
109	D10_B	S3-05	Sb/2010/T7	S	R	S	S	R	S	MDR1h	0	yes	yes	2	2
110	D10_B	S3-06	Sb/2010/T7	R	R	R	S	R	R	MDR1h	3	yes	yes	2	2

111	D10_B_S3-07	Sb/2010/T7	S	S	R	S	S	S	MDR1	0	yes	no	2	2
112	D10_B_S3-08	Sb/2010/T7	S	S	R	R	R	S	MDR1h	0	yes	yes	2	1
113	D10_B_S3-13	Sb/2010/T7	S	S	R	S	S	S	MDR1	0	no	no	2	1
114	D10_B_S3-14	Sb/2010/T7	S	S	S	R	R	S	no	0	no	n.a.	2	2
115	D10_B_S3-16	Sb/2010/T7	S	S	R	S	S	S	MDR1	0	no	no	2	2
116	D10_B_S3-19	Sb/2010/T7	S	S	S	R	R	R	MDR1	0	no	no	2	2
117	D10_B_S3-20	Sb/2010/T7	R	R	S	R	R	R	MDR1h	3	yes	yes	2	1
118	D10_B_S3-21	Sb/2010/T7	S	R	R	S	R	S	MDR1h	3	yes	yes	2	1
119	D10_B_S3-22	Sb/2010/T7	S	R	R	S	R	S	MDR1h	3	yes	yes	2	2
120	D10_B_S3-23	Sb/2010/T7	S	S	S	S	R	R	MDR1	0	no	no	2	1
121	D10_B_S3-24	Sb/2010/T7	R	R	R	S	R	R	MDR1h	3	yes	yes	2	1
122	D10_B_S3-27	Sb/2010/T7	R	R	S	S	R	R	MDR1	3	yes	no	2	1
123	D10_B_S4-03	Sc/2010/T8	S	R	S	S	R	S	MDR1h	3	yes	yes	2	1
124	D10_B_S4-04	Sc/2010/T8	S	R	R	S	R	R	MDR1h	3	yes	yes	2	1
125	D10_B_S4-07	Sc/2010/T8	R	R	R	S	R	R	MDR1h	3	yes	yes	2	2
126	D10_B_S4-08	Sc/2010/T8	R	R	R	S	R	R	MDR1h	3	yes	yes	2	2
127	D10_B_S4-09	Sc/2010/T8	R	R	S	S	R	R	MDR1h	3	yes	yes	2	1
128	D10_B_S4-10	Sc/2010/T8	R	R	S	S	R	R	MDR1h	14	yes	yes	2	2
129	D10_B_S4-16	Sc/2010/T8	R	R	R	S	R	R	MDR1h	3	yes	yes	2	1
130	D10_B_S4-17	Sc/2010/T8	R	R	R	S	R	R	MDR1h	3	yes	yes	2	2
131	D10_B_S4-18	Sc/2010/T8	R	R	R	S	R	R	MDR1h	3	yes	yes	2	2
132	D10_B_S4-19	Sc/2010/T8	R	R	R	S	R	R	MDR1h	3	yes	yes	2	1
133	D10_B_S4-20	Sc/2010/T8	R	R	R	S	R	R	MDR1h	3	yes	yes	2	2
134	D10_B_S4-21	Sc/2010/T8	R	R	R	S	R	R	MDR1h	3	yes	yes	2	1
135	D10_B_S4-23	Sc/2010/T8	R	R	S	S	R	R	MDR1h	3	yes	yes	2	1
136	D10_B_S4-25	Sc/2010/T8	R	R	R	S	R	R	MDR1h	3	yes	yes	2	2
137	D10_B_S4-26	Sc/2010/T8	R	R	S	S	R	R	MDR1h	3	yes	yes	2	1
138	D10_B_S4-27	Sc/2010/T8	R	R	S	S	R	R	MDR1h	3	yes	yes	2	1
139	D10_B_S4-28	Sc/2010/T8	S	S	S	R	R	S	no	0	yes	no	2	2
140	D10_B_S4-29	Sc/2010/T8	R	S	S	S	R	R	MDR1	3	yes	no	2	1
141	D10_B_S4-30	Sc/2010/T8	R	R	S	S	R	R	MDR1h	3	yes	yes	2	1
142	D10_B_S4-31	Sc/2010/T8	R	R	R	S	R	R	MDR1h	3	yes	yes	2	2
143	D10_B_S6-02	Sc/2010/T9	S	S	R	S	R	R	no	3	yes	no	2	1
144	D10_B_S6-10	Sc/2010/T9	S	S	S	R	R	S	no	3	yes	no	2	2
145	D10_B_S6-11	Sc/2010/T9	R	R	R	S	R	R	MDR1h	3	yes	yes	2	1+2
146	D10_B_S6-12	Sc/2010/T9	S	S	S	S	S	S	MDR1	0	yes	n.a.	2	n.a.
147	D10_B_S6-15	Sc/2010/T9	S	S	S	S	S	R	no	0	no	n.a.	2	2
148	D10_B_S6-17	Sc/2010/T9	S	S	R	R	R	R	no	3	yes	n.a.	2	1
149	D10_B_S6-18	Sc/2010/T9	S	S	R	S	R	S	MDR1	0	no	n.a.	2	1
150	D10_B_S6-20	Sc/2010/T9	S	S	S	S	R	R	MDR1	0	no	n.a.	2	2
151	D10_B_S6-23	Sc/2010/T9	S	R	R	S	R	R	MDR1h	3	yes	yes	2	2
152	D10_B_S6-24	Sc/2010/T9	S	S	R	R	R	R	no	0	no	n.a.	2	1
153	D10_B_S6-25	Sc/2010/T9	R	R	R	S	R	R	MDR1h	3	yes	yes	2	1
154	D10_B_S6-26	Sc/2010/T9	S	S	R	S	S	S	MDR1	0	no	no	2	2
155	D10_B_S6-27	Sc/2010/T9	R	R	S	S	R	S	MDR1h	3	yes	yes	2	2
156	D10_B_S6-28	Sc/2010/T9	S	R	S	S	R	R	MDR1	3	no	no	2	1+2
157	D10_B_S5-01	Sd/2010/n.a.	S	S	S	R	R	S	no	3	no	n.a.	2	1
158	D10_B_S5-02	Sd/2010/n.a.	S	S	R	S	R	R	no	13	no	n.a.	2	2
159	D10_B_S5-03	Sd/2010/n.a.	S	S	R	S	S	S	MDR1	0	no	no	2	2
160	D10_B_S5-05	Sd/2010/n.a.	S	S	S	R	R	S	no	13	no	n.a.	2	2
161	D10_B_S5-06	Sd/2010/n.a.	S	S	S	R	R	S	no	3	yes	no	2	2
162	D10_B_S5-09	Sd/2010/n.a.	S	S	S	R	R	S	no	13	no	n.a.	2	2
163	D10_B_S5-11	Sd/2010/n.a.	S	S	S	S	R	R	MDR1	0	no	n.a.	2	1
164	D10_B_S5-12	Sd/2010/n.a.	S	S	S	S	S	S	MDR1	0	yes	n.a.	2	2
165	D10_B_S5-16	Sd/2010/n.a.	S	S	S	R	R	S	no	0	yes	n.a.	2	1
166	D10_B_S5-18	Sd/2010/n.a.	S	S	S	S	R	S	no	3	no	n.a.	2	1
167	D10_B_S5-19	Sd/2010/n.a.	S	S	S	S	S	S	MDR1	0	no	n.a.	2	1
168	D10_B_S5-22	Sd/2010/n.a.	S	S	R	S	S	S	MDR1	0	no	n.a.	2	1+2
169	D10_B_S5-23	Sd/2010/n.a.	S	S	R	R	R	S	no	3	yes	n.a.	2	1
170	D10_B_S5-24	Sd/2010/n.a.	S	S	S	R	R	S	no	0	yes	n.a.	2	2
171	D10_B_S5-25	Sd/2010/n.a.	S	S	S	R	R	S	no	3	yes	n.a.	2	2
172	D10_B_S5-26	Sd/2010/n.a.	S	S	R	S	S	S	MDR1	0	no	n.a.	2	1
173	D10_B_S5-30	Sd/2010/n.a.	S	S	S	R	R	S	no	0	no	n.a.	2	2

Table S2 *Botrytis* strains used for sequencing and MDR1-related analyses.

Host plants: GV: Grape vine; ST: Strawberry; FB: Faba bean; CP: *Caltha palustris*. *Used for taxonomy-related sequencing. ** 3-bp triplet deletion (Δ CTC1638/ Δ L497) confirmed by *mrr1* sequencing. MDR-related mutations are described according to nucleotide and amino acid numbers indicated in Fig. S2. ***Kindly provided by A.-S. Walker. n.a.: not analyzed.

Strain name	Species or group	Host plant	Origin, year	MDR (mutation)	Reference
D06_1-30	<i>B. cinerea</i> *	GV	Germany, 2006	none	This work
D06_5-16	<i>B. cinerea</i> *	GV	Germany, 2006	MDR1 (G2044T/R632I)	(19)
D06_3-4	<i>B. cinerea</i>	GV	Germany, 2006	MDR1 (G1858A/G620R)	(19)
G09_S10	<i>B. cinerea</i> *	ST	Greece, 2009	none	This work
D11_M_E77	<i>B. cinerea</i>	ST	Germany, 2011	MDR1	This work
N11_S_E15	<i>B. cinerea</i> *	ST	Norway, 2011	n.a.	This work
N11_K_W08b	<i>B. cinerea</i> *	GV	Norway, 2011	n.a.	This work
D10_B_F3-07	<i>B. cinerea</i>	ST	Germany, 2010	MDR1 (G2044T/R632I)	This work
D09_K_A31	Group S*	ST	Germany, 2009	MDR1h**	This work
D10_B_F1-06	Group S*	ST	Germany, 2010	None	This work
D10_B_F3-05	Group S*	ST	Germany, 2010	MDR1h**	This work
D10_K_S11-02	Group S*	ST	Germany, 2010	none	This work
S10_C1	Group S*	ST	Spain, 2010	MDR1h**	This work
G09_S2	Group S*	ST	Greece, 2009	none	This work
G09_S33	Group S*	ST	Greece, 2009	none	This work
N11_S_E08	Group S*	ST	Norway, 2011	n.a.	This work
N11_K_W11	Group S*	GV	Norway, 2011	n.a.	This work
D08_H_8-16	Group S	ST	Germany, 2008	MDR1h	This work
D09_K_A12	Group S	ST	Germany, 2009	MDR1 (C1993T/A615V)	This work
D10_K_S11-04	Group S	ST	Germany, 2010	MDR1 (A959G/T296A)	This work
D10_K_S12-12	Group S	ST	Germany, 2010	MDR1 (C1993T/A615V)	This work
MUCL395 (CBS109.57)	<i>B. fabae</i> *	FB	The Netherlands	n.a.	BCCM
MUCL98	<i>B. fabae</i> *	FB	Spain	n.a.	BCCM
MUCL7923	<i>B. fabae</i> *	FB	Belgium	n.a.	BCCM
11002	<i>B. fabae</i> *	FB	France	n.a.	This work***
D04_57	<i>B. pseudocin.</i> *	GV	Germany, 2004	none	This work
VD256	<i>B. pseudocin.</i> *	GV	France, 2007	n.a.	(45)
N11_S_E06	<i>B. pseudocin.</i> *	ST	Norway, 2011	n.a.	This work
MUCL1089	<i>B. calthae</i> *	CP	Belgium	n.a.	(38)
MUCL2830	<i>B. calthae</i> *	CP	Canada	n.a.	(38)

Table S3 Distribution of IGS-RFLP patterns in gray mold isolates from German strawberry fields (S) and vineyards (G). Patterns are numbered according to ref. (18).

No. of isolates	Origin	Species/ genetic group	IGS-PCR-RFLP pattern [%]										
			0	1	2	3	4	5	8	11	12	13	14
125	S	<i>B. cinerea</i> and group S	33.6	0	0	58.4	0.8	0.8	0	0	0	4.0	2.4
35	S	<i>B. cinerea</i>	77.1	0	0	8.6	0	2.9	0	0	0	11.4	0
62	S	Group S (MDR1h)	6.5	0	0	88.7	0	0	0	0	0	1.6	3.2
28	S	Group S (no MDR1h)	39.3	0	0	53.6	3.6	0	0	0	0	0	3.6
137	G	<i>B. cinerea</i>	38.7	0.7	49.0	0.7	0	5.8	2.2	0.7	2.2	0	0

Table S4 Primers used in this work.

Primer	Gene	Sequence	Reference
Mrr1_atg	<i>mrr1</i>	ATACCCGGGTCAACATCATGAATCCAACAGTC	(19)
TF1-2	<i>mrr1</i>	TCAATGTCCACCACACTCTCC	(19)
TF1-2_n	<i>mrr1</i>	CTATCCGATCGACCGGTA	this work
TF1-3	<i>mrr1</i>	CGGTACAAAACGCACTGAG	(19)
TF1-3_n	<i>mrr1</i>	TGCTGTGACGAGCATGAC	this work
TF1-4	<i>mrr1</i>	GGATAGGGTATTGCGTAGATCG	(19)
TF1-5	<i>mrr1</i>	GTTGGCTTGTGCATAGTG	this work
TF1-6	<i>mrr1</i>	CAGGTTCTGATCCCAATG	this work
Mrr1-spez-F	<i>mrr1</i>	TATCGGTCTTGCAGTCCGC	this work
Mrr1-spez-R	<i>mrr1</i>	TTCCGTACCCCGATCTTCGGAA	this work
Mrr1-Pira	<i>mrr1</i>	CCACCACAATCTTGATCATTGGGATCAGAACCTGC	this work
FG1020-F	<i>fg1020</i>	GGAGGATGATATGGCAAAGTC	(27)
FG1020-R	<i>fg1020</i>	GGATTAAGAGCTTCACTACCA	(27)
MS547-F	RNA helicase	AAGGAGGACGTTGGAAGGAT	(45)
MS547-R	RNA helicase	AAGTCCAGAATCTCGATGTATTTGT	(45)
Hsp60-F	<i>hsp60</i>	CAACAATTGAGATTTGCCACAAG	(38)
Hsp60-R	<i>hsp60</i>	GATGGATCCAGTGGTACCGAGCAT	(38)
Nep2(-200)for	<i>nep2</i>	GAGTTTCAGGTATATTCGTTTGGTGA	(38)
Nep2(+1147)rev	<i>nep2</i>	GAACCTTGAATAGTGGGCAGTTGGG	(38)
IGS1a		TCCGGTGAGCCTTTTA	(18)
IGS1b		GTGGATTAGTGGCCGATGG	(18)
Mat1-F	<i>mat1-1</i>	GTGACCAGGAAACAGCTATGACCGGAGTGTGTTGATCGTGG	(1)
Mat1-R	<i>mat1-1</i>	GTGACTGTAAAACGACGGCCAGTCCACACATACATCATGAC	(1)
BcHMG-F	<i>mat1-2</i>	GTGACCAGGAAACAGCTATGACCGTCTCTTCCATAAGTCA	(1)
BcHMG-R	<i>mat1-2</i>	GTGACTGTAAAACGACGGCCAGTCAAGATCAGACGGAGTGC	(1)
BcHch262	<i>hch</i>	AAGCCCTTCGATGTCTTGGA	(11)
BcHch520L	<i>hch</i>	ACGGATTCCGAACCTAAGTAA	(11)
atrBfor	<i>atrB</i>	GCACCTTGTGGCGAGTATCTATC	(19)
atrBrev	<i>atrB</i>	TGCATCCCTCCATCCATAGC	(19)
actfor	<i>actin</i>	TCTGTCTTGGGTCTTGAGAG	(19)
actrev	<i>actin</i>	GGTGCAAGAGCAGTGATTC	(19)

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