Supplementary Information

Materials and Methods

Percent identity matrix for strains presented in Figure 2 was performed by alignment program of Clustal Omega (http://www.ebi.ac.uk/Tools/msa/clustalo/). *A. glaucus*: *Aspergillus glaucus*, *A. nidulans*: *Aspergillus nidulans*, *T. stipitatus*: *Talaromyces stipitatus*, *M. oryzae*: *Magnaporthe oryzae*, *G. zeae*: *Gibberella zeae*, *S. cerevisiae*: *Saccharomyces cerevisiae*, *U. maydis*: *Ustilago maydis*, *P. graminis*: *Puccinia graminis*, *S. pombe*: *Schizosaccharomyces pombe*, *A. thaliana*: *Arabidopsis thaliana*, *H. sapiens*: *Homo sapiens*, *M. musculus*: *Mus musculus*.

Table S1. Percent identity matrix for strains presented in Figure 2.

Strain	% Identity											
	M. musculus	***H. sapiens***	***A. thaliana***	***S. cerevisiae***	***U. maydis***	***S. pombe***	***P. graminis***	***A. glaucus***	***A. nidulans***	***T. stipitatus***	***M. oryzae***	***G. zeae***
M. musculus	100.00	99.24	64.31	58.27	57.36	59.76	61.57	49.80	61.57	61.57	62.35	62.35
H. sapiens	99.24	100.00	64.71	58.66	57.36	59.76	61.18	49.80	61.57	61.57	62.35	62.35
A. thaliana	64.31	64.71	100.00	59.22	62.11	60.32	63.42	57.09	67.19	67.19	66.41	66.41
S. cerevisiae	58.27	58.66	59.22	100.00	59.84	60.56	61.18	58.50	70.59	70.59	69.02	69.41
U. maydis	57.36	57.36	62.11	59.84	100.00	66.53	72.66	53.36	67.84	67.84	66.67	66.27
S. pombe	59.76	59.76	60.32	60.56	66.53	100.00	67.86	56.40	70.63	70.63	70.63	69.44
P. graminis	61.57	61.18	63.42	61.18	72.66	67.86	100.00	57.87	71.48	71.48	70.70	73.44
A. glaucus	49.80	49.80	57.09	58.50	53.36	56.40	57.87	100.00	78.35	78.35	77.56	72.05
A. nidulans	61.57	61.57	67.19	70.59	67.84	70.63	71.48	78.35	100.00	100.00	92.97	87.11
T. stipitatus	62.35	62.35	66.41	69.02	66.67	70.63	70.70	77.56	92.97	92.97	100.00	88.67
M. oryzae	62.35	62.35	66.41	69.41	66.27	69.44	73.44	72.05	87.11	87.11	88.67	100.00
G. zeae	60.39	60.00	68.36	69.02	64.71	71.83	69.53	71.26	85.16	85.16	87.89	89.06