

**Supplemental data S1. Number of AA proteins in the 41 selected fungal genomes.**

	AA1_1	AA1_2	AA1_3	AA2	AA3_1	AA3_2 <sup>a</sup>	AA3_3	AA3_4	AA4	AA5_1	AA5_2	AA6	AA7	AA8	AA9	AA10
<i>Aspergillus niger</i>	0	2	7	0	2	4	2	0	1	0	0	1	3	5	7	0
<i>Auricularia delicata</i>	0	1	5	18	1	3	6	3	0	8	0	4	2	2	20	0
<i>Botrytis cinerea</i>	0	1	9	0	4	1	2	0	1	2	2	1	1	7	9	0
<i>Ceriporiopsis subvermispora</i>	7	1	0	16	1	6	3	0	0	3	0	0	0	2	9	0
<i>Cladosporium fulvum</i>	0	1	10	0	2	1	4	0	0	2	1	1	0	3	2	0
<i>Coniophora puteana</i>	6	1	0	0	1	0	5	0	0	6	0	2	0	4	10	0
<i>Coprinopsis cinerea</i>	17	0	0	1	1	22	2	0	0	6	0	3	2	6	33	0
<i>Cryptococcus neoformans</i>	0	3	0	0	0	0	0	0	0	3	0	2	0	0	1	0
<i>Dacryopinax sp.</i>	0	2	0	0	0	0	1	0	2	3	0	1	3	0	0	0
<i>Dichomitus squalens</i>	11	1	0	12	1	11	4	0	0	9	0	1	4	2	15	0
<i>Dothistroma septosporum</i>	0	1	7	0	2	1	2	0	1	2	1	1	0	3	2	0
<i>Fomitiporia mediterranea</i>	10	1	0	17	1	2	3	0	0	4	0	3	0	1	13	0
<i>Fomitopsis pinicola</i>	5	1	0	0	0	1	4	0	0	4	0	1	5	0	4	0
<i>Ganoderma lucidum</i>	13	1	0	8	1	4	3	0	0	9	0	1	4	2	15	0
<i>Ganoderma sp.</i>	16	1	0	9	1	8	5	0	0	9	0	2	4	2	16	0
<i>Gloeophyllum trabeum</i>	4	1	0	0	1	6	2	1	3	2	0	3	0	0	4	0
<i>Grosmannia clavigera</i>	0	3	4	0	2	0	0	0	1	0	0	1	1	2	2	0
<i>Heterobasidion annosum</i>	14	1	0	7	1	13	3	0	0	5	0	2	3	2	10	0
<i>Laccaria bicolor</i>	9	3	0	1	0	3	2	0	0	11	0	2	1	0	13	0
<i>Malassezia globosa</i>	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
<i>Melampsora laricis-populina</i>	0	1	0	0	0	0	1	0	0	4	0	1	10	0	4	0
<i>Myceliophthora thermophila</i>	0	0	2	0	3	0	1	0	0	1	0	1	2	7	22	0
<i>Neurospora crassa</i>	0	2	8	0	2	0	1	0	0	1	1	1	2	8	14	0
<i>Phanerochaete carnosae</i>	0	1	0	11	1	4	4	0	0	6	0	3	0	2	11	0
<i>Phanerochaete chrysosporium</i>	0	1	0	16	1	3	3	1	0	7	0	4	0	2	15	0

<i>Pichia stipitis</i>	0	2	0	0	0	0	0	0	0	0	0	4	0	0	0	0
<i>Podospora anserina</i>	0	1	10	0	3	1	2	1	0	1	1	1	2	8	33	0
<i>Postia placenta</i>	2	1	0	0	0	3	4	0	0	2	0	1	0	0	2	0
<i>Punctularia strigosozonata</i>	12	1	0	11	1	6	4	1	0	9	0	2	1	1	14	0
<i>Schizophyllum commune</i>	2	0	0	0	1	2	4	0	0	2	0	4	4	3	22	0
<i>Sclerotinia sclerotiorum</i>	0	1	6	0	3	3	2	0	1	3	1	1	1	5	9	0
<i>Serpula lacrymans</i>	4	1	0	0	2	0	5	0	0	3	0	2	0	4	5	0
<i>Sporobolomyces roseus</i>	0	1	0	0	0	0	0	0	0	3	0	1	0	0	0	0
<i>Stagonospora nodorum</i>	0	1	2	0	4	1	3	0	1	2	1	1	4	5	28	0
<i>Stereum hirsutum</i>	15	2	0	6	1	15	7	0	0	8	0	1	3	2	16	0
<i>Thielavia terrestris</i>	0	2	5	0	3	0	1	0	2	1	0	1	2	9	18	0
<i>Trametes versicolor</i>	7	2	0	26	1	5	4	1	0	9	0	1	0	2	18	0
<i>Tremella mesenterica</i>	0	1	0	0	0	1	0	0	0	2	0	1	0	0	0	0
<i>Trichoderma reesei</i>	0	2	1	0	0	1	2	0	0	1	0	1	0	2	3	0
<i>Ustilago maydis</i>	0	1	0	0	0	1	0	0	0	3	1	1	0	0	0	1
<i>Wolfiporia cocos</i>	3	1	0	0	0	0	5	0	0	4	0	1	0	0	2	0

<sup>a)</sup> Putative AAO and GOX are reported.