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Supplementary material

The king oyster mushroom *Pleurotus eryngii* behaves as a virulent facultative parasite of *Eryngium campestre*

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Supplementary Fig. S1 - *Pleurotus eryngii* fruitingbody from *Eryngium campestre* labeled plant in 2004/2005.

Supplementary Fig. S2 - *Eryngium campestre* free plot inoculated with a piece of 7×7×14 cm *Pleurotus eryngii* mycelium.

Supplementary Fig. S3 - *Pleurotus eryngii* spawn mycelium inoculum.

Supplementary Fig. S4 - Bottle inoculum production with *Pleurotus eryngii* primordia on the surface.

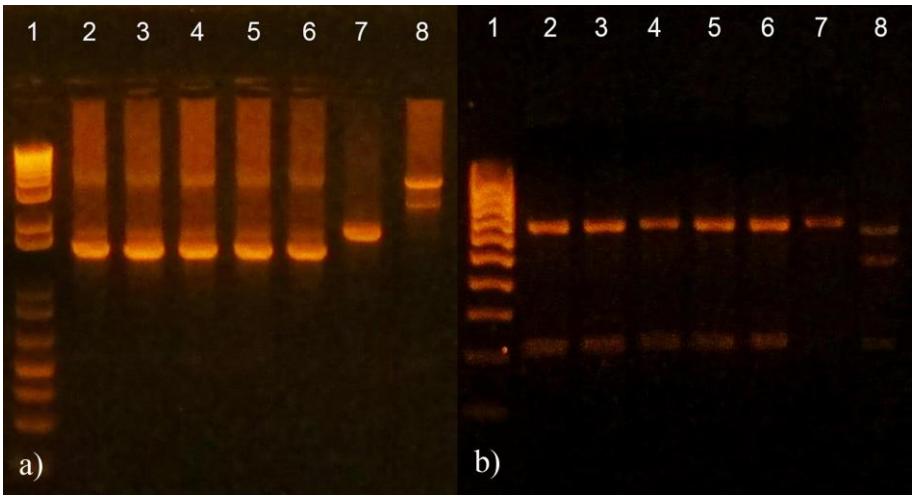
Supplementary Fig. S5 - Soil samples in *Eryngium campestre* fairy rings.

Supplementary Fig. S6 - Extraction on March 7, 2018 of healthy taproots of *Eryngium campestre*, in vegetative standstill, in an environment free of *Pleurotus eryngii* fructifications.

Supplementary Fig. S7 - Greenhouse inoculation of adult and wild plants of *Eryngium campestre* obtained from taproots in raised pots with legs.

Supplementary Fig. S8 - Semicircular seedbed of *Eryngium campestre* (control).

Supplementary Fig. S9 - *Eryngium campestre* vitroplant inoculation.



Supplementary Fig. S10 – a) Length of the IGS2 subregion in *P. eryngii* (samples taken from plants inoculated in 2014). Lane 1 shows a marker ladder (100-10000 bp); Lanes 2-6 show results for commercial strain from inoculated plants; Lanes 7-8 show results for wild fungal samples. **b)** Polymorphism in the IGS2 subregion; RFLP profiles produced with restriction enzyme BtgI. Lane 1 shows a marker ladder (100-1000 bp); Lanes 2 shows the results for a laboratory grown *P. eryngii* sample (control). Lanes 3-6 show the results for commercial strain from inoculated plants; Lanes 7-8 show results for wild fungal strains.

Supplementary Fig. S11 - Chlorotic leaves of *Eryngium campestre* and basidiocarps of *Pleurotus eryngii* cultivated in phytotron.

Supplementary Fig. S12 - Secondary and tertiary roots roots of adult *Eryngium campestre* plant colonized by *Pleurotus eryngii.*

Supplementary Fig. S13 - Gum formation in macroscopic cross section of an adult *Eryngium campestre* taproot inoculated plant.

Figure S14 - Total or partial destruction of two taproots of *Eryngium campestre* inoculated plant.

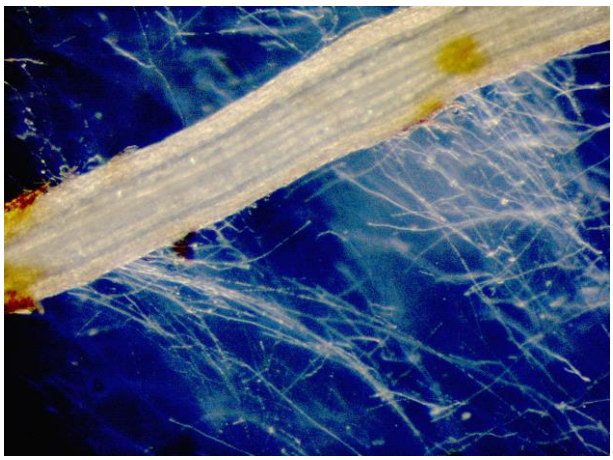


Figure S15 - Signs of infection in the root of seedlings.

Table S1 - Details of primers used in this study.

Primer	Locus	Sequence (5´-3´)	Tm (ºC)	Reference
ITS1F	ITS	CTTGGTCATTTAGAGGAAGTAA	55	Gardes and Bruns, 1993
ITS4	ITS	TCCTCCGCTTATTGATATGC	55	White et al., 1990
PeryITSF	ITS	CTGGGATGTAAACGTCTCGG	60	Own
PeryITSR	ITS	GCCAGACTCTATTCATGCGT	60	Own
IGS1_PeF	IGS1	CTATATTCCCCCTTTGTGATGTTGAACCC	65	Own*
IGS2_PeR	IGS2	CCCAAGCTGGAGTTCATTATGGTG	65	Own
5SRNAR	5SRNA	ACQGCATCCCGTCTGAT	60	Vilgalys and Gonzalez, 1990
invSR1R	SSU	ACTGGCAGAATCAACCAGGTA	60	Vilgalys et al., 1994

*From reverse complementary of Pleurotus_IGS1p_r2 (Kawai et al., 2008).

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