

E. A. Rangel-Montoya, M. Paolinelli, P. Rolshausen, R. Hernandez-Martinez (2020). The role of melanin in the grapevine trunk disease pathogen *Lasiodiplodia gilanensis*. *Phytopathologia Mediterranea* 59(3): 549-563. doi: 10.14601/Phyto-11685

SUPPLEMENTARY INFORMATION

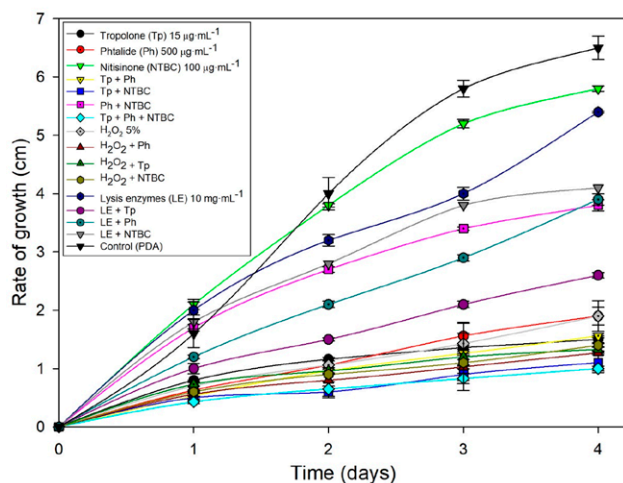


Figure S1. Mean colony dimensions of *Lasiodiplodia gilanensis* in the presence of different melanin inhibitors and enzymatic and oxidative stress factors. Treatments were incubated at 30°C for 4 d. Bars indicate the standard errors.

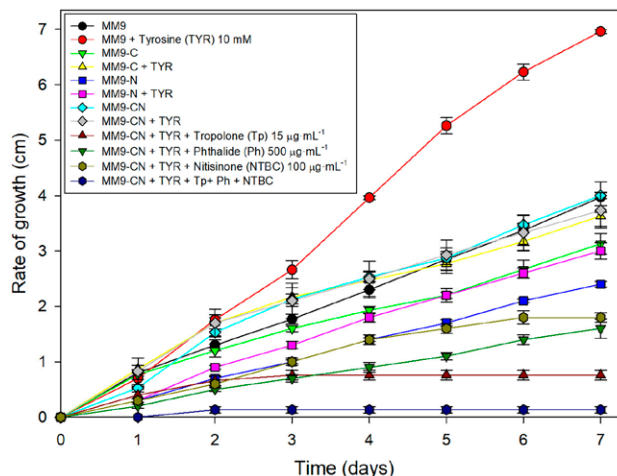


Figure S2. Mean colony dimensions of *Lasiodiplodia gilanensis* in the presence of tyrosine as a carbon and nitrogen source and combined with different melanin inhibitors. The fungus was incubated at 30°C for 7 d. Bars indicate standard errors.

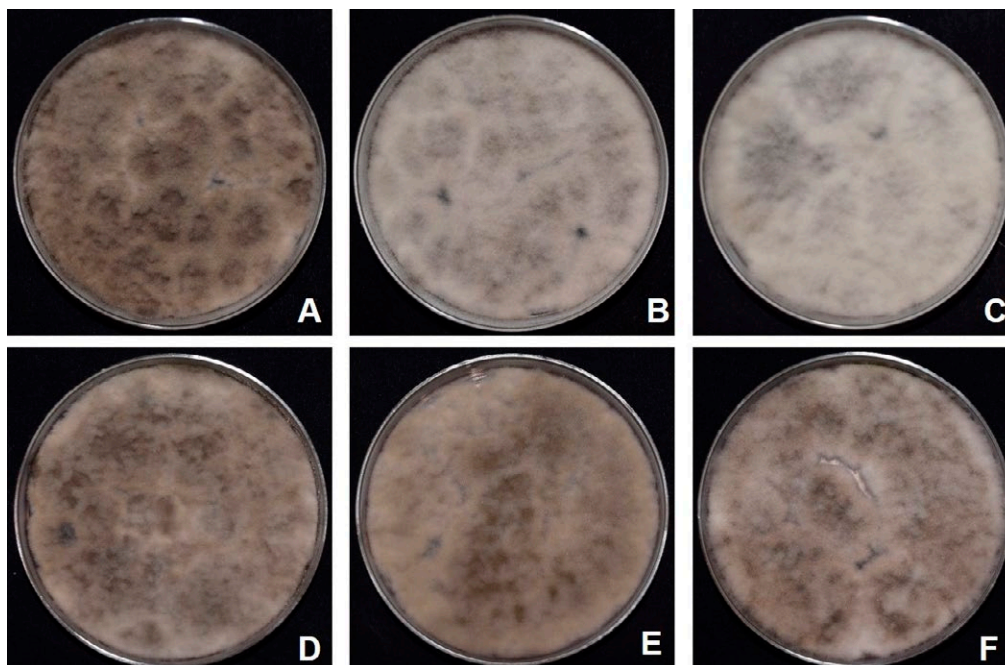


Figure S3. Germination of *Lasiodiplodia gilanensis* UCD256Ma conidia after 96h incubation following exposure to UV radiation. A) From hyaline conidia without exposure to UV (control), B) Hyaline conidia exposed to UV for 30 min. C) Hyaline conidia exposed to UV for 60 min. D) Pigmented conidia without exposure to UV (control). E) Pigmented conidia exposed to UV for 30 min. F) Pigmented conidia exposed to UV for 60 min.

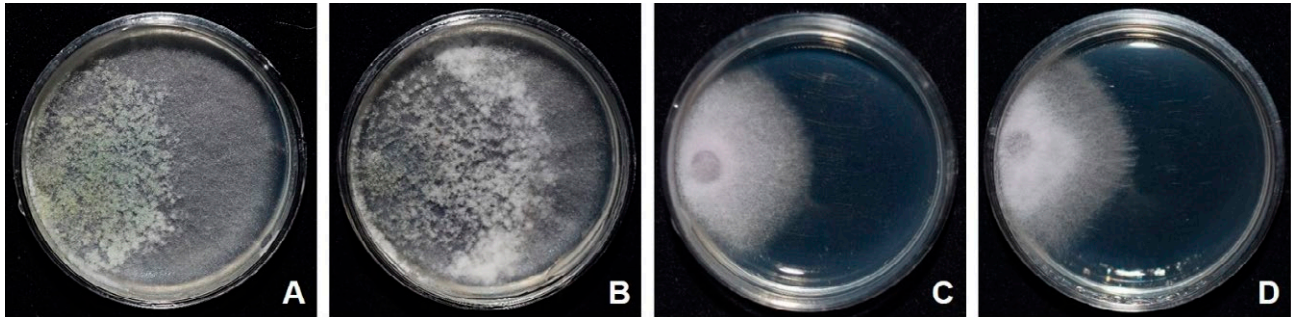


Figure S4. Effects of tropolone on non-melanized fungi in culture. A) *Trichoderma asperellum* on PDA. B) *T. asperellum* on PDA + Tp. C) *Fusarium oxysporum* on PDA. D) *F. oxysporum* PDA + Tp. PDA, Control; Tp, 15 $\mu\text{g mL}^{-1}$ tropolone.

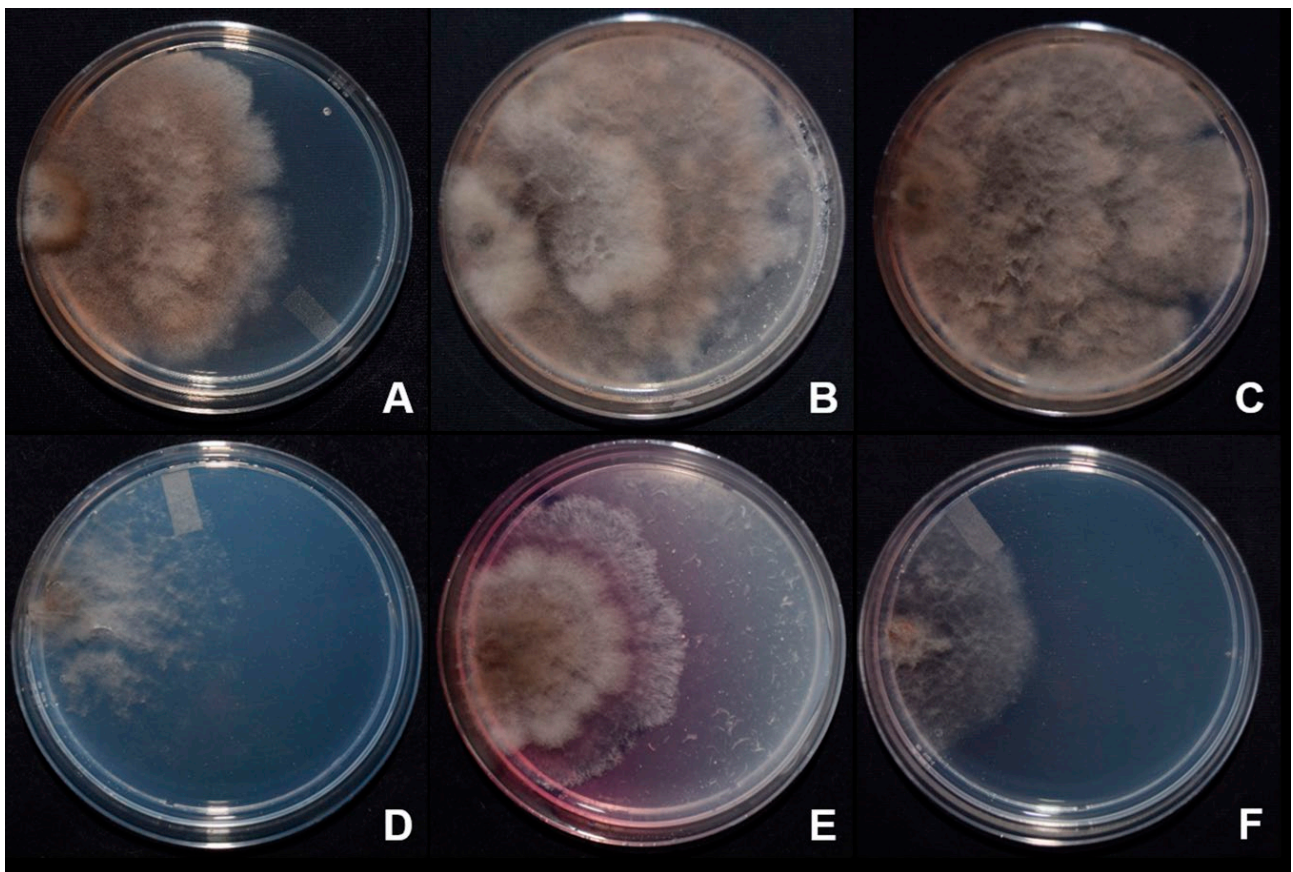


Figure S5. Growth of *Lasiodiplodia gilanensis* UCD256Ma in tyrosine (Tyr) 10 mM and phenylalanine (Phe) 5 mM. A) MM9 (control); B) MM9 + Tyr; C) MM9 + Phe; D) MM9-CN (control); E) MM9-CN + Tyr; F) MM9-CN + Phe. MM9: complete medium; MM9-CN: without carbon and nitrogen source.

Table S1. Sequence genomes of *Botryosphaeriaceae*.

Species	Responsible	Isolate	Date	GenBank ID
<i>Neofusicoccum parvum</i>	University of California Davis	UCRNP2	2013	651758
<i>Diplodia seriata</i>	University of California Davis	DS831	2015	339321
	INRA	F98.1	2017	965351
<i>Botryosphaeria dothidea</i>	Qingdao Agricultural University	LW030101	2016	788841
<i>Diplodia corticola</i>	University of Aveiro	CBS 112549	2016	893101
<i>Lasiodiplodia theobromae</i>	Beijing Academy of Agriculture and Forestry Sciences	CSS-01s	2017	1082361
	University of Aveiro	LA-SOL3	2019	4838081

Table S2. Biomass production of *Lasiodiplodia gilanensis* in the presence of melanin inhibitors and stress conditions.

Treatment	Biomass (g) ± SD
Control	0.634±0.027 a
Tropolone (Tp)	0.056±0.004 gh
Phthalide (Ph)	0.204±0.007 e
Nitisinone (NTBC)	0.329±0.047 d
Tp+Ph	0.117±0.030 e
Tp+NTBC	0.057±0.011 gh
Ph+NTBC	0.244±0.041 e
Tp+Ph+NTBC	0.129±0.025 f
Lysing Enzymes (LE)	0.544±0.053 b
LE+Tp	0.353±0.040 d
LE+Ph	0.343±0.020 d
LE+NTBC	0.452±0.068 c
H ₂ O ₂	0.103±0.015 fg
H ₂ O ₂ + Tp	0.013±0.009 h
H ₂ O ₂ + Ph	0.101±0.013 fg
H ₂ O ₂ + NTBC	0.100±0.029 fg

Means accompanied by the same letters are not significantly different ($\alpha < 0.05$).

Table S3. Biomass production of *Lasiodiplodia gilanensis* in melanin inhibitors and tyrosine.

Treatment	Biomass (g) ± SD
MM9	0.089±0.002 b
MM9+TYR	0.117±0.021 a
MM9-C	0.044±0.008 def
MM9-C+TYR	0.060±0.0138 cd
MM9-N	0.053±0.004 cde
MM9-N+TYR	0.100±0.009 ab
MM9-CN	0.058±0.014 cde
MM9-CN+TYR	0.088±0.018 b
MM9-CN+TYR+Tp	0.030±0.009 f
MM9-CN+TYR+Ph	0.066±0.007 c
MM9-CN+TYR+NTBC	0.062±0.007 cd
MM9-CN+TYR+Tp+Ph+NTBC	0.040±0.008 ef

Means accompanied by the same letters are not significantly different ($\alpha < 0.05$).