

Supplementary Table 1. Isolates ID, origin, sampling years, and Net blotch type of *Pyrenophora teres* isolates used

Running number	Isolate ID	Province	Location	Sampling year	Net blotch type
1	Pt 1	Algiers	Oued Semar (Field 1)	2015	NFNB
2	Pt2	Algiers	Oued Semar (Field 1)	2015	NFNB
3	Pt3	Algiers	Oued Semar (Field 1)	2015	NFNB
4	Pt4	Algiers	Oued Semar (Field 1)	2015	NFNB
5	Pt5	Algiers	Oued Semar (Field 1)	2015	NFNB
6	Pt6	Algiers	Oued Semar (Field 2)	2015	NFNB
7	Pt7	Algiers	Oued Semar (Field 2)	2015	NFNB
8	Pt8	Algiers	Oued Semar (Field 2)	2015	NFNB
9	Pt9	Algiers	Oued Semar (Field 2)	2015	NFNB
10	Pt10	Algiers	Oued Semar (Field 2)	2015	NFNB
11	Pt 11	Algiers	Oued Semar (Field 3)	2015	NFNB
12	Pt12	Algiers	Oued Semar (Field 3)	2015	NFNB
13	Pt13	Algiers	Oued Semar (Field 3)	2015	NFNB
14	Pt14	Algiers	Oued Semar (Field 3)	2015	NFNB
15	Pt15	Algiers	Oued Semar (Field 4)	2015	NFNB
16	Pt215	Algiers	Oued Semar (Field 4)	2015	NFNB
17	Pt216	Algiers	Oued Semar (Field 4)	2015	NFNB
18	Pt16	Algiers	CNCC Seeds(Sample 1)	2016	NFNB
19	Pt17	Algiers	CNCC Seeds(Sample 1)	2016	NFNB
20	Pt18	Algiers	CNCC Seeds (Sample 1)	2016	NFNB
21	Pt19	Algiers	CNCC Seeds (Sample 1)	2016	NFNB
22	Pt20	Algiers	CNCC Seeds (Sample 2)	2016	NFNB
23	Pt21	Algiers	CNCC Seeds (Sample 2)	2016	NFNB
24	Pt22	Algiers	CNCC Seeds(Sample 2)	2016	NFNB
25	Pt23	Algiers	Oued Semar (Field 5)	2015	NFNB
26	Pt24	Algiers	Oued Semar (Field 5)	2015	NFNB
27	Pt25	Algiers	Oued Semar (Field 5)	2015	NFNB
28	Pt26	Algiers	Oued Semar (Field 5)	2015	NFNB
29	Pt27	Algiers	Oued Semar (Field 5)	2015	NFNB
30	Pt28	Algiers	Oued Semar (Field 5)	2015	NFNB
31	Pt29	Algiers	Oued Semar (Field 5)	2016	NFNB
32	Pt30	Algiers	ENSA (Genotype 1)	2016	NFNB
33	Pt31	Algiers	ENSA (Genotype 1)	2016	NFNB
34	Pt32	Algiers	ENSA (Genotype 1)	2016	NFNB
35	Pt33	Algiers	ENSA (Genotype 2)	2016	NFNB
36	Pt34	Algiers	ENSA (Genotype 2)	2016	NFNB
37	Pt35	Algiers	ENSA (Genotype 2)	2016	NFNB
38	Pt36	Algiers	ENSA (Genotype 3)	2016	NFNB
39	Pt37	Algiers	ENSA (Genotype 3)	2016	SFNB
40	Pt38	Algiers	ENSA (Genotype 3)	2016	SFNB
41	Pt39	Algiers	ENSA (Genotype 3)	2016	SFNB
42	Pt40	Algiers	ENSA (Genotype 4)	2016	NFNB
43	Pt41	Algiers	ENSA (Genotype 4)	2016	NFNB
44	Pt42	Algiers	ENSA (Genotype 5)	2016	SFNB
45	Pt43	Algiers	ENSA (Genotype 5)	2016	SFNB
46	Pt44	Algiers	ENSA (Genotype 6)	2016	NFNB
47	Pt45	Algiers	ENSA (Genotype 6)	2016	NFNB

48	Pt230	Algiers	ENSA (Genotype 6)	2016	NFNB
49	Pt46	Algiers	ENSA (Genotype 7)	2016	SFNB
50	Pt47	Algiers	ENSA (Genotype 7)	2016	SFNB
51	Pt48	Algiers	ENSA (Genotype 7)	2016	SFNB
52	Pt49	Algiers	ENSA (Genotype 8)	2016	SFNB
53	Pt50	Algiers	ENSA (Genotype 8)	2016	SFNB
54	Pt51	Algiers	ENSA (Genotype 9)	2016	SFNB
55	Pt52	Algiers	ENSA (Genotype 9)	2016	SFNB
56	Pt53	Algiers	ENSA (Genotype 9)	2016	SFNB
57	Pt54	Algiers	ENSA (Genotype 9)	2016	NFNB
58	Pt188	Algiers	ENSA	2017	NFNB
59	Pt189	Algiers	ENSA	2017	NFNB
60	Pt190	Algiers	ENSA	2017	NFNB
61	Pt191	Algiers	ENSA	2017	NFNB
62	Pt192	Algiers	ENSA	2017	SFNB
63	Pt55	Algiers	Bouchaoui	2016	NFNB
64	Pt56	Algiers	Bouchaoui	2016	NFNB
65	Pt58	Algiers	Bouchaoui	2016	NFNB
66	Pt59	Algiers	Bouchaoui	2016	NFNB
67	Pt222	Algiers	Bouchaoui	2016	NFNB
68	Pt223	Algiers	Bouchaoui	2016	NFNB
69	Pt60	Béjaïa	Oued Ghir	2016	NFNB
70	Pt61	Béjaïa	Oued Ghir	2016	NFNB
71	Pt62	Béjaïa	Oued Ghir	2016	NFNB
72	Pt63	Béjaïa	Oued Ghir	2016	NFNB
73	Pt64	Béjaïa	INRAA	2016	NFNB
74	Pt65	Béjaïa	INRAA	2016	NFNB
75	Pt66	Béjaïa	Ifnayen (Field 1)	2016	NFNB
76	Pt67	Béjaïa	Ifnayen (Field 1)	2016	NFNB
77	Pt68	Béjaïa	Ifnayen (Field 1)	2016	NFNB
78	Pt69	Béjaïa	Ifnayen (Field 2)	2016	NFNB
79	Pt70	Béjaïa	Ifnayen (Field 2)	2016	NFNB
80	Pt71	Béjaïa	Ifnayen (Field 2)	2016	NFNB
81	Pt73	Béjaïa	Ifnayen (Field 3)	2016	NFNB
82	Pt74	Béjaïa	Ifnayen (Field 3)	2016	NFNB
83	Pt75	Béjaïa	Ifnayen (Field 4)	2016	NFNB
84	Pt76	Béjaïa	Ifnayen (Field 4)	2016	NFNB
85	Pt77	Béjaïa	Ifnayen (Field 5)	2016	SFNB
86	Pt78	Béjaïa	Ifnayen (Field 5)	2016	SFNB
87	Pt79	Béjaïa	Ifnayen (Field 5)	2016	SFNB
88	Pt203	Béjaïa	INRAA	2016	NFNB
89	Pt204	Béjaïa	INRAA	2016	NFNB
90	Pt205	Béjaïa	INRAA	2016	NFNB
91	Pt80	Bouira	Sour El Ghozlane (Field1)	2016	NFNB
92	Pt81	Bouira	Sour El Ghozlane (Field1)	2016	NFNB
93	Pt82	Bouira	Sour El Ghozlane (Field1)	2016	NFNB
94	Pt83	Bouira	Sour El Ghozlane (Field2)	2016	SFNB
95	Pt84	Bouira	Sour El Ghozlane (Field2)	2016	SFNB
96	Pt85	Bouira	Sour El Ghozlane (Field2)	2016	SFNB
97	Pt86	Bouira	Houachria	2016	SFNB
98	Pt87	Bouira	Houachria	2016	SFNB

99	Pt88	Bouira	Houachria	2016	SFNB
100	Pt90	Bouira	AinBessem	2016	SFNB
101	Pt91	Bouira	AinBessem	2016	SFNB
102	Pt217	Bouira	Sidi Khelifa	2016	NFNB
103	Pt218	Bouira	Sidi Khelifa	2016	NFNB
104	Pt219	Bouira	Sidi Khelifa	2016	NFNB
105	Pt92	Boumerdès	Zemmouri (Field 1)	2016	NFNB
106	Pt94	Boumerdès	Zemmouri (Field 1)	2016	NFNB
107	Pt95	Boumerdès	Zemmouri (Field 2)	2016	NFNB
108	Pt96	Boumerdès	Zemmouri (Field 2)	2016	NFNB
109	Pt97	Boumerdès	Zemmouri (Field 3)	2016	NFNB
110	Pt98	Boumerdès	Zemmouri (Field 3)	2016	NFNB
111	Pt99	Boumerdès	Zemmouri (Field 3)	2016	NFNB
112	Pt100	Boumerdès	Isser-Teliss	2016	NFNB
113	Pt102	Boumerdès	Isser-Teliss	2016	SFNB
114	Pt103	Boumerdès	Isser-Teliss	2016	SFNB
115	Pt104	Boumerdès	Isser-Bouchakour	2016	SFNB
116	Pt105	Boumerdès	Isser-Bouchakour	2016	SFNB
117	Pt106	Boumerdès	Isser-Bouchakour	2016	SFNB
118	Pt107	Boumerdès	Thénia	2016	NFNB
119	Pt108	Boumerdès	Thénia	2016	NFNB
120	Pt110	Boumerdès	Thénia	2016	NFNB
121	Pt111	Boumerdès	Corso	2016	NFNB
122	Pt112	Boumerdès	Corso	2016	NFNB
123	Pt113	Boumerdès	Cap Djinet	2016	SFNB
124	Pt114	Boumerdès	Cap Djinet	2016	SFNB
125	Pt115	Boumerdès	Cap Djinet	2016	SFNB
126	Pt116	Boumerdès	Cap Djinet	2016	SFNB
127	Pt117	TiziOuzou	Draâ El Mizan	2016	NFNB
128	Pt118	TiziOuzou	Draâ El Mizan	2016	NFNB
129	Pt119	TiziOuzou	Draâ El Mizan	2016	NFNB
130	Pt121	TiziOuzou	Draâ El Mizan	2016	NFNB
131	Pt122	TiziOuzou	Draâ El Mizan	2016	NFNB
132	Pt123	TiziOuzou	Draâ El Mizan	2016	NFNB
133	Pt126	TiziOuzou	Assi Youcef (Field 2)	2016	NFNB
134	Pt129	TiziOuzou	Assi Youcef (Field 2)	2016	NFNB
135	Pt130	TiziOuzou	Assi Youcef (Field 3)	2016	NFNB
136	Pt131	TiziOuzou	Assiyoucef (Field 3)	2016	NFNB
137	Pt132	Sétif	Ksar El Abtal (Field 1)	2016	NFNB
138	Pt133	Sétif	Ksar El Abtal (Field 1)	2016	NFNB
139	Pt135	Sétif	Ksar El Abtal (Field 1)	2016	NFNB
140	Pt136	Sétif	Ksar El Abtal (Field 1)	2016	NFNB
141	Pt137	Sétif	Ksar El Abtal (Field 2)	2016	NFNB
142	Pt138	Sétif	Ksar El Abtal (Field 2)	2016	NFNB
143	Pt139	Sétif	CNCC (cv.Saida)	2016	NFNB
144	Pt140	Sétif	CNCC (cv.Saida)	2016	NFNB
145	Pt141	Sétif	CNCC (cv.Saida)	2016	NFNB
146	Pt142	Sétif	CNCC (cv.Tichedrett)	2016	NFNB
147	Pt143	Sétif	Drâa El Miad	2016	NFNB
148	Pt144	Sétif	Drâa El Miad	2016	NFNB
149	Pt231	Sétif	AinOulmène	2016	SFNB

150	Pt232	Sétif	AïnOulmène	2016	SFNB
151	Pt233	Sétif	CNCC (cv.Tichedrett)	2016	NFNB
152	Pt227	Sétif	Draa el miaad	2016	NFNB
153	Pt228	Sétif	Kasr el abtal (Field 2)	2016	NFNB
154	Pt145	Tipaza	German	2016	NFNB
155	Pt146	Tipaza	German	2016	NFNB
156	Pt147	Tipaza	German	2016	NFNB
157	Pt148	Tipaza	Sidi Rached	2016	NFNB
158	Pt149	Tipaza	Sidi Rached	2016	NFNB
159	Pt150	Tipaza	Oued Bourkika	2016	NFNB
160	Pt151	Tipaza	Oued Bourkika	2016	NFNB
161	Pt152	Tipaza	Hadjout	2016	SFNB
162	Pt153	Tipaza	Hadjout	2016	SFNB
163	Pt154	Tipaza	Ahmar El Aïn	2016	SFNB
164	Pt206	Tipaza	Ahmar El Aïn	2016	SFNB
165	Pt208	Tipaza	German	2016	NFNB
166	Pt209	Tipaza	Oued Bourkika	2016	NFNB
167	Pt155	AïnDefla	BniMeghenem	2016	NFNB
168	Pt157	AïnDefla	BniMeghenem	2016	NFNB
169	Pt158	AïnDefla	BniMeghenem	2016	NFNB
170	Pt159	AïnDefla	Mekhatria (Field 1)	2016	NFNB
171	Pt160	AïnDefla	Mekhatria (Field 1)	2016	NFNB
172	Pt161	AïnDefla	Mekhatria (Field 2)	2016	SFNB
173	Pt162	AïnDefla	Mekhatria (Field 2)	2016	SFNB
174	Pt224	AïnDefla	Mekhatria (Field 2)	2016	SFNB
175	Pt225	AïnDefla	Mekhatria (Field 2)	2016	SFNB
176	Pt163	Blida	Amroussa	2016	SFNB
177	Pt164	Blida	Amroussa	2016	SFNB
178	Pt165	Blida	Faculty of biology	2016	NFNB
179	Pt166	Blida	Faculty of biology	2016	NFNB
180	Pt226	Blida	Faculty of biology	2016	NFNB
181	Pt167	Constantine	El Khroub (Saida 183)	2016	NFNB
182	Pt168	Constantine	El Khroub (Saida 183)	2016	NFNB
183	Pt169	Constantine	El Khroub (Saida 183)	2016	NFNB
184	Pt170	Constantine	El Khroub (Hamra)	2016	NFNB
185	Pt171	Constantine	El Khroub (Hamra)	2016	NFNB
186	Pt172	Constantine	El Khroub (Hamra)	2016	NFNB
187	Pt175	AïnTémouchent	AïnTémouchent	2016	NFNB
188	Pt176	AïnTémouchent	AïnTémouchent	2016	NFNB
189	Pt177	AïnTémouchent	AïnTémouchent	2016	NFNB
190	Pt178	Tlemcen	Tlemcen (Wheat)	2016	NFNB
191	Pt179	Tlemcen	Tlemcen (Wheat)	2016	NFNB
192	Pt180	Tlemcen	Tlemcen (Wheat)	2016	NFNB
193	Pt181	Tlemcen	Tlemcen (Wheat)	2016	NFNB
194	Pt182	Tlemcen	Tlemcen (Wheat)	2016	NFNB
195	Pt183	Tlemcen	Tlemcen (Wheat)	2016	NFNB
196	Pt184	Sidi Bel Abbès	Sidi Bel Abbès	2016	NFNB
197	Pt185	Sidi Bel Abbès	Sidi Bel Abbès	2016	NFNB
198	Pt186	Sidi Bel Abbès	Sidi Bel Abbès	2016	NFNB
199	Pt187	Sidi Bel Abbès	Sidi Bel Abbès	2016	NFNB
200	Pt193	Biskra	Biskra	2016	NFNB

201	Pt195	Médéa	Berrouaghia	2016	NFNB
202	Pt196	Médéa	Berrouaghia	2016	NFNB
203	Pt197	Médéa	Berrouaghia	2016	NFNB
204	Pt198	Médéa	Aïn El Melh	2016	NFNB
205	Pt199	Médéa	Aïn El Melh	2016	NFNB
206	Pt200	Médéa	Aïn El Melh	2016	NFNB
207	Pt201	Médéa	Aïn El Melh	2016	NFNB
208	Pt210	Tiaret	Hamadia	2016	NFNB
209	Pt211	Tiaret	Hamadia	2016	NFNB
210	Pt212	Tiaret	Hamadia	2016	NFNB
211	Pt174	Oum El-Bouaghi	Oum El Bouaghi	2016	NFNB
212	Pt221	Oum El-Bouaghi	Oum El Bouaghi	2016	SFNB

NFNB, net form of net blotch; SFNB, spot form of net vlotch.

Supplementary Table 2. Oligonucleotides used for pyrosequencing to detect mutations causing SDHI and QoI resistance in *Pyrenophora teres* (biomers)

Primer name	Application	Sequence (5'-3')
KES1845(Fw)	Amplification partial <i>sdh</i> B sequence	ACAGGACGCCCTCAACAACAG
KES1846(Rv) ^a		ACTCTCCCTATTTGCCACGTGAT
KES1848(Fw)	Amplification partial <i>sdh</i> C sequence	ATCTACAGGCCGCAAATCAC
KES1849(Rv) ^a		CCAAATGCCTCAATCCGTTAAG
KES2025(Fw) ^a	Amplification partial <i>sdh</i> C sequence	CTTAGACTTGCAGCAACTG
KES2026(Rv)		ATACCGAAGAGGTAGAGAGAACCG
KES432(Fw)	Amplification of partial <i>cyt b</i> sequence	TCCTAACTTAAAAGGTTACACAAGGCTT
KES433(Rv) ^a		AACCATTTTGGGCTATGTTGGTA
KES630(Fw) ^a	Amplification of partial <i>cyt b</i> sequence	GGCTGAAATGCTGCTTAATGT
KES631(Rv)		AATTTTCACCTCAAAGGCTCATT
KES1847(Fw)	Pyrosequencing primer B-H277Y	GAGCTTGTACCGATGC
KES1956(Fw)	Pyrosequencing primer C-N75S	TGGCCTCATCGCTCA
KES2027(Rv)	Pyrosequencing primer C-G79R	CGGAGAGAACGATAC
KES1851(Fw)	Pyrosequencing primer C-H134R and C-S135R	CGTCCCCTTCTTCTTT
KES434(Fw)	Pyrosequencing primer F129L in <i>cyt b</i>	CGGAACCTAGACAGCC
KES 632(Fw)	Pyrosequencing primer G137R in <i>cyt b</i>	CAAAGGCTCATTTC

SDHI, succinate dehydrogenase inhibitor; QoI, quinone outside inhibitor.

^a5' biotin labelling.

Supplementary Table 3. Isolates ID, origin, and Net blotch type of *Pyrenophora teres* isolates used for *in vitro* and *in planta* fungicides testes

Running number	Isolate ID	Province	Location	Net blotch type
1	Pt33	Algiers	ENSA (Genotype 2)	NFNB
2	Pt58	Algiers	Bouchaoui	NFNB
3	Pt80	Bouira	Sour El Ghozlane (Field1)	NFNB
4	Pt87	Bouira	Houachria	SFNB
5	Pt97	Boumerdès	Zemouri (Field 3)	NFNB
6	Pt135	Sétif	Ksar El Abtal (Field 1)	NFNB
7	Pt142	Sétif	CNCC (cv.Tichedrett)	NFNB
8	Pt152	Tipaza	Hadjout	SFNB
9	Pt169	Constantine	El Khroub (Saida 183)	NFNB
10	Pt195	Médéa	Berrouaghia	NFNB
11	Pt197	Médéa	Berrouaghia	NFNB
12	Pt209	Tipaza	OuedBourkika	NFNB
13	Pt217	Bouira	Sidi Khelifa	NFNB
14	Pt228	Sétif	Kasr el abtal (Field2)	NFNB
15	Pt129	Tizi Ouzou	Assi Youcef (Field 2)	NFNB
16	Pt123	Tizi Ouzou	Draâ El Mizan	NFNB
17	Pt117	Tizi Ouzou	Draâ El Mizan	NFNB
18	Pt157	Aïn Defla	Bni Meghenem	NFNB
19	Pt176	AïnTémouchent	Aïn Témouchent	NFNB
20	Pt185	Sidi Bel Abbès	Sidi Bel Abbès	NFNB
21	Pt126	Tizi Ouzou	Assi Youcef (Field 2)	NFNB
22	Pt166	Blida	Faculty of biology	NFNB
23	Pt148	Tipaza	Sidi Rached	NFNB
24	Pt01	Algiers	Oued Semar (Field 2)	NFNB
25	Pt61	Béjaïa	Oued Ghir	NFNB
26	Pt21	Algiers	CNCC Seeds (Sample 2)	NFNB
27	Pt108	Boumerdès	Thénia	NFNB
28	Pt112	Boumerdès	Corso	NFNB
29	Pt90	Bouira	Aïn Bessem	SFNB
30	Pt192	Algiers	ENSA	SFNB
31	Pt91	Bouira	Aïn Bessem	SFNB
32	Pt154	Tipaza	Ahmar El Aïn	SFNB
33	Pt143	Sétif	Drâa El Miad	NFNB
34	Pt119	Tizi Ouzou	Draâ El Mizan	NFNB
35	Pt64	Béjaïa	INRAA	NFNB
36	Pt115	Boumerdès	Cap Djinet	SFNB
37	Pt74	Béjaïa	Ifnayen (Field 3)	NFNB
38	Pt172	Constantine	El Khroub (Hamra)	NFNB
39	Pt66	Béjaïa	Ifnayen (Field 1)	NFNB
40	Pt63	Béjaïa	Oued Ghir	NFNB
41	Pt38	Algiers	ENSA (Genotype 3)	SFNB
42	Pt162	Aïn Defla	Mekhatria (Field 2)	SFNB
43	Pt181	Tlemcen	Tlemcen (Wheat)	NFNB
44	Pt102	Boumerdès	Isser-Teliss	SFNB
45	Pt79	Béjaïa	Ifnayen (Field 5)	SFNB

Supplementary Table 4. Isolates from Europe used as control (sensitive/resistant) kindly provided by BASF SE

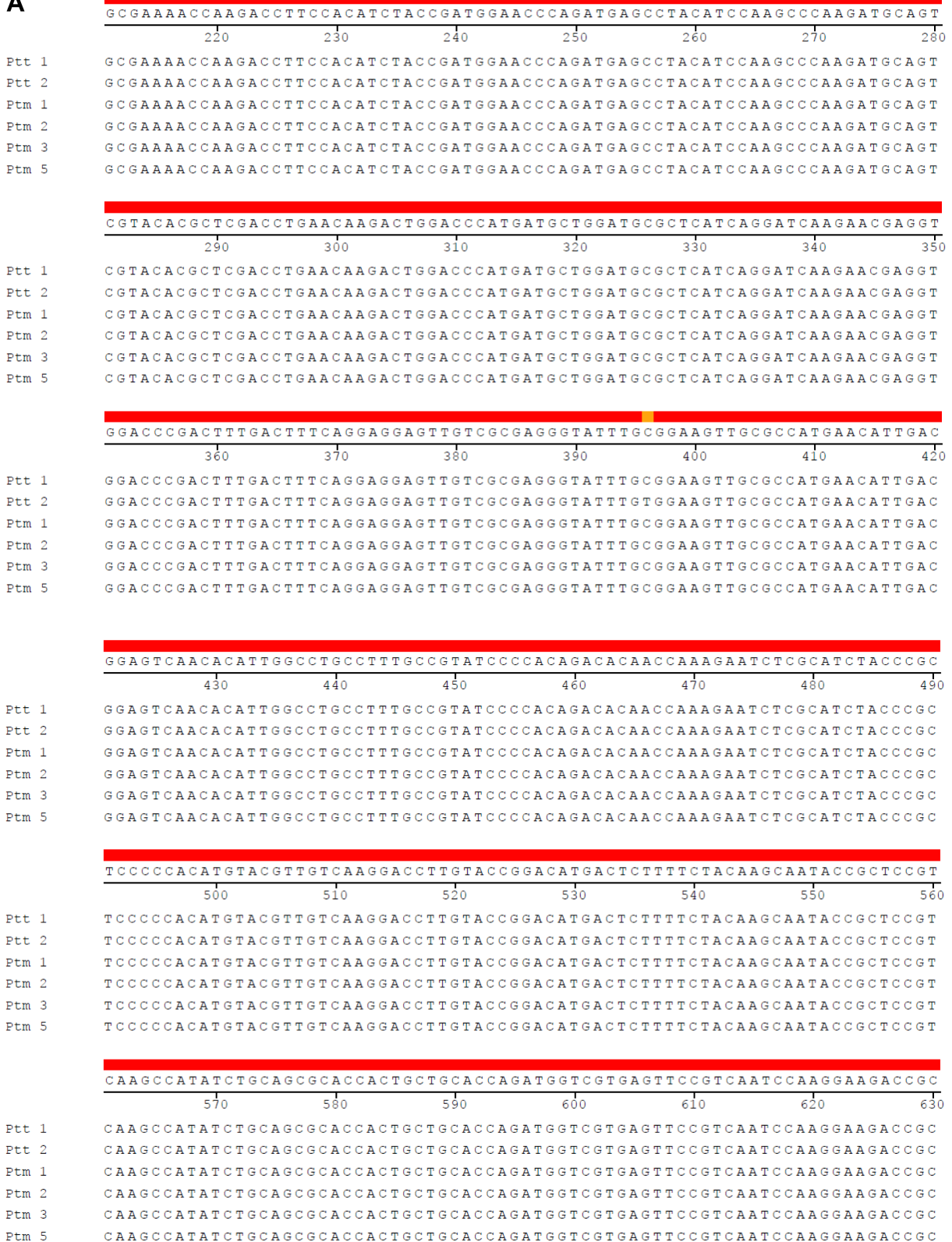
Isolates	Origin	Sensitivity/Resistance	Isolates	Origin	Sensitivity/Resistance
Pt1022	Swansea (UK) 1998	Sensitive toward QoIs and SDHIs	Pt1844	(DE) 2015	Sensitive toward QoIs and SDHIs
Pt1635	Cork, Moorepark (IE) 2010	Lower DMI sensitivity	Pt1755	(UK) 2015	Sensitive toward QoI sand SDHIs
Pt1685	Company Epilogic from Freising harvested anywhere in Germany (DE) 2012	Resistant to QoIs (F129L mutation)	Pt1900	Company Epilogic from Freising harvested between Paris- Reims (FR) 2015	Resistant to SDHIs (G79R mutation)
Pt1669	Company Epilogic from Freising harvested anywhere in Germany (DE) 2012	Resistant to QoIs and SDHIs (F129L+G79R mutant)	Pt1923	Company Epilogic from Freising harvested between St. Menhould-Metz-Saarbrücken (DFR) 2015	Resistant to SDHIs (C-N75S mutation)

SDHI, succinate dehydrogenase inhibitor.

Supplementary Table 5. Half maximum effective concentration values (EC₅₀) of each fungicide obtained for all Algerian *Ptt* and *Ptm* isolates tested

Form	Isolate	Azoxystrobin (mg/l)	Pyraclostrobin (mg/l)	Epoxiconazole (mg/l)	Tebuconazole (mg/l)	Propiconazole (mg/l)	Fluxapyroxad (mg/l)	
<i>Ptm</i>	Pt87	0.015	0.013	0.118	0.291	0.194	0.027	
	Pt152	0.024	0.007	0.166	0.145	0.105	0.023	
	Pt90	0.039	0.026	0.187	0.385	0.430	0.022	
	Pt192	0.027	0.017	0.215	0.253	0.146	0.025	
	P91	0.041	0.015	0.142	1.217	0.149	0.022	
	Pt154	0.025	0.010	0.072	0.119	0.090	0.044	
	Pt115	0.027	0.011	0.132	0.187	0.205	0.019	
	Pt38	0.017	0.005	0.012	0.052	0.092	0.015	
	Pt162	0.021	0.010	0.236	0.444	0.142	0.008	
	Pt102	0.011	0.009	0.091	0.206	0.086	0.020	
	Pt79	0.012	0.003	0.188	0.310	0.123	0.017	
	<i>Ptt</i>	Pt33	0.021	0.008	0.008	0.026	0.032	0.031
		Pt58	0.015	0.005	0.007	0.034	0.050	0.036
		Pt80	0.017	0.009	0.030	0.098	0.071	0.055
		Pt97	0.014	0.005	0.035	0.064	0.056	0.029
		Pt135	0.018	0.006	0.044	0.091	0.102	0.040
		Pt142	0.027	0.007	0.009	0.034	0.040	0.084
Pt169		0.018	0.009	0.039	0.068	0.060	0.042	
Pt195		0.021	0.008	0.050	0.081	0.099	0.062	
Pt196		0.028	0.008	0.010	0.031	0.059	0.027	
Pt209		0.028	0.008	0.010	0.037	0.081	0.070	
Pt217		0.019	0.008	0.040	0.063	0.084	0.055	
Pt228		0.034	0.006	0.010	0.049	0.056	0.035	
Pt129		0.015	0.016	0.022	0.076	0.196	0.034	
Pt123		0.009	0.007	0.002	0.032	0.049	0.013	
Pt117		0.013	0.009	0.104	0.133	0.061	0.026	
Pt157		0.024	0.011	0.121	0.136	0.099	0.414	
Pt176		0.016	0.016	0.084	0.204	0.169	0.054	
Pt185		0.041	0.024	0.125	0.275	0.204	0.042	
Pt125		0.027	0.014	0.037	0.078	0.178	0.043	
Pt166		0.029	0.017	0.152	0.307	0.212	0.041	
Pt148		0.028	0.014	0.099	0.206	0.192	0.064	
Pt01		0.029	0.018	0.052	0.113	0.105	0.034	
Pt61		0.010	0.002	0.260	0.277	0.307	0.016	
Pt21		0.005	0.011	0.059	0.315	0.249	0.037	
Pt108		0.012	0.018	0.012	0.084	0.125	0.041	
Pt112		0.025	0.014	0.193	0.297	0.273	0.033	
Pt143		0.013	0.007	0.070	0.251	0.065	0.058	
Pt119		0.024	0.013	0.015	0.049	0.099	0.076	
Pt64	0.038	0.023	0.026	0.113	0.227	0.098		
Pt74	0.014	0.008	0.228	0.370	0.210	0.042		
Pt172	0.018	0.010	0.087	0.252	0.155	0.054		
Pt66	0.025	0.013	0.133	0.216	0.250	0.034		
Pt63	0.016	0.004	0.054	0.134	0.181	0.021		
Pt181	0.013	0.006	0.005	0.034	0.045	0.032		

Ptt, *Pyrenophora teres* f. *teres*; *Ptm*, *P. teres* f. *maculate*.

A

Supplementary Fig. 1. Alignment of the coding sequence of *sdh-b* of isolates of *Pyrenophora teres* f. *teres* (Ptt 1 and Ptt 2) and *P. teres* f. *maculata* (Ptm 1, Ptm 2, and Ptm 3). Codons 1-301 were sequenced (A). Ptt are from Hungary and were obtained by CBS: CBS 123931 and CBS 123932. Ptm1 and Ptm 2 were also from Hungary and obtained by CBS: CBS 123929 and CBS 123930. Ptm 3 and Ptm 5 were isolated by BASF SE and were from Italy and Denmark, respectively. (B) Alignment of the corresponding amino acid sequence is provided.



AAGAAGCTAGACGGTCTCTACGAGTGCATTCTATGCGCCTGCTGCTCGACATCATGTCCATCGTACTGGT

640 650 660 670 680 690 700

Ptt 1 AAGAAGCTAGACGGTCTCTACGAGTGCATTCTATGCGCCTGCTGCTCGACATCATGTCCATCGTACTGGT

Ptt 2 AAGAAGCTAGACGGTCTCTACGAGTGCATTCTATGCGCCTGCTGCTCGACATCATGTCCATCGTACTGGT

Ptm 1 AAGAAGCTAGACGGTCTCTACGAGTGCATTCTATGCGCCTGCTGCTCGACATCATGTCCATCGTACTGGT

Ptm 2 AAGAAGCTAGACGGTCTCTACGAGTGCATTCTATGCGCCTGCTGCTCGACATCATGTCCATCGTACTGGT

Ptm 3 AAGAAGCTAGACGGTCTCTACGAGTGCATTCTATGCGCCTGCTGCTCGACATCATGTCCATCGTACTGGT

Ptm 5 AAGAAGCTAGACGGTCTCTACGAGTGCATTCTATGCGCCTGCTGCTCGACATCATGTCCATCGTACTGGT



GGAACCAGGAAGAGTACCTTGGCCCCGCTGTTCTCCTCCAATCGTACCGATGGATCGCCGACTCGCGAGA

710 720 730 740 750 760 770

Ptt 1 GGAACCAGGAAGAGTACCTTGGCCCCGCTGTTCTCCTCCAATCGTACCGATGGATCGCCGACTCGCGAGA

Ptt 2 GGAACCAGGAAGAATACTTGGCCCCGCTGTTCTCCTCCAATCGTACCGATGGATCGCCGACTCGCGAGA

Ptm 1 GGAACCAGGAAGAGTACCTTGGCCCCGCTGTTCTCCTCCAATCGTACCGATGGATCGCCGACTCGCGAGA

Ptm 2 GGAACCAGGAAGAGTACCTTGGCCCCGCTGTTCTCCTCCAATCGTACCGATGGATCGCCGACTCGCGAGA

Ptm 3 GGAACCAGGAAGAGTACCTTGGCCCCGCTGTTCTCCTCCAATCGTACCGATGGATCGCCGACTCGCGAGA

Ptm 5 GGAACCAGGAAGAGTACCTTGGCCCCGCTGTTCTCCTCCAATCGTACCGATGGATCGCCGACTCGCGAGA



CGAGAAGAAGGCCGAGCGACAGGACGCCCTCAACAACAGCATGAGCTTATATCGATGCCACACCATTCTC

780 790 800 810 820 830 840

Ptt 1 CGAGAAGAAGGCCGAGCGACAGGACGCCCTCAACAACAGCATGAGCTTGTACCGATGCCACACCATTCTC

Ptt 2 CGAGAAGAAGGCCGAGCGACAGGACGCCCTCAACAACAGCATGAGCTTGTACCGATGCCACACCATTCTC

Ptm 1 CGAGAAGAAGGCCGAGCGACAGGACGCCCTCAACAACAGCATGAGCTTATATCGATGCCACACCATTCTC

Ptm 2 CGAGAAGAAGGCCGAGCGACAGGACGCCCTCAACAACAGCATGAGCTTATATCGATGCCACACCATTCTC

Ptm 3 CGAGAAGAAGGCCGAGCGACAGGACGCCCTCAACAACAGCATGAGCTTATATCGATGCCACACCATTCTC

Ptm 5 CGAGAAGAAGGCCGAGCGACAGGACGCCCTCAACAACAGCATGAGCTTATATCGATGCCACACCATTCTC



AACTGCTCAAGGACATGCCCAAGGGCCTCAACCCTGCCCTGGCCATTGCTGAGATCAAGAAG

850 860 870 880 890 900

Ptt 1 AACTGCTCAAGGACATGTCCCAAGGGCCTCAACCCTGCCCTGGCCATTGCTGAGATCAAGAAG

Ptt 2 AACTGCTCAAGGACATGTCCCAAGGGCCTCAACCCTGCCCTGGCCATTGCTGAGATCAAGAAG

Ptm 1 AACTGCTCAAGGACATGCCCAAGGGCCTCAACCCTGCCCTGGCCATTGCTGAGATCAAGAAG

Ptm 2 AACTGCTCAAGGACATGCCCAAGGGCCTCAACCCTGCCCTGGCCATTGCTGAGATCAAGAAG

Ptm 3 AACTGCTCAAGGACATGCCCAAGGGCCTCAACCCTGCCCTGGCCATTGCTGAGATCAAGAAG

Ptm 5 AACTGCTCAAGGACATGCCCAAGGGCCTCAACCCTGCCCTGGCCATTGCTGAGATCAAGAAG

Supplementary Fig. 1. Continued.

B

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 Ptt 2 MACTRALTRLATKRIAVRPAVFSRGFASVNDVHARDPISKTAEKIVPDAARPTIPESKTSTVQEPSPSKD
 Ptm 1 MACTRALTRLATKRIAVRPAVFSRGFASVNDVHARDPISKTAEKIVPDAARPTIPESKTSTVQEPSPSKD
 Ptm 2 MACTRALTRLATKRIAVRPAVFSRGFASVNDVHARDPISKTAEKIVPDAARPTIPESKTSTVQEPSPSKD
 Ptm 3 MACTRALTRLATKRIAVRPAVFSRGFASVNDVHARDPISKTAEKIVPDAARPTIPESKTSTVQEPSPSKD
 Ptm 5 MACTRALTRLATKRIAVRPAVFSRGFASVNDVHARDPISKTAEKIVPDAARPTIPESKTSTVQEPSPSKD

AKTKTFHIYRWNPDEPTSKPKMQSYTLDLNKTGPMMLDALIRIKNEVDPTLTFRRSCREGICGSCAMNID
 80 90 100 110 120 130 140
 Ptt 1 AKTKTFHIYRWNPDEPTSKPKMQSYTLDLNKTGPMMLDALIRIKNEVDPTLTFRRSCREGICGSCAMNID
 Ptt 2 AKTKTFHIYRWNPDEPTSKPKMQSYTLDLNKTGPMMLDALIRIKNEVDPTLTFRRSCREGICGSCAMNID
 Ptm 1 AKTKTFHIYRWNPDEPTSKPKMQSYTLDLNKTGPMMLDALIRIKNEVDPTLTFRRSCREGICGSCAMNID
 Ptm 2 AKTKTFHIYRWNPDEPTSKPKMQSYTLDLNKTGPMMLDALIRIKNEVDPTLTFRRSCREGICGSCAMNID
 Ptm 3 AKTKTFHIYRWNPDEPTSKPKMQSYTLDLNKTGPMMLDALIRIKNEVDPTLTFRRSCREGICGSCAMNID
 Ptm 5 AKTKTFHIYRWNPDEPTSKPKMQSYTLDLNKTGPMMLDALIRIKNEVDPTLTFRRSCREGICGSCAMNID

GVNTLAACLRIPTDTTKESRIYPLPHMYVVKDLVDPMTLFYKQYRSVKPYLQRTTAAPDGREFRQSKEDR
 150 160 170 180 190 200 210
 Ptt 1 GVNTLAACLRIPTDTTKESRIYPLPHMYVVKDLVDPMTLFYKQYRSVKPYLQRTTAAPDGREFRQSKEDR
 Ptt 2 GVNTLAACLRIPTDTTKESRIYPLPHMYVVKDLVDPMTLFYKQYRSVKPYLQRTTAAPDGREFRQSKEDR
 Ptm 1 GVNTLAACLRIPTDTTKESRIYPLPHMYVVKDLVDPMTLFYKQYRSVKPYLQRTTAAPDGREFRQSKEDR
 Ptm 2 GVNTLAACLRIPTDTTKESRIYPLPHMYVVKDLVDPMTLFYKQYRSVKPYLQRTTAAPDGREFRQSKEDR
 Ptm 3 GVNTLAACLRIPTDTTKESRIYPLPHMYVVKDLVDPMTLFYKQYRSVKPYLQRTTAAPDGREFRQSKEDR
 Ptm 5 GVNTLAACLRIPTDTTKESRIYPLPHMYVVKDLVDPMTLFYKQYRSVKPYLQRTTAAPDGREFRQSKEDR

KKLDGLYECILCACCSTSCPSYWWNQEEYLGPAVLLQSYRWIADSRDEKKAERQDALNNSMSLYRCHTIL
 220 230 240 250 260 270 280
 Ptt 1 KKLDGLYECILCACCSTSCPSYWWNQEEYLGPAVLLQSYRWIADSRDEKKAERQDALNNSMSLYRCHTIL
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 Ptm 1 KKLDGLYECILCACCSTSCPSYWWNQEEYLGPAVLLQSYRWIADSRDEKKAERQDALNNSMSLYRCHTIL
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 Ptm 3 KKLDGLYECILCACCSTSCPSYWWNQEEYLGPAVLLQSYRWIADSRDEKKAERQDALNNSMSLYRCHTIL
 Ptm 5 KKLDGLYECILCACCSTSCPSYWWNQEEYLGPAVLLQSYRWIADSRDEKKAERQDALNNSMSLYRCHTIL

NCSRTC PKGLNPALAI AEIKK
 290 300
 Ptt 1 NCSRTC PKGLNPALAI AEIKK
 Ptt 2 NCSRTC PKGLNPALAI AEIKK
 Ptm 1 NCSRTC PKGLNPALAI AEIKK
 Ptm 2 NCSRTC PKGLNPALAI AEIKK
 Ptm 3 NCSRTC PKGLNPALAI AEIKK
 Ptm 5 NCSRTC PKGLNPALAI AEIKK

Supplementary Fig. 1. Continued.

A

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ATGGCTTCTCAGCGCATATTTTCAGCTCGGTCTGCGACGAGTCGCTGCGCCTAGTTTGAGGGTGCAGCCCG
      10          20          30          40          50          60          70
Ptt 1  ATGGCTTCTCAGCGCATATTTTCAGCTCGGTCTGCGACGAGTCGCTGCGCCTAGTTTGAGGGTGCAGCCCG
Ptt 2  ATGGCTTCTCAGCGCATATTTTCAGCTCGGTCTGCGACGAGTCGCTGCGCCTAGTTTGAGGGTGCAGCCCG
Ptm 1  ATGGCTTCTCAGCGCATATTTTCAGCTCGGTCTGCGACGAGTCGCTGCGCCTAGTTTGAGGGTGCAGCCCG
Ptm 2  ATGGCTTCTCAGCGCATATTTTCAGCTCGGTCTGCGACGAGTCGCTGCGCCTAGTTTGAGGGTGCAGCCCG
Ptm 3  ATGGCTTCTCAGCGCATATTTTCAGCTCGGTCTGCGACGAGTCGCTGCGCCTAGTTTGAGGGTGCAGCCCG
Ptm 5  ATGGCTTCTCAGCGCATATTTTCAGCTCGGTCTGCGACGAGTCGCTGCGCCTAGTTTGAGGGTGCAGCCCG

CAGGACGTTTGTATGCAGCGGAGACTTGCAGCAACTGGAAACGCCTCACAGTCTGAAGCCGCCAGATCCT
      80          90          100         110         120         130         140
Ptt 1  CAGGACGTTTGTATGCAGCGGAGACTTGCAGCAACTGGAAACGCCTCACAGTCTGAAGCCGCCAGATCCT
Ptt 2  CAGGACGTTTGTATGCAGCGGAGACTTGCAGCAACTGGAAACGCCTCACAGTCTGAAGCCGCCAGATCCT
Ptm 1  CAGGACGTTTGTATGCAGCGGAGACTTGCAGCAACTGGAAACGCCTCACAGTCTGAAGCCGCCAGATCCT
Ptm 2  CAGGACGTTTGTATGCAGCGGAGACTTGCAGCAACTGGAAACGCCTCACAGTCTGAAGCCGCCAGATCCT
Ptm 3  CAGGACGTTTGTATGCAGCGGAGACTTGCAGCAACTGGAAACGCCTCACAGTCTGAAGCCGCCAGATCCT
Ptm 5  CAGGACGTTTGTATGCAGCGGAGACTTGCAGCAACTGGAAACGCCTCACAGTCTGAAGCCGCCAGATCCT

CGCAAAACAGCGCCTCAACCGACCCGTCTCCCCCACTTGGCCATCTACAAGCCGCAAATCACCTGGTTG
      150         160         170         180         190         200         210
Ptt 1  CGCAAAACAGCGCCTCAACCGACCCGTCTCCCCCACTTGGCCATCTACAAGCCGCAAATCACCTGGTTG
Ptt 2  CGCAAAACAGCGCCTCAACCGACCCGTCTCCCCCACTTGGCCATCTACAAGCCGCAAATCACCTGGTTG
Ptm 1  CGCAAAACAGCGCCTCAACCGACCCGTCTCCCCCACTTGGCCATCTACAAGCCGCAAATCACCTGGTTG
Ptm 2  CGCAAAACAGCGCCTCAACCGACCCGTCTCCCCCACTTGGCCATCTACAAGCCGCAAATCACCTGGTTG
Ptm 3  CGCAAAACAGCGCCTCAACCGACCCGTCTCCCCCACTTGGCCATCTACAAGCCGCAAATCACCTGGTTG
Ptm 5  CGCAAAACAGCGCCTCAACCGACCCGTCTCCCCCACTTGGCCATCTACAAGCCGCAAATCACCTGGTTG

GCCTCCTCGCTCAACCGCATCACTGGTATCGTTTCTCTCCGGTTCCCTCTACCTCTTCGGCATCGCCTACC
      220         230         240         250         260         270         280
Ptt 1  GCCTCCTCGCTCAACCGCATCACTGGTATCGTTTCTCTCCGGTTCCCTCTACCTCTTCGGCATCGCCTACC
Ptt 2  GCCTCCTCGCTCAACCGCATCACTGGTATCGTTTCTCTCCGGTTCCCTCTACCTCTTCGGCATCGCCTACC
Ptm 1  GCCTCCTCGCTCAACCGCATCACTGGTATCGTTTCTCTCCGGTTCCCTCTACCTCTTCGGCATCGCCTACC
Ptm 2  GCCTCCTCGCTCAACCGCATCACTGGTATCGTTTCTCTCCGGTTCCCTCTACCTCTTCGGCATCGCCTACC
Ptm 3  GCCTCCTCGCTCAACCGCATCACTGGTATCGTTTCTCTCCGGTTCCCTCTACCTCTTCGGCATCGCCTACC
Ptm 5  GCCTCCTCGCTCAACCGCATCACTGGTATCGTTTCTCTCCGGTTCCCTCTACCTCTTCGGCATCGCCTACC

TTGTCGCTCCCTACACTGGATGGCACCTCGAGACGCAGTCCATGGTTGCGACGGTTGCAGCTTGGCCTGC
      290         300         310         320         330         340         350
Ptt 1  TTGTCGCTCCCTACACTGGATGGCACCTCGAGACGCAGTCCATGGTTGCGACGGTTGCAGCTTGGCCTGC
Ptt 2  TTGTCGCTCCCTACACTGGATGGCACCTCGAGACGCAGTCCATGGTTGCGACGGTTGCAGCTTGGCCTGC
Ptm 1  TTGTCGCTCCCTACACTGGATGGCACCTCGAGACGCAGTCCATGGTTGCGACGGTTGCAGCTTGGCCTGC
Ptm 2  TTGTCGCTCCCTACACTGGATGGCACCTCGAGACGCAGTCCATGGTTGCGACGGTTGCAGCTTGGCCTGC
Ptm 3  TTGTCGCTCCCTACACTGGATGGCACCTCGAGACGCAGTCCATGGTTGCGACGGTTGCAGCTTGGCCTGC
Ptm 5  TTGTCGCTCCCTACACTGGATGGCACCTCGAGACGCAGTCCATGGTTGCGACGGTTGCAGCTTGGCCTGC

GGCTGTCAAGGCGGGACTCAAGGCCTTTTATGCGTTCCCTTCTTCTTTTACAGCCTTAACGGATTGAGG
      360         370         380         390         400         410         420
Ptt 1  GGCTGTCAAGGCGGGACTCAAGGCCTTTTATGCGTTCCCTTCTTCTTTTACAGCCTTAACGGATTGAGG
Ptt 2  GGCTGTCAAGGCGGGACTCAAGGCCTTTTATGCGTTCCCTTCTTCTTTTACAGCCTTAACGGATTGAGG
Ptm 1  GGCTGTCAAGGCGGGACTCAAGGCCTTTTATGCGTTCCCTTCTTCTTTTACAGCCTTAACGGATTGAGG
Ptm 2  GGCTGTCAAGGCGGGACTCAAGGCCTTTTATGCGTTCCCTTCTTCTTTTACAGCCTTAACGGATTGAGG
Ptm 3  GGCTGTCAAGGCGGGACTCAAGGCCTTTTATGCGTTCCCTTCTTCTTTTACAGCCTTAACGGATTGAGG
Ptm 5  GGCTGTCAAGGCGGGACTCAAGGCCTTTTATGCGTTCCCTTCTTCTTTTACAGCCTTAACGGATTGAGG

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Supplementary Fig. 2. Alignment of the complete coding sequence of *sdh-c* of isolates of *Pyrenophora teres* f. *teres* (Ptt 1 and Ptt 2) and *P. teres* f. *maculata* (Ptm 1, Ptm 2, and Ptm 3) (A). Ptt are from Hungary and were obtained by CBS: CBS 123931 and CBS 123932. Ptm1 and Ptm 2 were also from Hungary and obtained by CBS: CBS 123929 and CBS 123930. Ptm 3 and Ptm 5 were isolated by BASF SE and were from Italy and Denmark, respectively. (B) Alignment of the corresponding amino acid sequence is provided.

CATTTGGCTTGGGATGTCCGGTGTGGATTCAAGAACCAGCAGGTTATCCGTACCGGGTGGGGTGTGGTTG
 430 440 450 460 470 480 490

Ptt 1 CATTTGGCTTGGGATGTCCGGTGTGGATTCAAGAACCAGCAGGTTATCCGTACCGGGTGGGGTGTGGTTG 490
 Ptt 2 CATTTGGCTTGGGATGTCCGGTGTGGATTCAAGAACCAGCAGGTTATCCGTACCGGGTGGGGTGTGGTTG 490
 Ptm 1 CATTTGGCTTGGGATGTCCGGTGTGGATTCAAGAACCAGCAGGTTATCCGTACCGGGTGGGGTGTGGTTG 490
 Ptm 2 CATTTGGCTTGGGATGTCCGGTGTGGATTCAAGAACCAGCAGGTTATCCGTACCGGGTGGGGTGTGGTTG 490
 Ptm 3 CATTTGGCTTGGGATGTCCGGTGTGGATTCAAGAACCAGCAGGTTATCCGTACCGGGTGGGGTGTGGTTG 490
 Ptm 5 CATTTGGCTTGGGATGTCCGGTGTGGATTCAAGAACCAGCAGGTTATCCGTACCGGGTGGGGTGTGGTTG 490

GACTGACGGCTGTGATGGGCCTGTACTACACCTTTGCGGGATAA
 500 510 520 530

Ptt 1 GACTGACGGCTGTGATGGGCCTGTACTACACCTTTGCGGGATAA 534
 Ptt 2 GACTGACGGCTGTGATGGGCCTGTACTACACCTTTGCGGGATAA 534
 Ptm 1 GACTGACGGCTGTGATGGGCCTGTACTACACCTTTGCGGGATAA 534
 Ptm 2 GACTGACGGCTGTGATGGGCCTGTACTACACCTTTGCGGGATAA 534
 Ptm 3 GACTGACGGCTGTGATGGGCCTGTACTACACCTTTGCGGGATAA 534
 Ptm 5 GACTGACGGCTGTGATGGGCCTGTACTACACCTTTGCGGGATAA 534

Supplementary Fig. 2. Continued.

B

MASQRIFQLGLRRVAAPSLRVQPAGRLMQRRRLAATGNASQSEAAQILAKQRLNRPVSPHLAIYKQITWL
 10 20 30 40 50 60 70

Ptt 1 MASQRIFQLGLRRVAAPSLRVQPAGRLMQRRRLAATGNASQSEAAQILAKQRLNRPVSPHLAIYKQITWL
 Ptt 2 MASQRIFQLGLRRVAAPSLRVQPAGRLMQRRRLAATGNASQSEAAQILAKQRLNRPVSPHLAIYKQITWL
 Ptm 1 MASQRIFQLGLRRVAAPSLRVQPAGRLMQRRRLAATGNASQSEAAQILAKQRLNRPVSPHLAIYKQITWL
 Ptm 2 MASQRIFQLGLRRVAAPSLRVQPAGRLMQRRRLAATGNASQSEAAQILAKQRLNRPVSPHLAIYKQITWL
 Ptm 3 MASQRIFQLGLRRVAAPSLRVQPAGRLMQRRRLAATGNASQSEAAQILAKQRLNRPVSPHLAIYKQITWL
 Ptm 5 MASQRIFQLGLRRVAAPSLRVQPAGRLMQRRRLAATGNASQSEAAQILAKQRLNRPVSPHLAIYKQITWL

ASSLNRRITGIVLSGSLYLFGIAYLVAPYTGWHLETQSMVATVAAWPAAVKAGLKAFYAFPPFFHSLNGLR
 80 90 100 110 120 130 140

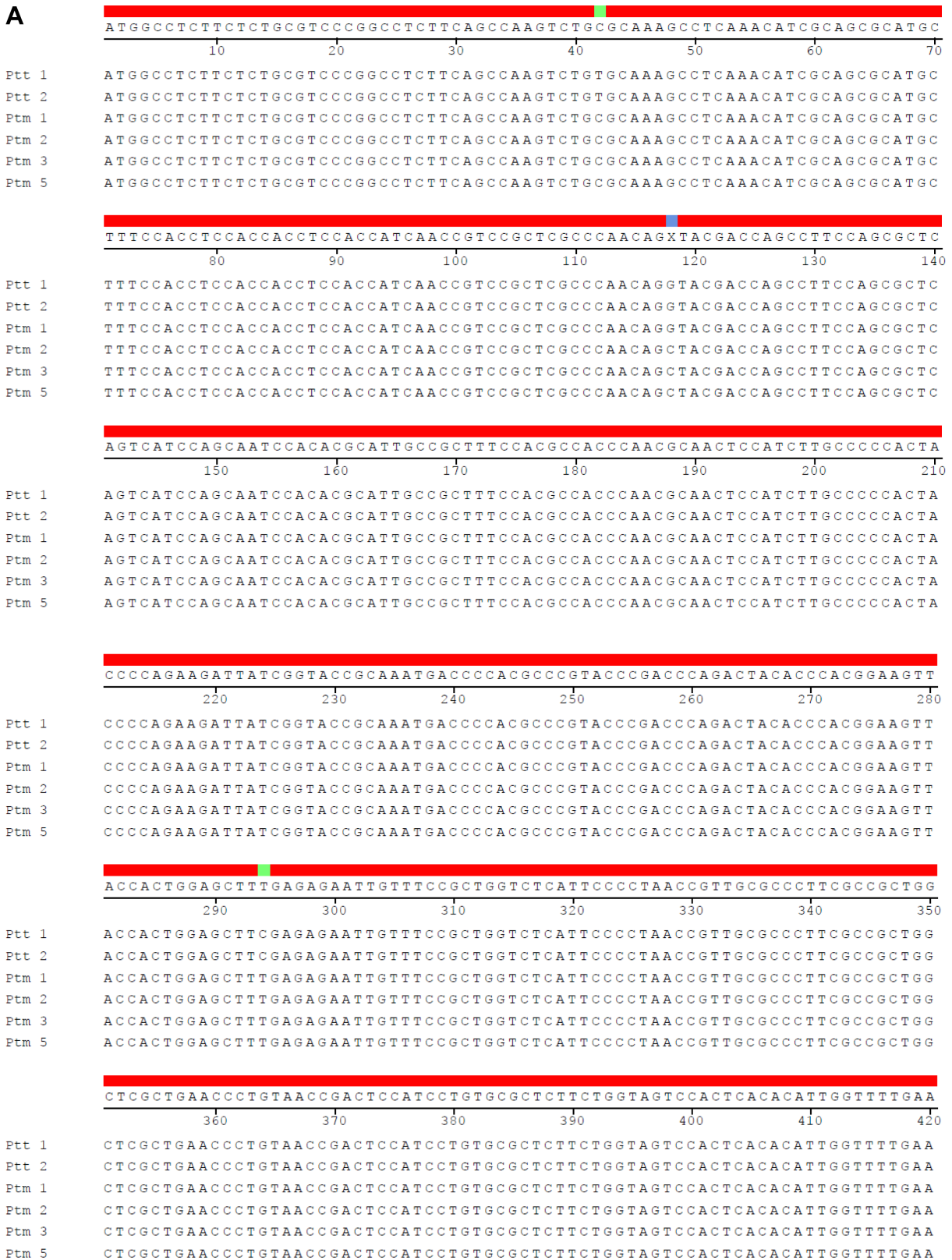
Ptt 1 ASSLNRRITGIVLSGSLYLFGIAYLVAPYTGWHLETQSMVATVAAWPAAVKAGLKAFYAFPPFFHSLNGLR
 Ptt 2 ASSLNRRITGIVLSGSLYLFGIAYLVAPYTGWHLETQSMVATVAAWPAAVKAGLKAFYAFPPFFHSLNGLR
 Ptm 1 ASSLNRRITGIVLSGSLYLFGIAYLVAPYTGWHLETQSMVATVAAWPAAVKAGLKAFYAFPPFFHSLNGLR
 Ptm 2 ASSLNRRITGIVLSGSLYLFGIAYLVAPYTGWHLETQSMVATVAAWPAAVKAGLKAFYAFPPFFHSLNGLR
 Ptm 3 ASSLNRRITGIVLSGSLYLFGIAYLVAPYTGWHLETQSMVATVAAWPAAVKAGLKAFYAFPPFFHSLNGLR
 Ptm 5 ASSLNRRITGIVLSGSLYLFGIAYLVAPYTGWHLETQSMVATVAAWPAAVKAGLKAFYAFPPFFHSLNGLR

HLAWDVGVGFKNQVIRTGWGVVGLTAVMGLYYTFAG-
 150 160 170

Ptt 1 HLAWDVGVGFKNQVIRTGWGVVGLTAVMGLYYTFAG.
 Ptt 2 HLAWDVGVGFKNQVIRTGWGVVGLTAVMGLYYTFAG.
 Ptm 1 HLAWDVGVGFKNQVIRTGWGVVGLTAVMGLYYTFAG.
 Ptm 2 HLAWDVGVGFKNQVIRTGWGVVGLTAVMGLYYTFAG.
 Ptm 3 HLAWDVGVGFKNQVIRTGWGVVGLTAVMGLYYTFAG.
 Ptm 5 HLAWDVGVGFKNQVIRTGWGVVGLTAVMGLYYTFAG.

Supplementary Fig. 2. Continued.

A



Supplementary Fig. 3. Alignment of the coding sequence of *sdh-d* of isolates of *Pyrenophora teres* f. *teres* (Ptt 1 and Ptt 2) and *P. teres* f. *maculata* (Ptm 1, Ptm 2 and Ptm 3). Codons 1-192 were sequenced (A). Ptt are from Hungary and were obtained by CBS: CBS 123931 and CBS 123932. Ptm1 and Ptm 2 were also from Hungary and obtained by CBS: CBS 123929 and CBS 123930. Ptm 3 and Ptm 5 were isolated by BASF SE and were from Italy and Denmark, respectively. (B) Alignment of the corresponding amino acid sequence is provided.

TCATGCATCGTCGATTATTTCCCAAGAAGCGCGTTCCCAAGACTCGTGCAGCCGCAATGTGGGCTCTTC
 430 440 450 460 470 480 490

Ptt 1 TCATGCATCGTCGATTATTTCCCAAGAAGCGCGTTCCCAAGACTCGTGCAGCCGCAATGTGGGCTCTTC
 Ptt 2 TCATGCATCGTCGATTATTTCCCAAGAAGCGCGTTCCCAAGACTCGTGCAGCCGCAATGTGGGCTCTTC
 Ptm 1 TCATGCATCGTCGATTATTTCCCAAGAAGCGCGTTCCCAAGACTCGTGCAGCTGCAATGTGGGCTCTTC
 Ptm 2 TCATGCATCGTCGATTATTTCCCAAGAAGCGCGTTCCCAAGACTCGTGCAGCCGCAATGTGGGCTCTTC
 Ptm 3 TCATGCATCGTCGATTATTTCCCAAGAAGCGCGTTCCCAAGACTCGTGCAGCCGCAATGTGGGCTCTTC
 Ptm 5 TCATGCATCGTCGATTATTTCCCAAGAAGCGCGTTCCCAAGACTCGTGCAGCCGCAATGTGGGCTCTTC

GTGCTGGAACCGTTGTTCTCGGTCTTGCACTCTACTCGTTCGAGACGAATGATGTTGGTATTACCGAGGC
 500 510 520 530 540 550 560

Ptt 1 GTGCTGGAACCGTTGTTCTCGGTCTTGCACTCTACTCGTTCGAGACGAATGATGTTGGTATTACCGAGGC
 Ptt 2 GTGCTGGAACCGTTGTTCTCGGTCTTGCACTCTACTCGTTCGAGACGAATGATGTTGGTATTACCGAGGC
 Ptm 1 GTGCTGGAACCGTTGTTCTCGGTCTTGCACTCTACTCGTTCGAGACGAATGATGTTGGTATTACCGAGGC
 Ptm 2 GTGCTGGAACCGTTGTTCTCGGTCTTGCACTCTACTCGTTCGAGACGAATGATGTTGGTATTACCGAGGC
 Ptm 3 GTGCTGGAACCGTTGTTCTCGGTCTTGCACTCTACTCGTTCGAGACGAATGATGTTGGTATTACCGAGGC
 Ptm 5 GTGCTGGAACCGTTGTTCTCGGTCTTGCACTCTACTCGTTCGAGACGAATGATGTTGGTATTACCGAGGC

TGTTGCTAGGCTGTGG
 570

Ptt 1 TGTTGCTAGGCTGTGG
 Ptt 2 TGTTGCTAGGCTGTGG
 Ptm 1 TGTTGCTAGGCTGTGG
 Ptm 2 TGTTGCTAGGCTGTGG
 Ptm 3 TGTTGCTAGGCTGTGG
 Ptm 5 TGTTGCTAGGCTGTGG

B

MASSLRPGLFSQVCAKPPQTSQRMLSTSTTSTINRPLAQQRPAFQRSVIQQSTRIA AFHATQRNSILPPL
 10 20 30 40 50 60 70

Ptt 1 MASSLRPGLFSQVCAKPPQTSQRMLSTSTTSTINRPLAQQRPAFQRSVIQQSTRIA AFHATQRNSILPPL
 Ptt 2 MASSLRPGLFSQVCAKPPQTSQRMLSTSTTSTINRPLAQQRPAFQRSVIQQSTRIA AFHATQRNSILPPL
 Ptm 1 MASSLRPGLFSQVCAKPPQTSQRMLSTSTTSTINRPLAQQRPAFQRSVIQQSTRIA AFHATQRNSILPPL
 Ptm 2 MASSLRPGLFSQVCAKPPQTSQRMLSTSTTSTINRPLAQQLRPAFQRSVIQQSTRIA AFHATQRNSILPPL
 Ptm 3 MASSLRPGLFSQVCAKPPQTSQRMLSTSTTSTINRPLAQQLRPAFQRSVIQQSTRIA AFHATQRNSILPPL
 Ptm 5 MASSLRPGLFSQVCAKPPQTSQRMLSTSTTSTINRPLAQQLRPAFQRSVIQQSTRIA AFHATQRNSILPPL

PQKIIGTANDPTVPDPDYTHGSYHWSFERIVSAGLIPLTVAPFAAGSLNPVTD SILCALLVVHSHIGFE
 80 90 100 110 120 130 140

Ptt 1 PQKIIGTANDPTVPDPDYTHGSYHWSFERIVSAGLIPLTVAPFAAGSLNPVTD SILCALLVVHSHIGFE
 Ptt 2 PQKIIGTANDPTVPDPDYTHGSYHWSFERIVSAGLIPLTVAPFAAGSLNPVTD SILCALLVVHSHIGFE
 Ptm 1 PQKIIGTANDPTVPDPDYTHGSYHWSFERIVSAGLIPLTVAPFAAGSLNPVTD SILCALLVVHSHIGFE
 Ptm 2 PQKIIGTANDPTVPDPDYTHGSYHWSFERIVSAGLIPLTVAPFAAGSLNPVTD SILCALLVVHSHIGFE
 Ptm 3 PQKIIGTANDPTVPDPDYTHGSYHWSFERIVSAGLIPLTVAPFAAGSLNPVTD SILCALLVVHSHIGFE
 Ptm 5 PQKIIGTANDPTVPDPDYTHGSYHWSFERIVSAGLIPLTVAPFAAGSLNPVTD SILCALLVVHSHIGFE

SCIVDYFPKKRVPKTRAAAMWALRAGTVVLGLALYSFETNDV GITEAVARLW
 150 160 170 180 190

Ptt 1 SCIVDYFPKKRVPKTRAAAMWALRAGTVVLGLALYSFETNDV GITEAVARLW
 Ptt 2 SCIVDYFPKKRVPKTRAAAMWALRAGTVVLGLALYSFETNDV GITEAVARLW
 Ptm 1 SCIVDYFPKKRVPKTRAAAMWALRAGTVVLGLALYSFETNDV GITEAVARLW
 Ptm 2 SCIVDYFPKKRVPKTRAAAMWALRAGTVVLGLALYSFETNDV GITEAVARLW
 Ptm 3 SCIVDYFPKKRVPKTRAAAMWALRAGTVVLGLALYSFETNDV GITEAVARLW
 Ptm 5 SCIVDYFPKKRVPKTRAAAMWALRAGTVVLGLALYSFETNDV GITEAVARLW

Supplementary Fig. 3. Continued.