

Classification of Organisms:

Pathogenicity classification of fungi

Status December 2014 (CGM/141218-03)

Pathogenicity classification of fungi

COGEM advice CGM/141218-03

Dutch Regulations Genetically Modified Organisms

In the Decree on Genetically Modified Organisms (GMO Decree) and its accompanying more detailed Regulations (GMO Regulations) genetically modified micro-organisms are grouped in four pathogenicity classes, ranging from the lowest pathogenicity Class 1 to the highest Class 4.¹ The pathogenicity classifications are used to determine the containment level for working in laboratories with GMOs.

A micro-organism of Class 1 should at least comply with one of the following conditions:

- a) the micro-organism does not belong to a species of which representatives are known to be pathogenic for humans, animals or plants,
- b) the micro-organism has a long history of safe use under conditions without specific containment measures,
- c) the micro-organism belongs to a species that includes representatives of class 2, 3 or 4, but the particular strain does not contain genetic material that is responsible for the virulence,
- d) the micro-organism has been shown to be non-virulent through adequate tests.

A micro-organism is grouped in Class 2 when it can cause a disease in humans or animals whereby it is unlikely to spread within the population while an effective prophylaxis, treatment or control strategy exists, as well as an organism that can cause a disease in plants.

A micro-organism is grouped in Class 3 when it can cause a serious disease in humans or animals whereby it is likely to spread within the population while an effective prophylaxis, treatment or control strategy exists.

A micro-organism is grouped in Class 4 when it can cause a very serious disease in humans or animals whereby it is likely to spread within the population while no effective prophylaxis, treatment or control strategy exists.

Pathogenicity classification of fungi

The Netherlands Commission on Genetic Modification (COGEM) advises the Dutch government (amongst others) on the classification in risk groups (classes) of organisms according to the risk they pose to human health and the environment. These classifications are written in Dutch and are therefore only published on the Dutch part of the COGEM website.

1. Ministerie van Infrastructuur en Milieu (2015). Regeling genetisch gemodificeerde organismen milieubeheer 2013.

<http://wetten.overheid.nl/BWBR0035072/2017-01-01> [In Dutch]

In order to inform other countries and/or organisations about the classification of organisms by COGEM, the most recent classification list of fungi has been translated.

In table 1 all apathogenic fungi that have been classified until the 18th of December 2014 are listed alphabetically. In table 2 all pathogenic fungi that have been classified until the 18th of December 2014 are listed alphabetically.

Table 1. Classification of apathogenic fungi, sorted alphabetically

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
Achaetomium	strumarium				1
		Acremonium	alabamense	t. n.: Thielavia terrestris	1
		Acremonium	atrogriseum		1
		Acremonium	blochii		1
		Acremonium	curvulum		1
		Acremonium	hyalinulum		1
		Acremonium	potronii		1
		Acremonium	roseogriseum		1
		Acremonium	spinosum		1
		Acremonium	strictum		1
		Acrophialophora	fusispora		1
Agaricus	bisporus				1
		Alternaria	chlamydospora		1
		Anthopsis	deltoidea		1
Aphanoascus	keratinophilus	Chrysosporium	keratinophilum		1
Arnium	leporinum				1
Arthroderma	flavescens	Trichophyton	flavescens		1
Arthroderma	gertleri	Trichophyton	vanbreuseghemii		1
Arthroderma	gloriae	Trichophyton	gloriae		1
Arthroderma	gypseum	Microsporum	gypseum var. gypseum	A. gypseum = Nannizzia gypsea	1
Arthroderma	insingulare	Trichophyton	terrestre		1
Arthroderma	lenticulare	Trichophyton	terrestre		1

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
Arthroderma	quadrifidum	Trichophyton	terrestre		1
Arthroderma	racemosum	Microsporum	racemosum		1
Arthroderma	uncinatum	Trichophyton	ajelloi		1
		Arxula	terrestris		1
Ascotricha	chartarum	Dicyma	ampullifera		1
		Aspergillus	avenaceus		1
		Aspergillus	brasiliensis		1
		Aspergillus	caesiellus		1
		Aspergillus	calidoustus		1
		Aspergillus	candidus		1
		Aspergillus	chevalieri	t. n.: Eurotium chevalieri	1
		Aspergillus	conicus		1
		Aspergillus	deflectus		1
		Aspergillus	fischerianus	t. n.: Neosartorya fischeri	1
		Aspergillus	flavipes	t. n.: Fennellia flavipes	1
		Aspergillus	foetidus		1
		Aspergillus	fumigatiaffinis		1
		Aspergillus	fumissynnematus		1
		Aspergillus	glaucus	t. n.: Eurotium herbariorum	1
		Aspergillus	granulosus		1
		Aspergillus	hollandicus	t. n.: Eurotium amstelodami	1
		Aspergillus	janus		1
		Aspergillus	japonicus		1
		Aspergillus	nidulans	t. n.: Emericella nidulans	1
		Aspergillus	niger var. niger		1
		Aspergillus	niger var. awamori		1

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
		Aspergillus	ochraceopetaliiformis		1
		Aspergillus	oryzae		1
		Aspergillus	reptans	t. n.: Eurotium repens	1
		Aspergillus	restrictus		1
		Aspergillus	sojae		1
		Aspergillus	spinosus	t. n.: Neosartorya spinosa	1
		Aspergillus	sydowii		1
		Aspergillus	tetrazonus	t. n.: Emericella quadrilineata	1
		Aspergillus	tritici		1
		Aspergillus	udagawae	t.n.: Neosartorya udagawae	1
		Aspergillus	unguis	t. n.: Emericella unguis	1
		Aspergillus	ustus		1
		Aspergillus	vadense		1
		Aureobasidium	pullulans	= Discosphaerina fulvida	1
		Basipetospora	rubra	t. n.: Monascus ruber	1
		Beauveria	brongniartii		1
Bjerkandera	adusta				1
		Bipolaris	papendorffii		1
		Bipolaris	spicifera	t. n.: Cochliobolus spiciferus	1
Botryosphaeria	subglobosa	Sphaeropsis	subglobosa		1
Calypトロzyma arxii					1
		Candida	fabianii	t. n.: Lindnera fabianii	1
		Candida	famata	t. n.: Debaryomyces hansenii	1
		Candida	guilliermondii	t. n.: Meyerozyma guilliermondii = Pichia guilliermondii	1
		Candida	haemulonii		1

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
		Candida	kefyr	t. n.: Kluyveromyces marxianus	1
		Candida	lambica	t. n.: Pichia fermentans	1
		Candida	lipolytica	t. n.: Yarrowia lipolytica	1
		Candida	maltosa	C. maltosa = C. cloacae = C. novellus = C. subtropicalis	1
		Candida	norvegensis	t. n.: Pichia norvegensis	1
		Candida	oleophila		1
		Candida	pelliculosa	t. n.: Hansenula anomala = Pichia anomala = Wickerhamomyces anomalus	1
		Candida	pintolopesii	t. n.: Kazachstania telluris	1
		Candida	pulcherrima	t. n.: Metschnikowia pulcherrima	1
		Candida	rugosa		1
		Candida	sphaerica	t. n.: Kluyveromyces lactis = Kluyveromyces marxianus var. lactis	1
		Candida	utilis	t. n.: Lindnera jadinii = Pichia jadinii	1
		Candida	viswanathii		1
		Candida	zeylanoides		1
		Cephalophora	irregularis		1
Ceriporiopsis	subvermispora				1
Chaetomium	atrobrunneum				1
Chaetomium	funicola				1
Chaetomium	murorum				1
Chaetomium	strumarium				1
Chlamydoabsidia	padenii				1

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
		Chrysonilia	sitophila	t. n.: Neurospora sitophila	1
		Chrysosporium	inops		1
		Chrysosporium	keratinophilum	t. n.: Aphanoascus keratinophilus	1
		Chrysosporium	lucknowense		1
		Chrysosporium	pannicola		1
		Chrysosporium	queenslandicum	t. n.: Uncinocarpus queenslandicus	1
		Chrysosporium	sp.	t. n.: Nannizziopsis vriesii	1
		Chrysosporium	zonatum	t. n.: Uncinocarpus orissi	1
		Cladosporium	elatum		1
		Cladosporium	herbarum	t. n.: Mycosphaerella tassiana	1
		Cladosporium	sphaerospermum		1
		Clonostachys	rosea	= Gliocladium catenulatum	1
Cochliobolus	spiciferus	Bipolaris	spicifera		1
Cokeromyces	recurvatus				1
Conidiobolus	lamprauges				1
Coniochaeta	ligniaria	Lecythophora	hoffmannii		1
		Coniosporium	epidermidis		1
		Coniothyrium	minitans		1
Coprinopsis	cinereus	Hormographiella	aspergillata		1
Corynascus	heterothallicus	Myceliophthora	thermophila		1
Cosmospora	episphaerica	Fusarium	aquaeductuum		1
		Cryptococcus	adeliensis		1
		Cryptococcus	albidus		1
		Cryptococcus	ater		1
		Cryptococcus	diffluens		1
		Cryptococcus	flavescens		1

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
		Cryptococcus	humicola		1
		Cryptococcus	laurentii		1
		Cryptococcus	liquefaciens		1
		Cryptococcus	macerans		1
		Cryptococcus	magnus		1
		Cryptococcus	uzbekistanensis		1
		Cryptococcus	uniguttulatus	t. n.: Filobasidium uniguttulatum	1
		Curvularia	brachyspora		1
		Cylindrocarpon	lichenicola		1
		Cyphellophora	laciniata		1
		Cyphellophora	pluriseptata		1
Debaryomyces	hansenii	Candida	famata		1
Dichomitus	squalens				1
		Dichotomophthoropsis	nymphaearum		1
		Dichotomophthora	portulacae		1
		Dicyma	ampullifera	t. n.: Ascotricha chartarum	1
		Discosphaerina	fulvida	= Aureobasidium pullulans	1
		Drechslera	papendorffii		1
Duddingtonia	flagrans	Trichothecium	flagrans		1
Emericella	nidulans	Aspergillus	nidulans		1
Emericella	quadrilineata	Aspergillus	tetrazonus		1
Emericella	unguis	Aspergillus	unguis		1
		Engyodontium	album		1
		Epidermophyton	stockdaleae		1
Eurotium	amstelodami	Aspergillus	hollandicus		1
Eurotium	chevalieri	Aspergillus	chevalieri		1

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
Eurotium	herbariorum	Aspergillus	glaucus		1
Eurotium	repens	Aspergillus	reptans		1
		Exophiala	xenobiotica		1
		Exserohilum	longirostratum		1
		Exserohilum	mcginnisii		1
Fennellia	flavipes	Aspergillus	flavipes		1
Filobasidium	uniguttulatum	Cryptococcus	uniguttulatus		1
		Fusarium	aqueductum	t. n.: Cosmospora episphaerica	1
		Fusarium	dimerum		1
		Geomyces	pannorum		1
		Glarea	lozoyensis		1
		Gliocladium	catenulatum	= Clonostachys rosea	1
		Graphium	sp.	t. n.: Petriella setifera	1
Hansenula	angusta			= Ogataea angusta = Pichia angusta	1
Hansenula	anomala	Candida	pelliculosa	H. anomala = Wickerhamomyces anomalus = Pichia anomala	1
Hansenula	polymorpha			= Ogataea polymorpha = Pichia polymorpha	1
		Hormographiella	aspergillata	t. n.: Coprinopsis cinereus	1
		Hortaea	werneckii		1
Hypocrea	koningii	Trichoderma	koningii		1
Hypocrea	pseudokoningii	Trichoderma	pseudokoningii		1
Hypocrea	rufa	Trichoderma	viride		1
Irpex	lacteus			I. lacteus = Polyporus tulipiferae	1
Kazachstania	telluris	Candida	pintolopesii		1

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
		Keratinomyces	ceretanicus		1
Kluyveromyces	lactis	Candida	sphaerica	K. lactis = K. marxianus var.lactis	1
Kluyveromyces	marxianus	Candida	kefyr		1
Kodamaea	ohmeri			= Pichia ohmeri	1
Komagataella	pastoris			= Pichia pastoris	1
Lachancea	kluyveri				1
		Lecythophora	hoffmannii	t. n.: Coniochaeta ligniaria	1
		Lecythophora	mutabilis		1
Lindnera	fabianii	Candida	fabianii		1
Lindnera	jadinii	Candida	utilis	L. jadinii = Pichia jadinii	1
		Malassezia	dermatis		1
		Malbranchea	pulchella		1
Massarina	tetraploa	Tetraploa	aristata		1
		Metarhizium	anisopliae		1
Metschnikowia	pulcherrima	Candida	pulcherrima		1
Meyerozyma	guilliermondii	Candida	guilliermondii	M. guilliermondii = Pichia guilliermondii	1
Microascus	cinereus	Scopulariopsis	cinereus		1
Microascus	cirrosus	Scopulariopsis	paisii		1
Microascus	manginii	Scopulariopsis	candida		1
		Microsphaeropsis	olivacea		1
		Microsporum	gypseum var. gypseum	t. n.: Arthroderma gypseum	1
		Microsporum	racemosum	t. n.: Arthroderma racemosum	1
Monascus	ruber	Basipetospora	rubra		1
		Moniliella	suaveolens		1

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
Mortierella	alpina				1
Mortierella	polycephala				1
Mucor	indicus				1
Mucor	miehei			= Rhizomucor miehei	1
Mucor	ramosissimus				1
		Mycoleptodiscus	indicus		1
		Myceliophthora	thermophila	t. n.: Corynascus heterothallicus	1
Mycosphaerella	tassiana	Cladosporium	herbarum		1
		Myriodontium	keratinophilum	t. n.: Neoarachnotheca keratinophila	1
		Myrmecridium	schulzeri	= Ramichloridium schulzeri	1
Myxotrichum	deflexum				1
Nannizziopsis	vriesii	Chrysosporium	sp.		1
Narasimhella	hyalinospora				1
		Natrassia	dimidiatum		1
Neoarachnotheca	keratinophila	Myriodontium	keratinophilum		1
Neosartorya	fischeri	Aspergillus	fischerianus		1
Neosartorya	spinosa	Aspergillus	spinosus		1
Neosartorya	udagawae	Aspergillus	udagawae		1
Neurospora	crassa				1
Neurospora	sitophila	Chrysonilia	sitophila		1
		Nigrospora	sphaerica		1
		Ochroconis	constricta		1
Ogataea	angusta			= Pichia angusta = Hansenula angusta	1
Ogataea	methanolica			= Pichia methanolica	1

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
Ogataea	polymorpha			= Pichia polymorpha = Hansenula polymorpha	1
		Oidiodendron	cerealis		1
Oidiodendron	maius				1
Ophiostoma	piceae	Sporothrix	sp.		1
Ophiostoma	stenoceras	Sporothrix	sp.		1
		Ovadendron	sulphureoohraceum		1
		Paecilomyces	crustaceus	t. n.: Thermoascus crustaceus	1
		Paecilomyces	javanicus		1
		Paecilomyces	lilacinus		1
		Paecilomyces	marquandii		1
		Paecilomyces	viridis		1
		Papulaspora	equi		1
		Penicillium	aurantiogriseum		1
		Penicillium	chrysogenum		1
		Penicillium	decumbens		1
		Penicillium	funiculosum		1
		Penicillium	piceum		1
		Penicillium	purpurogenum		1
		Penicillium	spinulosum		1
Petriella	setifera	Graphium	sp.		1
Petriella	setifera	Scedosporium	sp.		1
		Phaeoacremonium	alvesii		1
		Phaeoacremonium	amstelodamense		1
		Phaeoacremonium	griseobrunneum		1
		Phaeoacremonium	inflatipes		1

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
		Phaeoacremonium	rubrigenum	t. n.: Togninia rubrigena	1
		Phaeoacremonium	sphinctrophorum		1
		Phaeoacremonium	tardicrescens		1
		Phaeoacremonium	venezuelense		1
		Phaeococcomyces	exophialae		1
		Phaeoisaria	clematidis		1
		Phaeosclera	dematioides		1
		Phaeotrichoconis	crotalariae		1
		Phaffia	rhodozyma	t. n.: Xanthophyllomyces dendrorhous	1
		Phialophora	bubakii		1
		Phialophora	reptans		1
		Phialophora	repens		1
Phlebia	radiata			P. radiata = Phlebia merismoides	1
Phlebia	tremellosa			P. tremellosa = Merulius tremellosus	1
Phlebiopsis	gigantea				1
		Phoma	herbarum		1
		Phoma	minutella		1
		Phoma	minutispora		1
Physisporinus	rivulosus				1
Pichia	anomala	Candida	pelliculosa	P. anomala = Hansenula anomala = Wickerhamomyces anomalus	
Pichia	angusta			= Ogataea angusta = Hansenula angusta;	1
Pichia	fermentans	Candida	lambica		1

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
Pichia	guilliermondii	Candida	guilliermondii	P. guilliermondii = Meyerozyma guilliermondii	1
Pichia	jadinii	Candida	utilis	P. jadinii = Lindnera jadinii	1
Pichia	methanolica			= Ogataea methanolica	1
Pichia	norvegensis	Candida	norvegensis		1
Pichia	ohmeri			= Kodamaea ohmeri	1
Pichia	pastoris			= Komagataella pastoris	1
Pichia	polymorpha			= Ogataea polymorpha = Hansenula polymorpha	1
Phanerochaete	chrysosporium	Sporotrichum	pruinsum		1
		Piedraia	hortai		1
		Piedraia	quintanilhae		1
Plectosphaerella	cucumerina	Plectosporium	tabacinum		1
		Plectosporium	tabacinum	t. n.: Plectosphaerella cucumerina	1
		Pleurophoma	cava		1
		Pleurophomopsis	lignicola		1
		Pleurostomophora	repens		1
Pleurotus	eryngii				1
Pleurotus	ostreatus				1
Pleurotus	pulmonarius				1
Pneumocystis	murina				1
Pneumocystis	oryctolagi				1
Pneumocystis	wakefieldiae				1
		Polypaecilum	insolutum		1
Podospora	pauciseta			voorheen Podospora anserina	1
Pseudeurotium	ovale	Sporothrix	sp.		1

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
		Pseudozyma	flocculosa		1
		Ramichloridium	schulzeri	= Myrmecridium schulzeri	1
		Rhinocladiella	atrovirens		1
		Rhinocladiella	basitona		1
Rhizomucor	miehei			= Mucor miehei	1
Rhodosporidium	diobovatum	Rhodotorula	glutinis		1
Rhodosporidium	sphaerocarpum	Rhodotorula	glutinis		1
Rhodosporidium	toruloides	Rhodotorula	glutinis		1
		Rhodotorula	glutinis	t. n.: Rhodosporidium diobovatum, Rhodosporidium sphaerocarpum or Rhodosporidium toruloides	1
		Rhodotorula	minuta		1
		Rhodotorula	mucilaginosa		1
Saccharomyces	bayanus				1
Saccharomyces	cerevisiae				1
Saccharomyces	eubayanus				1
Saccharomyces	kluyveri			= Lachancea kluyveri	1
Saccharomyces	kudriavzevii				1
Saccharomyces	mikatae				1
Saccharomyces	paradoxus				1
Saccharomyces	pastorianus				1
Saccharomyces	uvarum				1
		Scedosporium	sp.	t. n.: Petriella setifera	1
		Scedosporium	dehoogii		1
Schizosaccharomyces	pombe				1
		Scopulariopsis	acremonium		1

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
		Scopulariopsis	asperula		1
		Scopulariopsis	candida	t. n.: Microascus manginii	1
		Scopulariopsis	cinereus	t. n.: Microascus cinereus	1
		Scopulariopsis	flava		1
		Scopulariopsis	fusca		1
		Scopulariopsis	koningii		1
		Scopulariopsis	paisii	t. n.: Microascus cirrosus	1
		Scytalidium	infestans		1
		Scytalidium	japonicum		1
		Scytalidium	lignicola		1
Sodyomyces	alkalinus				1
		Sphaeropsis	subglobosa	t. n.: Botryosphaeria subglobosa	1
Sporidiobolus	johnstonii	Sporobolomyces	salmonicolor		1
		Sporobolomyces	salmonicolor	t. n.: Sporidiobolus johnstonii	1
		Sporothrix	sp.	t. n.: Ophiostoma piceae, Ophiostoma stenoceras or Pseudeurotium ovale	1
		Sporotrichum	pruinsum	t. n.: Phanerochaete chrysosporium	1
		Staphylotrichum	coccosporum		1
		Taeniolella	stilbospora		1
Talaromyces	emersonii				1
Talaromyces	macrosporus				1
		Tetraploa	aristata	t. n.: Massarina tetraploa	1
Thermoascus	crustaceus	Paecilomyces	crustaceus		1
Thermomucor	indicae-seudaticae				1
		Thermomyces	lanuginosus	= Humicola lanuginosa	1

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
Thielavia	terrestris	Acremonium	alabamense		1
		Tilletiopsis	minor		1
Togninia	rubrigena	Phaeoacremonium	rubrigenum		1
Trametes	versicolor			T. versicolor = Coriolus versicolor, Microporus versicolor, Boletus versicolor, Bjerkandera versicolor, Poria versicolor	1
		Triadelphia	pulvinata		1
		Trichocladium	asperum		1
		Trichoderma	asperellum	= Trichoderma harzianum = Trichoderma viride	1
		Trichoderma	atroviride		1
		Trichoderma	gamsii		1
		Trichoderma	longibrachiatum		1
		Trichoderma	koningii	t. n.: Hypocrea koningii	1
		Trichoderma	polysporum		1
		Trichoderma	pseudokoningii	t. n.: Hypocrea pseudokoningii	1
		Trichoderma	reesei		1
		Trichoderma	viride	t. n.: Hypocrea rufa	1
		Trichophyton	ajelloi	t. n.: Arthroderma uncinatum	1
		Trichophyton	flavescens	t. n.: Arthroderma flavescens	1
		Trichophyton	gloriae	t. n.: Arthroderma gloriae	1
		Trichophyton	terrestre	t. n.: Arthroderma insingulare, Arthroderma lenticulare or Arthroderma quadrifidum	1
		Trichophyton	thuringiense		1

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
		Trichophyton	vanbreusegheimii	t. n.: Arthroderma gertleri	1
		Trichosporon	domesticum		1
		Trichothecium	flagrans	t. n.: Duddingtonia flagrans	1
		Ulocladium	botrytis		1
		Ulocladium	chartarum		1
Uncinocarpus	orissi	Chrysosporium	zonatum		1
Uncinocarpus	queenslandicus	Chrysosporium	queenslandicum		1
		Veronaea	botryosa		1
		Volutella	cinerascens		1
		Wallemia	sebi		1
Wickerhamomyces	anomalus	Candida	pelliculosa	W. anomalus = Hansenula anomala = Pichia anomala	1
Xanthophyllomyces	dendrorhous	Phaffia	rhodozyma		1
Yarrowia	lipolytica	Candida	lipolytica		1
Zygosaccharomyces	bailii				1
Zygosaccharomyces	rouxii				1

t. n.: teleomorph name

= : is also known under the name

Table 2. Classification of pathogenic fungi, sorted alphabetically

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
Absidia	coerulea				2
Absidia	ornata			= Lichtheimia ornata	2
		Acremonium	falciforme	= Fusarium falciforme	2
		Acremonium	kiliense		2
		Acremonium	recifei		2
Ajellomyces	dermatitidis	Blastomyces	dermatitidis		3; D
Ajellomyces	crescens	Emmonsia	crescens	E. crescens = Emmonsia parva var. crescens	2
Ajellomyces	capsulatus	Histoplasma	capsulatum	A. capsulatus = Emmonsia capsulata	3; D
		Alternaria	dianthicola		2; P
Aphanoascus	fulvescens	Chrysosporium	sp.		2
Apophysomyces	elegans				2
Arachnomycetes	nodosetosus	Onychocola	canadensis		2
		Arthrotrichum	oligospora		2; D
Arthroderma	benhamiae	Trichophyton	erinacei		2; D
Arthroderma	borellii	Microsporum	amazonicum		2
Arthroderma	corniculatum	Microsporum	sp.		2; A
Arthroderma	fulvum	Microsporum	fulvum	A. fulvum = Nannizzia fulva	2
Arthroderma	grubyi	Microsporum	gallinae		2; D
Arthroderma	incurvatum	Microsporum	gypseum		2; D
Arthroderma	obtusum	Microsporum	nanum	A. obtusum = Nannizzia obtusa	2; D
Arthroderma	otae	Microsporum	canis	A. otae = Nannizzia otae	2; D
Arthroderma	persicolor	Microsporum	persicolor	A. persicolor = Nannizzia persicolor	2; D

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
Arthroderma	simii	Trichophyton	simii		2; D
Arthroderma	vanbreuseghemii	Trichophyton	interdigitale		2
Arthroderma	vanbreuseghemii	Trichophyton	krajdenii	= Trichophyton interdigitale;	2
Arthroderma	vanbreuseghemii	Trichophyton	mentagrophytes		2
		Arthrographis	kalrae	t. n.: Eremomyces langeronii	2
		Aspergillus	arvii		2
		Aspergillus	flavus		2; D; T
		Aspergillus	fumigatus	t. n.: Neosartorya fumigata	2; D; A; T
		Aspergillus	lentulus		2; T
		Aspergillus	terreus		2; D; T
		Aspergillus	thermomutatus	t. n.: Neosartorya pseudofischeri	2
		Aspergillus	versicolor		2; T
Basidiobolus	haptosporus				2
Basidiobolus	ranarum				2; D
Batrachochytrium	dendrobatidis				2
		Beauveria	bassiana	t.n.: Cordiceps bassiana	2
		Beauveria	brongniartii	t.n.: Cordiceps brongniartii	2
		Beauveria	pseudobassiana		2
		Bipolaris	australiensis	t. n.: Cochliobolus australiensis	2;P
		Blastomyces	dermatitidis	t. n.: Ajellomyces dermatitidis	3; D
		Blastoschizomyces	capitatus	= Geotrichum capitatum = Saprochaete capitata; t. n.: Magnusiomyces capitatus = Dipodascus capitatus;	2
Botryomyces	caespitosus				2

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
		Candida	africana		2; A
		Candida	albicans		2; A
		Candida	bracarensis		2
		Candida	dublinsiensis		2
		Candida	ciferrii	t. n.: Trichomonascus ciferrii = Stephanoascus ciferrii	2
		Candida	glabrata	= Torulopsis glabrata	2; D
		Candida	krusei	t. n.: Pichia kudriavzevii = Issatchenkia orientalis	2; D
		Candida	lusitaniae	t. n.: Clavispora lusitaniae	2
		Candida	metapsilosis		2
		Candida	nivariensis		2
		Candida	orthopsilosis		2
		Candida	parapsilosis		2
		Candida	pseudotropicalis		2
		Candida	stellatoidea	= Candida albicans	2; A
		Candida	tropicalis		2; D
Botryosphaeria	rhodina				2; P
Capronia	semiimmersa	Phialophora	americana		2
		Cerinosterus	cyanescens	= Fugomyces cyanescens	2
		Chrysosporium	sp.	t. n.: Aphanoascus fulvescens	2
		Chrysosporium	tropicum		2
		Cladophialophora	arxii		2
		Cladophialophora	bantiana		3; D
		Cladophialophora	boppi		2
		Cladophialophora	carrionii		2

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
		Cladophialophora	devriesii		2
		Cladophialophora	emmonsii		2
		Cladophialophora	immunda		2
		Cladophialophora	modesta		3
		Cladophialophora	mycetomatis		2
		Cladophialophora	samoënsis		2
Clavispora	lusitaniae	Candida	lusitaniae		2
		Coccidioides	immitis		3; D
		Coccidioides	posadasii		3
Cochliobolus	australiensis	Bipolaris	australiensis		2; P
Cochliobolus	geniculatus	Curvularia	geniculata		2; P
Cochliobolus	lunatus	Curvularia	lunata		2; P
Cochliobolus	pallens	Curvularia	pallens		2; P
Cochliobolus	verruculosus	Curvularia	verruculosa		2; P
		Colletotrichum	coccodes		2; P
		Colletotrichum	dematium		2; P
		Colletotrichum	gloeosporioides	t. n.: Glomerella cingulata	2; P
		Colletotrichum	graminicola	t. n.: Glomerella tucumanensis	2; P
Cordiceps	bassiana	Beauveria	bassiana		2
Cordiceps	brongniartii	Beauveria	brongniartii		2
Conidiobolus	coronatus			= Delacroixia coronata	2
Conidiobolus	incongruus				2
		Coniothyrium	fuckelii	t. n.: Leptosphaeria coniothyrium	2; P
Cryphonectria	parasitica			= Endothia parasitica	2; P
		Cryptococcus	gattii	t. n.: Filobasidiella bacillispora	2; D
		Cryptococcus	neoformans var. grubii	t. n.: Filobasidiella neoformans	2; D; A

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
		Cryptococcus	neoformans var. neoformans	t. n.: Filobasidiella neoformans	2; D; A
Cunninghamella	bertholletiae				2
		Curvularia	clavata		2; P
		Curvularia	geniculata	t. n.: Cochliobolus geniculatus	2; P
		Curvularia	lunata	t. n.: Cochliobolus lunatus	2; P
		Curvularia	pallescent	t. n.: Cochliobolus pallescens	2; P
		Curvularia	verruculosa	t. n.: Cochliobolus verruculosus	2; P
		Cylindrocarpon	cyaneus		2
		Cylindrocarpon	destructans	t. n.: Nectria radicola	2; P
Delacroixia	coronata			= Conidiobolus coronatus	2
Dipodascus	capitatus	Geotrichum	capitatum	D. capitatus = Magnusiomyces capitatus; G. capitatum = Blastoschizomyces capitatus = Saprochaete capitata	2
		Dissitimurus	exedrus		2
		Drechslera	australiensis		2; P
		Drechslera	biseptata		2; P
		Drechslera	hawaiiensis		2; P
		Drechslera	spicifera		2; P
		Emmonsia	crescens	= Emmonsia parva var. crescens; t. n.: Ajellomyces crescens;	2
		Emmonsia	parva var. parva		2; D
		Emmonsia	parva var. crescens	= Emmonsia crescens; t. n.: Ajellomyces crescens	2
		Emmonsia	pasteuriana		2

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
		Epidermophyton	floccosum		2; A
Eremomyces	langeronii	Arthrographis	kalrae		2
		Exophiala	asiatica		2
		Exophiala	attenuata		2
		Exophiala	bergeri		2
		Exophiala	castellanii		2
		Exophiala	dermatitidis		2; D
		Exophiala	jeanselmei		2; D
		Exophiala	lecanii-corni		2
		Exophiala	mansonii		2
		Exophiala	moniliae		2
		Exophiala	oligosperma		2
		Exophiala	pisciphila		2; D
		Exophiala	phaeomuriformis	= Sarcinomyces phaeomuriformis	2
		Exophiala	salmonis		2; D
		Exophiala	spinifera	= Rhinocladiella spinifera	2
		Exserohilum	rostratum	t. n.: Setosphaeria rostrata	2; P
Filobasidiella	bacillispora	Cryptococcus	gattii		2; D
Filobasidiella	neoformans	Cryptococcus	neoformans var. neoformans		2; D; A
Filobasidiella	neoformans	Cryptococcus	neoformans var. grubii		2; D; A
		Fonsecaea	compacta	= Rhinocladiella compacta	2
Fomitopsis	pinicola				2; P
		Fonsecaea	monophora		2
		Fonsecaea	pedrosoi	= Rhinocladiella pedrosoi	2
		Fugomyces	cyanescens		2

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
		Fusarium	falciforme	= Acremonium falciforme	2
		Fusarium	oxysporum		2; P; T
		Fusarium	proliferatum	t. n.: Gibberella fujikuroi	2; P; T
		Fusarium	sacchari		2; P
		Fusarium	solani	t. n.: Nectria haematococca var. breviconia	2; P; T
		Fusarium	subglutinans	t. n.: Gibberella fujikuroi var. subglutinans	2; P; T
		Fusarium	verticilloides	t. n.: Gibberella moniliformis	2; P; T
Galactomyces	geotrichum	Geotrichum	candidum		2; P
Ganoderma	australe			G. austral = Ganoderma adspersum (vroeger G. europaeum)	2; P
		Geomyces	destructans		2; D
		Geotrichum	candidum	t. n.: Galactomyces geotrichum	2; P
		Geotrichum	capitatum	= Blastoschizomyces capitatus = Saprochaete capitata; t. n.: Dipodascus capitatus = Magnusiomyces capitatus	2
		Geotrichum	clavatum		2
Gibberella	fujikuroi	Fusarium	proliferatum		2; P
Gibberella	fujikuroi var. subglutinans	Fusarium	subglutinans		2; P
Gibberella	moniliformis	Fusarium	verticillioides		2; P
Glomerella	cingulata	Colletotrichum	gloeosporioides		2; P
Glomerella	tucumanensis	Colletotrichum	graminicola		2; P
		Graphium	eumorphum	= Scedosporium boydii;	2; D

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
				t. n.: Pseudallescheria boydii	
Gymnoascus	dankaliensis				2
		Histoplasma	duboisii	= Histoplasma capsulata var. duboisii	3
		Histoplasma	capsulatum	t. n.: Ajellomyces capsulatus = Emmonsia capsulata	3; D
		Histoplasma	farcinosum	= Histoplasma capsulata var. farcinosum	2; D
		Hormonema	dematioides	t. n.: Sydowia polyspora	2; P
Issatchenkia	orientalis	Candida	krusei	I. orientalis = Pichia kudriavzevii	2; D
		Keratinomyces	ajelloi		2
		Lacazia	loboi	= Loboia loboi	2; D
		Lasioplodia	theobromae		2; P
		Lecanicillium	muscarium	= Verticillium lecanii	2; D
Leptosphaeria	senegalensis				2
Leptosphaeria	thompkinsii				2
Leptosphaeria	coniothyrium	Coniothyrium	fuckelii		2; P
Lichtheimia	corymbifera			= Mycocladus corymbifera = Absidia corymbifera	2; D
Lichtheimia	ramosa			= Mycocladus lutetiensis	2
Lichtheimia	ornata			= Absidia ornata	2
		Loboia	loboi	= Lacazia loboi	2; D
		Madurella	grisea		2
		Madurella	mycetomatis		2
Magnusiomyces	capitatus	Saprochaete	capitata	M. capitatus = Dipodascus capitatus; S. capitata = Geotrichum capitatum = Blastoschizomyces capitatus	2

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
		Malassezia	furfur		2
		Malassezia	globosa	= Pityrosporum orbiculara	2
		Malassezia	obtusa		2
		Malassezia	pachydermatis		2; D
		Malassezia	restricta		2
		Malassezia	slooffiae		2
		Malassezia	sympodialis		2
Microascus	brevicaulis	Scopulariopsis	brevicaulis		2
		Microsporum	sp.	t. n.: Arthroderma corniculatum	2; A
		Microsporum	amazonicum	t. n.: Arthroderma borellii	2
		Microsporum	audouinii	= Microsporum langeronii = Microsporum rivalieri	2
		Microsporum	boullardii	= Microsporum fulvum	2
		Microsporum	canis	t. n.: Arthroderma otae	2; D
		Microsporum	distortum	= Microsporum canis var. distortum	2
		Microsporum	duboisii		2
		Microsporum	equinum	= Microsporum canis var. distortum	2
		Microsporum	ferrugineum		2
		Microsporum	fulvum	t. n.: Arthroderma fulvum = Nannizzia fulva	2
		Microsporum	gallinae	t. n.: Arthroderma grubyi	2; D
		Microsporum	gypseum	t. n.: Arthroderma incurvatum	2; D
		Microsporum	langeronii	= Microsporum audouinii = Microsporum rivalieri	2
		Microsporum	nanum	t. n.: Arthroderma obtusum	2; D
		Microsporum	persicolor	t. n.: Arthroderma persicolor	2; D

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
		Microsporium	praecox		2
		Microsporium	rivalieri	= Microsporium audouinii = Microsporium langeronii	2
		Monosporium	apiospermum	= Ploycytella hominis = Scedosporium apiospermum; t.n.: Pseudallescheria apiosperma	2; D
Mortierella	wolfii				2; D
Mucor	amphibiorum				2
Mucor	circinelloides				2; D
Mucor	hiemalis				2; P
Mucor	racemosus				2; P
		Mycocentrospora	acerina		2; P
		Nattrassia	mangiferae		2
Nectria	radicicola	Cylindrocarpon	destructans		2; P
Nectria	haematococca var. breviconia	Fusarium	solani		2
Neosartorya	fumigata	Aspergillus	fumigatus		2; D; A
Neosartorya	pseudofischeri	Aspergillus	thermomutatus		2
		Neoscytalidium	dimidiatum		2
Neotestudina	rosatii				2
		Ochroconis	gallopava		2; D
		Ochroconis	humicola		2
		Ochroconis	tshawytschae		2
		Onychocola	canadensis	t. n.: Arachnomyces nodosetosus	2
Ophiostoma	roboris				2
Ovulinia	azalea				2; P

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
		Paecilomyces	variotii		2; T
		Paracoccidioides	brasiliensis		3
		Paracoccidioides	lutzii		3
		Penicillium	marneffeii		2; A
Peronosclerospora	philippinensis				2; P
		Phaeoacremonium	parasiticum	t. n.: Togninia parasitica	2
		Phaeoacremonium	krajdenii		2
Phellinus	pini				2; P
		Phialemonium	curvatum		2
		Phialemonium	dimorphosporum		2
		Phialemonium	obovatum		2
		Phialophora	americana	t. n.: Capronia semiimera	2
		Phialophora	europaea		2
		Phialophora	parasitica		2; P
		Phialophora	verrucosa		2
		Phoma	crurishominis		2
		Phoma	dennissii v. oculohiminis		2
		Phoma	eupyrena		2; P
		Phoma	glomerata		2; P
		Phoma	glycinicola		2; P
		Phoma	sorghina		2; P; T
Pichia	kudriavzevii	Candida	krusei	P. kudriavzevii = Issatchenkia orientalis	2; D
		Pityrosporum	orbiculare	= Malassezia globosa	2
		Pleurostomophora	richardsiae	= Phialophora richardsiae	2
Pneumocystis	jirovecii				2

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
		Polycytella	hominis	= Monosporium apiospermum = Scedosporium apiospermum; t.n.: Pseudallescheria apiosperma	2; D
Pseudallescheria	apiosperma	Scedosporium	apiospermum	S. apiospermum = Monosporium apiospermum = Polycytella hominis	2; D
Pseudallescheria	boydii	Scedosporium	boydii	S. boydii = Graphium eumorphum	2; D
Pseudallescheria	fusoidea				2
		Pseudochaetosphaeronema	larensae		2
		Pseudomicrodochium	suttonii		2
		Pyrenochaeta	mackinnonii		2
		Pyrenochaeta	romeroi		2
		Pyrenochaeta	unguishominis		2
Pythium	insidiosum				2; D
		Ramichloridium	mackenzii	= Rhinocladiella mackenzii	3
		Redaellia	elegans		2
		Rhinocladiella	aquaspersa		2
		Rhinocladiella	compacta	= Fonsecaea compacta	2
		Rhinocladiella	mackenzii	= Ramichloridium mackenzii	3
		Rhinocladiella	pedrosoi	= Fonsecaea pedrosoi	2
		Rhinocladiella	similis		2
		Rhinocladiella	spinifera	= Exophiala spinifera	2
Rhinosporidium	seeberi				2
Rhizomucor	pusillus				2
Rhizomucor	variabilis				2
Rhizopus	arrhizus			= Rhizopus oryzae	2; P
Rhizopus	stolonifer				2; P

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
Rhizopus	azygosporus				2
Rhizopus	microsporus				2
Rhizopus	oryzae			= Rhizopus arrhizus	2; P
Rhizopus	schipperae				2
Saksenaea	vasiformis				2
		Saprochaete	capitata	= Geotrichum capitatum = Blastoschizomyces capitatus; t. n.: Dipodascus capitatus = Magnusiomyces capitatus	2
		Saprochaete	clavata		2
		Sarcinomyces	phaeomuriformis	= Exophiala phaeomuriformis	2
		Scedosporium	apiospermum	= Monosporium apiospermum = Polycytella hominis; t. n.: Pseudallescheria apiosperma	2; D
		Scedosporium	boydii	= Graphium eumorphum; t.n.: Pseudallescheria boydii	2; D
		Scedosporium	aurantiacum		2
		Scedosporium	prolificans		2
Schizophyllum	commune				2; P
Sclerophtora	rayssiae var. zeaea				2; P
		Scopulariopsis	brevicaulis	t. n.: Microascus brevicaulis	2
		Scopulariopsis	brumptii		2
		Scytalidium	dimidiatum	= Neoscytalidium dimidiatum	2
		Scytalidium	hyalinum		2
Setosphaeria	rostrata	Exerohilum	rostratum		2; P

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
		Sporothrix	brasiliensis		2
		Sporothrix	globosa		2
		Sporothrix	luriei		2
		Sporothrix	pallida		2
		Sporothrix	schenkii		2; D
		Stenella	araguata		2
Stephanoascus	ciferrii	Candida	ciferrii	S. ciferrii = Trichomonascus ciferrii	2
Sydowia	polyspora	Hormonema	dematioides		2; P
Syncephalastrum	racemosum				2
Togninia	parasitica	Phaeoacremonium	parasiticum		2; P
		Torulopsis	glabrata	= Candida glabrata	2; D
Trichomonascus	ciferrii	Candida	ciferrii	T. ciferrii = Stephanoascus ciferrii	2
		Trichophyton	concentricum		2
		Trichophyton	equinum		2; D
		Trichophyton	erinacei	t. n.: Arthroderma benhamiae	2; D
		Trichophyton	fischeri	= Trichophyton rubrum	2
		Trichophyton	gallinae	= Microsporum gallinae; t. n.: Arthroderma grubyi	2; D
		Trichophyton	gourvilii var. intermedium	= Trichophyton rubrum	2; D
		Trichophyton	interdigitale	t. n.: Arthroderma vanbreuseghemii	2
		Trichophyton	kanei	= Trichophyton rubrum	2
		Trichophyton	krajdenii	= Trichophyton interdigitale; t. n.: Arthroderma vanbreuseghemii	2
		Trichophyton	longifusum		2
		Trichophyton	mentagrophytes	t. n.: Arthroderma vanbreuseghemii	2
		Trichophyton	phaseoliforme		2

Teleomorph (= sexual) name		Anamorph (= asexual) name		Remarks	Class
		Trichophyton	raubitschekii	= Trichophyton rubrum	2
		Trichophyton	rubrum	= Trichophyton fischeri = Trichophyton gourvilii var. intermedium = Trichophyton kanei = Trichophyton raubitschekii	2; D; T
		Trichophyton	schoenleinii		2
		Trichophyton	simii	t. n.: Arthroderma simii	2; D
		Trichophyton	soudanense	= Trichophyton violaceum	2
		Trichophyton	tonsurans		2
		Trichophyton	verrucosum		2; D
		Trichophyton	violaceum	= Trichophyton soudanense	2
		Trichophyton	yaoundei		2
		Trichosporon	asahii		2
		Trichosporon	asteroides		2
		Trichosporon	beigelii		2
		Trichosporon	cutaneum		2
		Trichosporon	dohaense		2
		Trichosporon	inkin		2
		Trichosporon	mucoides		2
		Trichosporon	ovoides		2
		Tritirachium	oryzae		2; P
		Verticillium	alboatrum		2; P
		Verticillium	dahliae		2; P

D: animal pathogeen P: plant pathogenA: causes allergic reaction in humans T: produces toxins t.n.: teleomorph name
 =: is also known under the name