

APPENDIX 1

Culture media

Potato dextrose agar (Difco, Detroit, USA)

Potato dextrose agar consists of 200 g of potato infusion, 20 g of bacto dextrose and 15 g of agar per litre.

Corn meal agar (CMA)

Corn meal agar consists of 2 g of corn meal extract, 15 g of agar and 1 litre of distilled water.

Glucose yeast extract agar (GYA)

Glucose yeast extract consists of 1% glucose, 0.1% yeast extract and 15 g of agar per litre.

Malt extract agar (MA)

Malt extract agar consists of 1.17 g of malt extract, 3 g of peptone and 15 g of agar.

All media were autoclaved at 121°C for 15 minutes at 15 lb/inch².

Antibiotics (streptomycin, penicillin G and chloramphenicol) concentration 1g/l were added into the media.

APPENDIX 2

Culture broth

Potato dextrose broth (PDB)

Potato dextrose broth (PDB) consists of 200 g of potato infusion and 20 g of bacto dextrose per litre

Malt extract broth (MB)

Malt extract broth (MB) consists of 1% glucose and 0.1% yeast extract per litre.

All media were autoclaved at 121°C for 15 minutes at 1b/inch².

List of the fungi used in molecular studies

Fungi	Code
<i>Hypocrella scutata</i>	SSC46
<i>Hypocrella scutata</i>	SSC57
<i>Hypocrella schizistachyi</i>	NHJ4547*
<i>Hypocrella discoidea</i>	NHJ5004*

Provided by Dr. Nigel L. Hywel-Jones.

APPENDIX 3

Preparation of reagents for DNA extraction

1M Tris-HCl

121.1 g of Tris-base was dissolved in 800 ml of distilled water and the pH was adjusted to the desired value by adding concentrated HCl.

Desired pH	Approximate amount of HCl
7.470 ml	
7.560 ml	
8.042 ml	

The solution was allowed to cool before making the final adjustment of the pH and the volume made up to 1 litre. The solution was sterilised by autoclaving at 121°C for 15 minutes.

5 M NaCl

292.2 g of NaCl was dissolved in distilled water. The NaCl solution was autoclaved at 121°C for 15 minutes for sterilization.

0.5 M EDTA

29.76 g of EDTA was dissolved in 400 ml of distilled water. The solution was stirred vigorously. NaOH pellets were added until pH 8.0 was reached. (approximately 10 g of NaOH pellets) The solution was transferred to a glass screw cap bottle and autoclaved at 121°C for 15 minutes.

3 M sodium acetate

40.81g of sodium acetate 3H₂O was dissolved in 80 ml distilled water with stirring. Glacial acetic acid was added to adjust the pH of the

solution until the pH 5.2 was reached. This was made up to 100 ml. The solution was autoclaved at 121°C for 15 minutes before use.

5 N NaOH

20 g of NaOH pellets was dissolved in 50 ml of distilled water. This was made up to 100 ml and stored at room temperature

TE buffer

50 ml of 1 M Tris (pH 8.0) was added to 5 ml of 0.5M EDTA and 445 ml of distilled water and then autoclaved at 121°C for 15 minutes to sterilise.

CTAB extraction buffer

100 mM Tris-HCl

1.4 M NaCl

25 mM EDTA

2% CTAB (Cethytrimethylammonium bromide)

APPENDIX 5

Hypocrella schizostachyi NHJ 4547 partial 28S rDNA sequence

TATCAATAAG	cGGAGGAAAA	GAAACcAACA	GGGATTGCCC
CAGTAACGGC	GAGTGAAGCG	GCAGCAGCTC	AAATTTGAAA
TCTGGCGCCC	CCCGGGGAGC	CCGAGTTGTA	GTTTGCAGAG
GATGCTTTTG	GCGAGGCGCC	TTCCGAGTTC	CCTGGAACGG
GACGCCGCAG	AGGGTGAGAG	CCCCGTCTGG	TCGGACGCCG
AGCCTCTGTA	AAGCTCCCTC	GACGAGTCGA	GTAGTTTGGG
AATGCTGCTC	TAAACGGGAG	GTATATGTCT	TCTAAAGCTA
AATACCGGCC	AGAGACCGAT	AGCGCACAAAG	TAGAGTGATC
GAAAGATGAA	AAGCACTTTG	GAAAGAGGGT	TAAACAGTAC
GTGAAATTGT	TGAAAGGGAA	GCGCTCGTGA	CCAGACTCGG
GCGCGGCGGA	TCATcTCGGC	GCCACgCGCC	NGGCGCACTT
CGCCGGGCC	GGGCCAGCAT	CGGTTCCGCGC	CCTGGGGACA
AAGGCGGCGG	GAACgTGGTC	CCCAGGGGG	GTTATAGCCC
CgCCGCCGCC	ATgCCCCCGg	GGCTGGGCC	AGGTTTTCCC
CTCCACCACG	GATGCTGGCC	TTAACGG	

Hypocrella scutata SSC 57 partial 28S rDNA sequence

CAATCGcGGG	GAaATAcTCC	ACAcGGATTG	CCCTaGTCAC
GGTGAGtGAA	GCGGtAACAG	CTCaAATTTG	AAATCTGGCT
CTTTCAGGGT	CCGAGTTGTA	ATTTGCAGAG	GGCGCTctGG
CTTTGGcACG	CGGTCCAAGT	TCCTTGGAAC	AGGACGTCAC
AGAGGGTGAG	AATCCCCTAC	GTGGTCGCTA	GCTATTGCCG
CGTAAAGCCC	CCTTCTACGA	GTCcGAGTTG	TTTGGGAATG
CAgCTCTAAA	TGGGAGGTAA	ATTTCTTCTA	AAGCTAAATA
TTGGCCACCA	GACCGATAGC	GCACAAGTAG	AGTGATCGAA
AGATGAAAAG	CActtTGGA	AGAGAGTCAA	ACAGCACGTG
AAATTGTTGA	AAGGGAAGCG	CTTGCAgCCA	GACTTGCTTG
CAGTTGCTCA	TCCGGGCTTT	TGCCCCGGTGC	ACTCTTCTGT
AGGCAGGCCA	GCATCAGTTT	GGGCGGTGGG	ATAAAGGTCT
CTGTCACGTA	CCTCTCTTCG	GGGAGGCCTT	ATAGGGGAGA
CGACATACCA	CCAGCCTAGA	CTGAGGTCCG	CGCATGcTGA
TA			

APPENDIX 6

The species used for phylogenetic analysis and GenBank accession number

No.	Species	Accession number
1.	<i>Balansia aristidae</i>	U57677
2.	<i>Balansia henningsiana</i>	U57678
3.	<i>Balansia obtecta</i>	U17395
4.	<i>Balansia sclerotica</i>	U47821
5.	<i>Balansia strangulans</i>	U57679
6.	<i>Claviceps fusiformis</i>	U17402
7.	<i>Claviceps purpurea</i>	U57085
8.	<i>Cordyceps pseudomilitaris</i>	AF327376
9.	<i>Cordyceps irangiensis</i>	AF327378
10.	<i>Cordyceps sphecocephala</i> (<i>Hymenostilbe sphecophila</i>)	AF327390
11.	<i>Hypocrella discoidea</i> (<i>Aschersonia samoensis</i>)	AF327387
12.	<i>Hypocrella discoidea</i>	AF327381
13.	<i>Aschersonia badia</i>	AF327386
14.	<i>Hypocrella</i> sp.GJS 89-104	U47832
15.	<i>Cordyceps irangiensis</i> (<i>Hymenostilbe aurantiaca</i>)	AF327389
16.	<i>Cordyceps tuberculata</i> (<i>Akanthomyces pistillariiformis</i>)	AF327384
17.	<i>Akanthomyces novoguineensis</i>	AF327383
18.	<i>Akanthomyces arachnophilus</i>	AF327385
19.	<i>Torrubiella arachnophilus</i> (<i>Gibellula pulchra</i>)	AF327391
20.	<i>Hyperdermium pulvinatum</i>	AF242353
21.	<i>Hyperdermium bertonii</i>	AF242354
22.	<i>Hypocrea gelatinosa</i>	U00738
23.	<i>Hypocrea lutea</i>	U00739
24.	<i>Cylindrocladium floridanum</i>	U17408
25.	<i>Gibberella zeae</i>	AB084297
26.	<i>Gibberella fujikuroi</i>	AB084300
27.	<i>Gibberella xylarioides</i>	AJ539570
28.	<i>Nectria rigidiuscula</i>	AB084302
29.	<i>Trichoderma koningii</i>	AF399239
30.	<i>Trichoderma strictipilis</i>	AF399248

**The species used for phylogenetic analysis and GenBank accession number
(continued)**

No.	Species	Accession number
31.	<i>Aschersonia</i> sp. Ap isolate A28	AF169315
32.	<i>Aschersonia</i> sp. Ap isolate A31	AF169316
33.	<i>Aschersonia insperata</i>	AY173421
34.	<i>Aschersonia turbinata</i>	AY173422
35.	<i>Aschersonia aleyrodii</i> isolate 3.4485	AY173423
36.	<i>Aschersonia goldiana</i>	AY173424
37.	<i>Gibellula leiopus</i>	2600*
38.	<i>Cordyceps unilateralis</i>	3711*
39.	<i>Aschersonia hypocreoidea</i>	5269*
40.	<i>Aschersonia oxystoma</i>	4099*
41.	<i>Cordyceps irangiensis</i>	3938*
42.	<i>Cordyceps communis</i>	1334*
43.	<i>Cordyceps brunneapunctata</i>	1491*
44.	<i>Cordyceps myrmecophila</i>	5632*

* Provided by Dr. Julian Mitchell, Portsmouth University, UK.