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Species name	uAUG1	uAUG2	mAUG	NCC6	NCC7	NCC8
Aciculosporium take	GUCAAGAUGC	AUCACCAUGG	UUCAAGAUGA	GUUGAUUGG	GCCAACAUU	UUCACGACGG
Ajellomyces capsulatus	AAGAUAUUGG	GUCACCAUGG	UUGAAUUGG	GGGCCUCUGA	ACAGCCAUU	UUCACCAACGG
Ajellomyces dermatitidis	CAAAUUUUGG	GUCAACUUGG	CGUAUUUUGU	GGAUUCUGA	CCAAACAUGU	UUCACCAACGG
Alternaria arborescens	CGAACAAUUGG	GUCAUCAUGG	ACAAACUUGG			ACCAUCAACGG
Alternaria brassicicola	CGAACAAUUGG	GUCAUCAUGG	ACAAACUUGG			ACCAUCAACGG
Amorphotheca resiniae	UCCAAGAUGU	ACCACCAUGG	CCCAACAUGG	GAAAACUGA	GCCACAUAUC	UUCAACAACGG
Arthrotrichum oligospora	GCCAAAUGG	GCCAGGUAUGG	GUCGAUUGG			
Arthroderma benhaimiae	UACAAGAUGG	CCCAUCAUGG	GCCGCAUUGG	GGACCUUGA	ACCACCAUUC	UUCACCAACGG
Arthroderma gypseum	UACAAGAUGG	CCCAUCAUGG	GCCGCAUUGG	GGACCUUGA	ACCACCAUUC	UUCACCAACGG
Ascocoryne sarcoides	GCCACGAUGU	ACCAAGAUGG	CCAAACUUGG	GAAUCUUGA	GCCAACAUC	UUCACCAACGG
Aspergillus clavatus	UGCAAAAUGG	GCAAUCAUGG	CGCAUCAUGU	GGACCUUGA	AACAUAUUC	UUCACCAACGG
Aspergillus fumigatus	UGCAAAAUGG	GCAAUCAUGG	CGCAUCAUGU	GGACCUUGA	AACAUAUUC	UUCACCAACGG
Aspergillus kawachii	UUCAAAAUGG	GCAAUCAUGG	CGCAUCAUGU	GGACCUUGA		UUCACCAACGG
Aspergillus nidulans	CUCAAAAUGG	GCAAUCAUGG	CGCAUCAUGU	GAACCUUGA		UUCACCAACGG
Aspergillus niger	UUCAAAAUGG	GCAAUCAUGG	CGCAUCAUGU	GGACCUUGA		UUCACCAACGG
Aspergillus oryzae	UCCACAUGG	GCAAUCAUGG	CGCAUCAUGU	GGACCUUGA	AACAUAUUC	UUCACCAACGG
Aspergillus sojae	UCCAAAUGG	GCAAUCAUGG	CGCAUCAUGU	GGACCUUGA	AACAUAUUC	UUCACCAACGG
Aspergillus terreus	CCCAAAAUGA	GCAAUCAUGG	CGCAUCAUGU	GGACCUUGA		UUCACCAACGG
Beauveria bassiana	UUCAAGAUGC	GUCAUCAUGG	GCCAACAUGG	GUCGACUGA	GCCAACAUC	UUCACCAACGG
Botryotinia fuckeliana	UUCAAGAUGC	GUCAUCAUGG	GCCAACAUGG	GAAUAUUGA	GCAACAUAUC	UUCACCAACGG
Chaetomium globosum	UUCAAGAUGC	GUCAUCAUGG	GCCAACAUGG	GUUGAAUGA	GCCGCAUUC	UUCACCAACGG
Chaetomium thermophilum	UUCAAAAUGC	GUCACCAUGG	GCCAAGAUGA	GUUGAAUGA	GCCACAUAUC	UUCACCAACGG
Cladosporium sphaerospermum	GACACCAUGG	GCAUCAUGG	AACACCAUGG			UUCACCAACGG
Claviceps fusiformis	GCCAAGAUGU	GUCAACAUGG	GCCAAGAUGA	GUUGAAUGG	GCCAACAUC	UUCACCAACGG
Claviceps paspali	GCCAAGAUGU	GUCAACAUGG	GCCAAGAUGA	GCUGACUGG	GCCAACAUC	UUCACCAACGG
Coccidioides immitis	UCCAUCAUGA	GUCAACAUGG	CGAGCGAUGU	GGACCUUGA	CCAACCAUC	UUCACCAACGG
Coccidioides posadasii	UCCAUCAUGA	GUCAACAUGG	CGAGCGAUGU	GGACCUUGA	CCAACCAUC	UUCACCAACGG
Cochliobolus heterostrophus	AUCAUAUGG	GUCAACAUGG	ACAAACUUGG			UUCACCAACGG
Colletotrichum gloeosporioides	CUCAAGAUGC	AUCACCAUGG	UCAAGAUGG	GUCGAUUGA	UCCACCAUC	UUCACCAACGG
Colletotrichum higginsianum	GCAACCAUGC	AUCAUCAUGG	CCAACAUGG	GUCGAUUGA	GCAACCAUC	CUACCAACGG
Cordyceps militaris	UUCAAGAUGC	GUCAACAUGG	GGCACAUGA	GUCGACUGA	GCCAACAUC	UUCACCAACGG
Cryphonectria parasitica	AUCAAGAUGU	GUCAACAUGG	AACAUAUUGG			GCCAACAUC
Daldinia eschscholzii	AUCAAAAUGC	GUCAAAAUGG	GCCAGGAUGG	GAAGAAUGA	GCCACCAUC	UUCACCAACGG
Epichloe amarillans	GUCAAGAUGC	AUCAACAUGG	GGCAAGAUGA	GUUGAUUGG	GCCAAAUAUC	UUCACCAACGG
Epichloe brachyelytri	GUCAAGAUGC	AUCAACAUGG	GGCAAGAUGA	GUUGAUUGG	GCCAAAUAUC	UUCACCAACGG
Epichloe festucae	GUCAAAAUGC	AUCAACAUGG	GGCAAGAUGA	GUUGAUUGG	GCCAAAUAUC	UUCACCAACGG
Epichloe glyceriae	GUCAAGAUGC	AUCAACAUGG	GGCAAGAUGA	GUUGAUUGG	GCCAAAUAUC	UUCACCAACGG
Epichloe typhina	GUCAAGAUGC	AUCAACAUGG	GGCAAGAUGA	GUUGAUUGG	GCCAAAUAUC	UUCACCAACGG
Fusarium oxysporum	GUCAAGAUGU	GUCACCAUGG	GCCAAGAUGA	GUCGACUGA	GCCAACAUC	UUCACCAACGG
Fusarium pseudograminearum	AUCAAGAUGU	AUCACCAUGG	GCAAAGAUGA	GUCGACUGA	GCCAACAUC	UUCACCAACGG
Fusarium sporotrichioides	AUCAACAUGU	AUCACCAUGG	GCAAAGAUGA	GUCGACUGA	GCCAACAUC	UUCACCAACGG
Gaeumannomyces graminis	AUCAAGAUGU	GUCACCAUGG	GGCAAGAUGA	GAAGACUGA	GUCACCAUC	UUCACCAACGG
Geomyces destructans	CCCAAAAUGG	GUCACCAUGG	ACAAACUUGG	CAAGACUGA	UCCACCAUC	UUUACCAACGG
Geomyces pannorum	CACAAAUGG	GUCAACAUGG	AACAACUUGG	GAAGAUUGA	ACCACCAUC	UUUACCAACGG
Gibberella fujikuroi	GUCAAGAUGU	GUCACCAUGG	GCCAAGAUGA	GUCGAUUGA	GCCAACAUC	UUCACCAACGG
Gibberella moniliformis	GUCAAGAUGU	GUCACCAUGG	GCCAAGAUGA	GUCGACUGA	GCCAACAUC	UUCACCAACGG
Gibberella zeae	AUCAAGAUGU	AUCACCAUGG	GCAAAGAUGA	GUCGACUGA	GCCAACAUC	UUCACCAACGG
Glarea lozoyensis	GACACGAUGU	ACCACCAUGG	CCAACAUGG	GAAGAUUGA	GCCACCAUC	UUCACCAACGG
Glomerella graminicola	GCAACCAUGC	AUCACAUGG	CCCAAGAUGG	GUCGAUUGA	GCAACCAUC	UUCACCAACGG
Grosmanina clavigera	GCAAGAUGC	GUCAACAUGG	AGCAAAAUGG	GUCGAUUGA	GCAACCAUC	UUCACCAACGG
Histoplasma capsulatum	AAGAUAUUGG	GUCACCAUGG	UUGAAUUGG	GGGCCUCUGA	ACAGCCAUU	UUCACCAACGG
Hypocrea lixii	UUCAAGAUGA	GUCAACAUGG	GCCAAGAUGA	GUCGAUUGA	GCCAACAUC	UUCACCAACGG
Hypocrea vires	UUCAAGAUGA	GUCAACAUGG	GCCAAGAUGA	GUCGACUGA	GCCAACAUC	UUCACCAACGG
Leptosphaeria maculans	AUCAUAUUGG	GACACCAUGG	ACAACUUGG			UUCACCAACGG
Macrophomina phaseolina	GUCAAAAUGU	GUCACCAUGG	GGCACAUGA			UUCACCAACGG
Magnaporthe grisea	GCCAAAUGG	GUCACCAUGG	ACCAAGAUGA	CCAGCUUGG	GCCGCCAUUC	UUCACCAACGG
Magnaporthe poae	AUCAAGAUGU	GUCACCAUGG	GGCAAGAUGA	GAAGACUGA	GUCACCAUC	UUCACCAACGG
Marssonina brunnea	UCCACCAUGU	CCCAAGAUGG	CCCAACUUGG		UUCGCAUUC	GCCACCAACGG
Metarhizium acridum	UUCAAGAUGC	AUCAACAUGG	GCCAAGAUGA	GUUGAUUGG	GCCACCAUC	UUCACCAACGG
Metarhizium anisopliae	UUCAAGAUGC	AUCAACAUGG	GCCAAGAUGA	GUUGAUUGG	GCCACCAUC	UUCACCAACGG
Microsporium canis	UACAAGAUGG	CCCAUCAUGG	CAAACUUGG	GGACCUUGA	UUCACCAUC	UUCACCAACGG
Myceliophthora thermophila	ACCAAGAUGC	GUCAAGAUGG	GGCAAGAUGA	GUUGAAUGA	GCCGCCAUUC	UUCACCAACGG
Mycosphaerella fijensis	ACGAAAUGG	GCAAACAUGG	UUCGCAUUGG			UUCACCAACGG
Mycosphaerella graminicola	UUAAACAUGG	GCAAACAUGG	UUCGCAUUGG			UUCACCAACGG
Mycosphaerella populorum	UUCAAGAUGU	GCAAACAUGG	GGCACAUGG			CCCAACAUC
Nectria haematococca	GUCAAGAUGU	GUCAUCAUGG	GCCAAGAUGA	GUCGACUGA	GCCAACAUC	UUCACCAACGG
Neosartorya fischeri	UGCAAAAUGG	GCAAACAUGG	CGCAUCAUGU	GGACCUUGA	AACAACAUC	UUCACCAACGG
Neotyphodium gansuense	GUCAAGAUGC	AUCAACAUGG	GCCAAGAUGA	GUUGAUUGG	GCCAAAUAUC	UUCACCAACGG
Neurospora crassa	AUCAAGAUGC	GUCAACAUGG	AACAAGAUGU	GUAGAUUGA	GCCACCAUC	UUCACCAACGG
Neurospora tetrasperma	AUCAAGAUGC	GUCAACAUGG	AACAAGAUGU	GUAGAUUGA	GCCACCAUC	UUCACCAACGG
Ophiostoma novo-ulmi	GCCACAUGC	GCAAACAUGG	AAAAAAUUGG	GUCGAUUGA	GUCACAUC	UUCACCAACGG
Ophiostoma piliferum	GACACCAUGC	GCAAACAUGG	ACCAACAUGG	GUCGAAUGA	GUCACCAUC	UUCACCAACGG
Paracoccidioides brasiliensis	ACGACGAUGG	GCCACCAUGG	CGCAUCAUGU	GGACCUUGG	GUCACCAUC	UUCACCAACGG
Passalora fulva	ACGAACAUGG	GCAAACAUGG	UUCGCAUUGG			UUCACCAACGG
Penicillium chrysogenum	GCCAAAUGG	GCAAACAUGG	CGUGUCAUGU	GGACCUUGA	ACCCCGAUC	UUCACCAACGG
Penicillium digitatum	GCCAAAUGG	GCAAACAUGG	CGUGUCAUGU	GGACCUUGA		UUCACCAACGG
Penicillium marneffeii	UCCAUAUUGG	GCAAACAUGG	AGAGUCAUGU		ACCACCAUC	UUCACCAACGG
Periglandula ipomoeae	GUCAAGAUGC	AUCAACAUGG	GCCAAGAUGA	GUUGAUUGG	GCCAACAUC	UUCACCAACGG
Phaeosphaeria nodorum	AACAAGAUGG	GCAAACAUGG	GCAGCCAUGG			UUCACCAACGG
Podospora anserine	ACCAAGAUGC	GUCAACAUGG	GGCAAGAUGA	GUUGAAUGA	ACCGCCAUC	UUCACCAACGG
Pyrenophora teres	CGAACAAUUGG	GUCAUCAUGG	ACAAACUUGG			UCCAUCAACGG
Pyrenophora tritici-repentis	CGAACAAUUGG	GUCAUCAUGG	ACAAACUUGG			UCCAUCAACGG
Sclerotinia homoeocarpa	AACAAGAUGU	AUCAACAUGG	CCAAACAUGG	GAAUCUUGU	GCAACAUAUC	UUCACCAACGG
Sclerotinia sclerotiorum	CUCAAAAUGU	AUCAACAUGG	AUAGACUUGG	GAAAUAUGA		UUCACCAACGG
Septoria passerinii	GUUAACAUGG	GCAAACAUGG	UUCGCAUUGG			UUCACCAACGG
Sordaria macrospore	AUCAAGAUGC	AUCAACAUGG	AACAAGAUGU	GUAGAUUGA	GCCACCAUC	UUCACCAACGG
Talaromyces stipitatus	UCCAUAUUGG	GCAAACAUGG	AGAGUCAUGU		UCCACCAUC	UUCACCAACGG
Thermomyces lanuginosus	GUCAUAUUGG	GCAACCAUGG	CAAGUCAUGG	GAUUCGUGA	AACAACAUC	UUCACCAACGG
Thielavia heterothallica	ACCAAGAUGC	GUCAAGAUGG	GGCAAGAUGA	GUUGAAUGA	GCCGCCAUUC	UUCACCAACGG
Thielavia terrestris	AUCAAGAUGC	GUCAAGAUGG	GGCAAGAUGA	AGCACCUGG	GCCGCCAUUC	UUCACCAACGG
Trichoderma atroviride	UUCACGAUGA	GUCAACAUGG	GCCAAGAUGA	GUCGACUGA	GCGAACAUC	UUCACCAACGG
Trichoderma reesei	UUCAAGAUGA	GUCAACAUGG	GCCAAGAUGA	GUCGACUGA	GCCAACAUC	UUCACCAACGG
Trichophyton rubrum	UGCAAGAUGG	CCCAUCAUGG	GCGGAUUGG	GGACCUUGA	AUCACCAUC	UUCACCAACGG
Trichophyton tonsurans	UACAAGAUGG	CCCAUCAUGG	GCGGCAUUGG	GGACCUUGA	AUCACCAUC	UUCACCAACGG
Trichophyton verrucosum	UGCAAGAUGG	CCCAUCAUGG	GCGGAUUGG	GGACCUUGA	AUCACCAUC	UUCACCAACGG
Tuber melanosporum	GUUAUCAUGG	CCAGCCAUGG	UACAACAUGG			
Verticillium dahliae	AUCACCAUGC	UACACCAUGG	GCGAACAUGA	GUUGAUUGA	UUCUCCAUC	GUCACCAACGG
"Citrus clementina" #1	GACACCAUGG	GCAAUCAUGG	AUCACUUGG			UUCACCAACGG
"Citrus clementina" #2	GACAUCAUGG	GCAAUCAUGG	AUCACUUGG			UUCACCAACGG
"Malus x domestica"	AGAGUCAUGU	ACCAACAUGG	CCGACCAUGA			GCCACCAACGG

B

Agaricus bisporus	GUAGCU <u>AUUU</u>
Antrodia cinnamomea	UCAGCC <u>UUGU</u>
Ceriporiopsis subvermispora	CCCGCC <u>UUGU</u>
Coniophora puteana	AGA <u>ACG</u> CUGC
Coprinopsis cinerea	GGCGCC <u>AUUU</u>
Dichomitus squalens	CCCACC <u>UUGU</u>
Fibroporia radiculosa	UCCACC <u>UUGU</u>
Fomitiporia mediterranea	CCAGCC <u>AUUC</u>
Ganoderma lucidum	CCCGCC <u>UUGU</u>
Gloeophyllum trabeum	UUCGAG <u>AUAC</u>
Heterobasidion annosum	CUCGCG <u>AUUC</u>
Heterobasidion irregulare	CUCGCG <u>AUUC</u>
Laccaria bicolor	GCCGCA <u>AUUC</u>
Lentinula edodes	GUCGAA <u>AUUU</u>
Omphalotus olearius	GUCGCA <u>AUUU</u>
Phanerochaete carnosae	GCCGCC <u>UUGU</u>
Phanerochaete chrysosporium	GCCGCC <u>UUGU</u>
Piriformospora indica	GCCAAG <u>AUUU</u>
Pleurotus ostreatus	GUAGCC <u>AUUU</u>
Postia placenta	UCCACC <u>UUGU</u>
Punctularia strigosozonata	GCCGUA <u>AUUC</u>
Rhizoctonia solani	GCCGCC <u>AUUU</u>
Schizophyllum commune	GCAGCC <u>AUAG</u>
Serpula lacrymans	UCCGCC <u>AUUU</u>
Stereum hirsutum	CCAGCC <u>AUAC</u>
Trametes versicolor	ACAGCC <u>UUGU</u>
"Pinus taeda"	GCCACC <u>UUGU</u>

C

Tuber melanosporum
FAGTTTCCTCTCCCCGATACAACCTCAAACCTCGTTTTCCACGCTTGTACCCCTGTAGAATCC
TTCACCACGCCTTCCCAGAGATCTACGGACCTCTGAGCCCTTCGCTTAGCGACATTACCCCA
CAACAGCCAGTCAACCATTCTTCCTCGGAACCAATTGTGTTCCCTCCAAACGACCAGCCATG

Arthrobotrys oligospora
FGAATCGCCACCCCGCTCTCGTCTCCACCTCATCTCCAAATCCCCTTTGCCCCCTTTTACA
AACAAAATAGCTTTCCTCTTTTTCAAAATCAGGCCCGTCTTTTAAAGACTGCCTGAT
TTCCTACTCGCCAAAATACTTCGCTTAGCGAGTTACCACCCCCCAAACCGTCAAAATTTC
CCCTCAACGACGCTCTGCGTTACGCACAAGCCCAAGATCCGCCAGGATG

Supplementary Figure 2. Conservation of NCCs in *cpc-1* homologs of different fungi. (A and B)

Nucleotide sequences used for generating weblogo in Figure 1 and Supplementary Figure 5, respectively. Species identifiers of the sequences used are indicated on the left. Asterisk next to species name indicates sequence presumed to derive from unknown Pezizomycotina or Agaricomycetes that is contaminating an EST library of the indicated species (e.g. Agaricomycetes sequence contaminating *Pinus taeda* library). Presumed start codons are highlighted in green. Sequences from species names in quotation marks are presumed contaminants of fungal origin because they cluster with *cpc-1* from Pezizomycotina or Agaricomycetes even though the name of the sequenced species is plant. Alignments of the 10 nucleotides including the AUG or NCC start codons and the nucleotides that define the initiation contexts (-6 to +4) which were used to generate the weblogo in Figure 1 C-J, and Supplementary Figures 5D and 5E are shown for *cpc-1/GCN4* homologs from: (A) uAUG1 uAUG2, mAUG, NCC6, NCC7 and NCC8 from Pezizomycotina; (B) the Single NCC from Agaricomycetes. (C) Nucleotide sequences of the 5' regions of *cpc-1* homologs from the upstream in-frame stop codon to the uAUG in *Tuber melanosporum* and *Arthrobotrys oligospora*. NCCs are highlighted in green.