

Table S1 Kellner et al. 2011

**Table S1: Species selection and accession numbers**

Species	Host	Origin	Reference/Herbarium	<i>ef1-<math>\alpha</math></i> 987F - 1567R	<i>rpb1</i> RoK157 - RoK158	<i>ssu</i> NS23 - NS24	ITS ITS1 - ITS4	<i>lsu</i> NL1 - NL4
<i>Cintractia limitata</i>	<i>Cyperus sp.</i>	Cuba	HJBJ10488	DQ645511	DQ645510	DQ645507	DQ645508	DQ645506
<i>Lundquistia fascicularis</i>	<i>Digitaria brownie</i>	Australia	58832a (DAR)				AY740035 (1)	AY740088 (1)
<i>Macalpinomyces eragrostiellae</i>	<i>Eragrostiella bifaria</i>	India	KVU 960				AY740036 (1)	AY740089 (1)
<i>Macalpinomyces eriachnes</i>	<i>Eriachne sulcate</i>	Australia	KVU 961	<b>JN367363</b>	<b>JN367417</b>	<b>JN367340</b>	<b>JN367287</b>	<b>JN367312</b>
<i>Macalpinomyces loudetiae</i>	<i>Loudetia flavida</i>	South Africa	M-0056576				AY740151 (1)	AY740151 (1)
<i>Macalpinomyces simplex</i>	<i>Loudetia simplex</i>	Zimbabwe	M-0056577				AY740152 (1)	AY740152 (1)
<i>Macalpinomyces trichopterygis</i>	<i>Trichopteryx dregeana</i>	South Africa	M-0056578				AY740039 (1)	AY740092 (1)
<i>Malassezia globosa</i>	human	Great Britain	CBS 7966	XM1732260	XM1729744	EU192364	AY387132 (1)	AY743604 (1)
<i>Malassezia pachydermatis</i>	dog	Sweden	CBS 1879	DQ028594	DQ785792	EU192366	DQ411532	AY745724 (1)
<i>Melanopsichium pennsylvanicum</i>	<i>Persicaria lapathifolia</i>	Germany	Marco Thines (3)	<b>JN367364</b>	<b>JN367418</b>	<b>JN367341</b>	<b>JN367288</b>	<b>JN367313</b>
<i>Melanotaenium euphorbiae</i>	<i>Euphorbia heterophylla</i>	Papua New Guinea	HUV 17733	<b>JN367365</b>	n.a.	<b>JN367342</b>	<b>JN367289</b>	<b>JN367314</b>
<i>Moesziomyces bullatus</i>	<i>Paspalum distichum</i>	India	KVU 833				AY740153 (1)	AY740153 (1)
<i>Schizonella melanogramma</i>	<i>Carex sempervirens</i>	Switzerland	CBS 174.42	AFTOL	AFTOL	AFTOL	AFTOL	AFTOL
<i>Sporisorium aegypticum</i>	<i>Schismus arabicus</i>	Iran	KVU 756				AY344970 (1)	AY740129 (1)
<i>Sporisorium andropogonis</i>	<i>Bothriochloa cf. saccharoides</i>	Bolivia	MP 2666	<b>JN367366</b>	<b>JN367419</b>	<b>JN367343</b>	AY740042 (1)	AY740095 (1)
<i>Sporisorium andropogonis-micranthi</i>	<i>Capillipedium spicigerum</i>	Australia	M-0056595				AY740047 (1)	AY740100 (1)
<i>Sporisorium anthrocoideisporum</i>	<i>Pseudoraphis spinescens</i>	Papua New Guinea	HUV 18350	<b>JN367367</b>	<b>JN367420</b>	<b>JN367344</b>	<b>JN367290</b>	<b>JN367315</b>
<i>Sporisorium apludae-aristatae</i>	<i>Apluda mutica</i>	India	M-0056590				AY740045 (1)	AY740098 (1)
<i>Sporisorium arthroxonis</i>	<i>Arthroxon lanceolatus</i>	China	M-0056592				AY740046 (1)	AY740099 (1)
<i>Sporisorium bicornis</i>	<i>Andropogon bicornis</i>	Cuba	HJBJ10458					<b>JN872447</b>
<i>Sporisorium bursum</i>	<i>Themeda quadrivalis</i>	India	KVU 844	<b>JN367368</b>	<b>JN367421</b>	<b>JN367345</b>	<b>JN367291</b>	<b>JN367316</b>
<i>Sporisorium cenchri</i>	<i>Cenchrus pilosus</i>	Nicaragua	MP 1974				AY344972 (1)	AF453943 (1)
<i>Sporisorium chrysopogonis</i>	<i>Chrysopogon fulvus</i>	Sri Lanka	KVU 407				AY344973 (1)	AY740131 (1)
<i>Sporisorium consanguineum</i>	<i>Aristida uruguayensis</i>	Argentina	HUV 19145	<b>JN367369</b>	<b>JN367422</b>	<b>JN367346</b>	<b>JN367292</b>	<b>JN367317</b>
<i>Sporisorium cruentum</i>	<i>Sorghum bicolor</i>	Nicaragua	MP 2036				AY740156 (1)	AY740156 (1)
<i>Sporisorium culmiperdum</i>	<i>Andropogon gerardii</i>	Honduras	MP 2060				AY344975 (1)	AF133580 (1)
<i>Sporisorium destruens</i>	<i>Panicum miliaceum</i>	Romania	KVU 472				AY344976 (1)	AY747077 (1)
<i>Sporisorium dimeriae-ornithopodae</i>	<i>Dimeria ornithopoda</i>	India	KVU 848				AY344977 (1)	AY740132 (1)
<i>Sporisorium elionuri</i>	<i>Elionurus muticus</i>	Bolivia	MP 2601				AY740157 (1)	AY740157 (1)
<i>Sporisorium erythraeense</i>	<i>Hackelchloa granularis</i>	India	KVU 849				AY740049 (1)	AY740102 (1)
<i>Sporisorium everhartii</i>	<i>Andropogon virginicus</i>	Cuba	MP 2270				AY740159 (1)	AY740159 (1)
<i>Sporisorium exsertum</i>	<i>Themeda triandra</i>	Australia	KVU 965	<b>JN367370</b>	<b>JN367423</b>	<b>JN367347</b>	<b>JN367293</b>	<b>JN367318</b>

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Species	Host	Origin	Reference/Herbarium	<i>ef1-<math>\alpha</math></i> 987F - 1567R	<i>rpb1</i> RoK157 - RoK158	<i>ssu</i> NS23 - NS24	ITS ITS1 - ITS4	<i>lsu</i> NL1 - NL4
<i>Sporisorium fastigiatum</i>	<i>Andropogon angustatus</i>	Nicaragua	MP 1976				AY344978 (1)	AY740133 (1)
<i>Sporisorium formosanum</i>	<i>Panicum repens</i>	Taiwan	KVU 688				AY344979 (1)	AY740134 (1)
<i>Sporisorium foveolati</i>	<i>Eremopogon foveolatus</i>	Canary Islands	MP 2365				AY740050 (1)	AY740103 (1)
<i>Sporisorium gayanum</i>	<i>Andropogon gayanus</i>	Zimbabwe	M-0056604					<b>JN872445</b>
<i>Sporisorium holwayi</i>	<i>Andropogon bicornis</i>	Panama	MP 1271				AY344980 (1)	AF453941 (1)
<i>Sporisorium hwangense</i>	<i>Sporobolus panicoides</i>	Zimbabwe	M-0056607				AY740051 (1)	AY740104 (1)
<i>Sporisorium lacrymae-jobi</i>	<i>Coix lacrymae-jobi</i>	India	M-0056611				AY740052 (1)	AY740105 (1)
<i>Sporisorium lepturi</i>	<i>Hemarthria uncinata</i>	Australia	KVU 966				AY344981 (1)	AY740135 (1)
<i>Sporisorium loudetiae-pedicellatae</i>	<i>Loudetia pedicellata</i>	South Africa	M-0056615				AY740053 (1)	AY740106 (1)
<i>Sporisorium manilense</i>	<i>Sacciolepis indica</i>	India	KVU 854				AY740059 (1)	AY740112 (1)
<i>Sporisorium mishrae</i>	<i>Apluda mutica</i>	India	KVU 967	<b>JN367371</b>	<b>JN367424</b>	<b>JN367348</b>	<b>JN367294</b>	<b>JN367319</b>
<i>Sporisorium modestum</i>	<i>Enneapogon avenaceus</i>	Australia	M-0056617				AY740054 (1)	AY740107 (1)
<i>Sporisorium monakai</i>	<i>Isachne globosa</i>	India	M-0056618				AY740161 (1)	AY740161 (1)
<i>Sporisorium moniliferum</i>	<i>Heteropogon contortus</i>	Indonesia	KVU 851				AY344984 (1)	AF453940 (1)
<i>Sporisorium nealii</i>	<i>Heteropogon melanocarpus</i>	India	M-0056621				AY740055 (1)	AY740108 (1)
<i>Sporisorium neglectum</i>	<i>Setaria pumila</i>	Germany	RB 2056				AY740056 (1)	AY740109 (1)
<i>Sporisorium nervosum</i>	<i>Sehima nervosum</i>	Australia	M-0056622				AY740057 (1)	AY740110 (1)
<i>Sporisorium occidentale</i>	<i>Andropogon gerardii</i>	USA	KVU 758				AY344985 (1)	AY740137 (1)
<i>Sporisorium ophiuri</i>	<i>Rottboellia exaltata</i>	Indonesia	KVU 852				AY740019 (1)	AJ236136 (1)
<i>Sporisorium ovarium</i>	<i>Urochloa fasciculata</i>	Mexico	MP 1871				AY740020 (1)	AJ236137 (1)
<i>Sporisorium paspali-notati</i>	<i>Paspalum notatum</i>	Cuba	MP 2101				AY344982 (1)	AF453944 (1)
<i>Sporisorium penniseti</i>	<i>Pennisetum setaceum</i>	Canary Islands	MP 2367				AY344971 (1)	AY740130 (1)
<i>Sporisorium pollinae</i>	<i>Andropogon distachyos</i>	Greece	KVU 690				AY344987 (1)	AY740138 (1)
<i>Sporisorium provinciale</i>	<i>Andropogon gerardii</i>	USA	KVU 759				AY344988 (1)	AY747076 (1)
<i>Sporisorium pseudanthistiriae</i>	<i>Pseudanthistiria hispida</i>	India	KVU 969				<b>JN367295</b>	<b>JN367320</b>
<i>Sporisorium pseudechinolaenae</i>	<i>Pseudechinolaena polystachya</i>	Indonesia	KVU 853				AY344989 (1)	AY740139 (1)
<i>Sporisorium puellare</i>	<i>Hyparrhenia hirta</i>	Canary Islands	MP 2372				AY740058 (1)	AY740111 (1)
<i>Sporisorium pulverulentum</i>	<i>Saccharum strictum</i>	Yugoslavia	M-0056627				AY740162 (1)	AY740162 (1)
<i>Sporisorium reilianum</i>	<i>Zea mays</i>	Germany	Jan Schirawski (3)	DQ832233	DQ832232	DQ832229	DQ832230	DQ832228
<i>Sporisorium reilianum</i>	<i>Zea mays</i>	China	Jan Schirawski (3)					
<i>Sporisorium scitamineum</i>	<i>Saccharum sp.</i>	South Africa	Jan Schirawski (3)	<b>JN367372</b>	<b>JN367425</b>	<b>JN367349</b>	<b>JN367296</b>	<b>JN367321</b>
<i>Sporisorium sehemicola</i>	<i>Sehima ischaemoides</i>	Zimbabwe	M-0056628					<b>JN872446</b>
<i>Sporisorium sorghi</i>	<i>Sorghum bicolor</i>	Nicaragua	MP 2036				AY740021 (1)	AF009872 (1)

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<i>Sporisorium themedae-arguentis</i>	<i>Themeda arguens</i>	Indonesia	KVU 855				AY344991 (1)	AY740140 (1)
<i>Sporisorium trachypogoncola</i>	<i>Trachypogon plumosus</i>	Cuba	MP 2463				AY344992 (1)	AY740141 (1)
<i>Sporisorium trachypogonis-pulmosi</i>	<i>Trachypogon plumosus</i>	Venezuela	M-0056635				AY740060 (1)	AY740113 (1)
<i>Sporisorium tristachyae</i>	<i>Loudetiopsis chrysothrix</i>	Bolivia	MP 2630				AY740164 (1)	AY740164 (1)
<i>Sporisorium tumefaciens</i>	<i>Chrysopogon aciculatus</i>	Sri Lanka	KVU 231				AY344969 (1)	AY740128 (1)
<i>Sporisorium veracruzianum</i>	<i>Panicum viscidellum</i>	Costa Rica	MP 960				AY344993 (1)	AY740114 (1)
<i>Sporisorium walkeri</i>	<i>Themeda triandra</i>	Australia	KVU 975	<b>JN367373</b>	<b>JN367426</b>	<b>JN367350</b>	<b>JN367297</b>	<b>JN367322</b>
<i>Tranzscheliella hypodytes</i>	n.a.	n.a.	RK 074	<b>JN367374</b>	<b>JN367427</b>	<b>JN367351</b>	<b>JN367298</b>	<b>JN367323</b>
<i>Urocystis eranthidis</i>	<i>Eranthis hyemalis</i>	Great Britain	hmk 292	<b>JN367375</b>	<b>JN367428</b>	<b>JN367352</b>	<b>JN367299</b>	<b>JN367324</b>
<i>Ustanciosporium gigantosporum</i>	<i>Rhynchospora alba</i>	Germany	HRK 023	<b>JN367376</b>	<b>JN367429</b>	<b>JN367353</b>	<b>JN367300</b>	<b>JN367325</b>
<i>Ustanciosporium standleyanum</i>	<i>Rhynchospora rugosa</i>	Ecuador	JG 91	<b>JN367377</b>	AFTOL	<b>JN367354</b>	DQ846890	<b>JN367326</b>
<i>Ustilago aeluropodis</i>	<i>Aeluropus littoralis</i>	Romania	M-0056571					<b>JN872442</b>
<i>Ustilago affinis</i>	<i>Stenotaphrum secundatum</i>	Costa Rica	Rivera s.n. (USJ)				AY344995 (1)	AF133581 (1)
<i>Ustilago alcornii</i>	<i>Tripogon loliiiformis</i>	Australia	M-0056514				AY740165 (1)	AY740165 (1)
<i>Ustilago altilis</i>	<i>Triodia pungens</i>	Australia	KVU 418				AY740166 (1)	AY740166 (1)
<i>Ustilago austro-africana</i>	<i>Enneapogon cenchroides</i>	Zimbabwe	M-0056516				AY740061 (1)	AY740115 (1)
<i>Ustilago avenae</i>	<i>Arrhenatherum elatius</i>	Germany	HRK004				AY740063 (1)	AY740117 (1)
<i>Ustilago bromivora</i>	<i>Bromus catharticus</i>	Argentina	HUV 19322				AY740064 (1)	AY740118 (1)
<i>Ustilago bullata</i>	n.a.	n.a.	DB 3758					<b>JN367301</b> <b>JN367327</b>
<i>Ustilago calamagrostidis</i>	<i>Calamagrostis epigeios</i>	Bulgaria	M-0056518				AY740065 (1)	AY740119 (1)
<i>Ustilago crameri</i>	<i>Setaria italica</i>	India	KVU 995				AY344999 (1)	AY740143 (1)
<i>Ustilago cynodontis</i>	<i>Cynodon dactylon</i>	Spain	HRK 040	<b>JN367378</b>	<b>JN367430</b>	<b>JN367355</b>	AY345000 (1)	AF009881 (1)
<i>Ustilago davisii</i>	<i>Glyceria multiflora</i>	Argentina	HUV 19252				AY740169 (1)	AY740169 (1)
<i>Ustilago drakensbergiana</i>	<i>Digitaria tricholaenoides</i>	South Africa	M-0056523				AY740170 (1)	AY740170 (1)
<i>Ustilago echinata</i>	<i>Phalaris arundinacea</i>	Germany	KVU 540				AY345001 (1)	AY740144 (1)
<i>Ustilago esculenta</i>	<i>Zizania latifolia</i>	Taiwan	KVU 590				AY345002 (1)	AF453937 (1)
<i>Ustilago filiformis</i>	<i>Glyceria fluitans</i>	Germany	HRK 025	<b>JN367379</b>	<b>JN367431</b>	<b>JN367356</b>	<b>JN367302</b>	<b>JN367328</b>
<i>Ustilago hordei</i>	<i>Hordeum vulgare</i>	USA	Jan Schirawski (3)	<b>JN367380</b>	<b>JN367432</b>	<b>JN367357</b>	n.a.	<b>JN367329</b>
<i>Ustilago hordei</i>	<i>Hordeum vulgare</i>	n.a.	CBS 343.32				AY345003 (1)	AY345003 (1)
<i>Ustilago kolleri</i>	<i>Avena sativa</i>	n.a.	DB 1526					<b>JN367303</b> <b>JN367330</b>
<i>Ustilago longissima</i>	n.a.	n.a.	n.a.					<b>JN367304</b> <b>JN367331</b>
<i>Ustilago longissima var. macrospora</i>	n.a.	n.a.	CBS 160.22					<b>JN367305</b> <b>JN367332</b>
<i>Ustilago maydis</i>	<i>Zea mays</i>	USA	521 (MUMDB)	XM751978	XM754917	X62396	AY854090 (1)	AF453938 (1)

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<i>Ustilago maydis</i>	<i>Zea mays</i>	USA	FB1 (2)					
<i>Ustilago maydis</i>	<i>Zea mays</i>	USA	FB2 (2)					
<i>Ustilago maydis</i>	<i>Zea mays</i>	USA	FB6a (2)					
<i>Ustilago maydis</i>	<i>Zea mays</i>	USA	FB6b (2)					
<i>Ustilago neyraudiae</i>	<i>Neyraudia reynaudiana</i>	India	M-0056543					<b>JN872443</b>
<i>Ustilago nigra</i>	n.a.	n.a.	n.a.				<b>JN367306</b>	<b>JN367333</b>
<i>Ustilago nuda</i>	<i>Hordeum leporinum</i>	Greece	HUV 17782				<b>JN367307</b>	<b>JN367334</b>
<i>Ustilago pamirica</i>	<i>Bromus gracillimus</i>	Iran	KVU 789				AY345005 (1)	AY740145 (1)
<i>Ustilago schroeteriana</i>	<i>Paspalum paniculatum</i>	Costa Rica	KVU 887				AY345006 (1)	AY740146 (1)
<i>Ustilago sparsa</i>	n.a.	India	KVU 892				<b>JN367308</b>	<b>JN367335</b>
<i>Ustilago spermophora</i>	<i>Erragrostis ferruginea</i>	n.a.	HUV 20717	<b>JN367381</b>	<b>JN367433</b>	<b>JN367358</b>	AY740171 (1)	AY740171 (1)
<i>Ustilago striiformis</i>	<i>Alopecurus pratensis</i>	Germany	HUV 18286	<b>JN367382</b>	<b>JN367434</b>	<b>JN367359</b>	AY740172 (1)	AY740172 (1)
<i>Ustilago syntherismae</i>	<i>Digitaria ternata</i>	India	KVU 998				AY740071 (1)	AY740123 (1)
<i>Ustilago tragana</i>	<i>Tragus berteronianus</i>	Zimbabwe	M-0056562				AY740072 (1)	AY740124 (1)
<i>Ustilago trichophora</i>	<i>Echinochloa colona</i>	India	M-0056564				AY740073 (1)	AY740125 (1)
<i>Ustilago triodiae</i>	<i>Triodia microstachya</i>	Australia	M-0056566				AY740075 (1)	AY740127 (1)
<i>Ustilago tritici</i>	n.a.	n.a.	n.a.				<b>JN367309</b>	<b>JN367336</b>
<i>Ustilago turcomanica</i>	<i>Eremopyrum distans</i>	Iran	HUV 23				AY345011 (1)	AF453936 (1)
<i>Ustilago vetiveriae</i>	<i>Vetiveria zizanioides</i>	India	HUV 17954	<b>JN367383</b>	<b>JN367435</b>	<b>JN367360</b>	AY345011 (1)	<b>JN367337</b>
<i>Ustilago williamsii</i>	n.a.	USA	HRK 045	<b>JN367384</b>	n.a.	<b>JN367361</b>	<b>JN367310</b>	<b>JN367338</b>
<i>Ustilago xerochloae</i>	<i>Xerochloae imberbis</i>	Australia	KVU 1000	<b>JN367385</b>	<b>JN367436</b>	<b>JN367362</b>	<b>JN367311</b>	<b>JN367339</b>