

Phytophthora heterospora sp. nov., a new pseudoconidia-producing sister species of *P. palmivora*

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Dryad supporting table. Information on all oomycete species and isolates used in the phylogenetic analyses, including sequence identifications.

Sequence name	Species	Isolate identification	GenBank accession No.			
			ITS	<i>Btub</i>	<i>cox1</i>	<i>nadh1</i>
Nvaldivia	<i>Nothophytophthora valdiviana</i> (T)	CBS 142357; CL331	MZ753910	MZ736449	MZ736421	KY788628
Pnicotiana	<i>Phytophthora nicotianae</i> (ASI2)	WPC P6303; CPHST BL 162	(GS) JAAKBE010001860	(GS) JAAKBE010003943	(GS) JAAKBE010002284	(GS) JAAKBE010003823
Pcactorum	<i>P. cactorum</i>	P295	(GS) RCMO01001417	(GS) RCMO01000030	(GS) RCMO01000985	(GS) RCMO01000778
Pinfestans	<i>P. infestans</i>	CBS 147289, T30-4; TJ1504	MZ753914	MZ736454	MZ736428	MZ736507
Pmeadii	<i>P. meadii</i>	CBS 219.88; 61J9; IMI 129185; WPC P3950 - P3433; ATCC 58103	MH620109	KX250594	Contig HQ708324 MT583652	MT583705
Ptropical	<i>P. tropicalis</i> (T)	CBS 434.91; WPC P10329; 35C8; ATCC 76651, MYA-4218; CPHST BL 58	MH620112	KX250699	Contig MH620025 MH136987	-
	<i>P. tropicalis</i>	AN97/86; PD97/11132	-	-	-	AY563988
Pmultivora	<i>P. multivora</i> (T)	CBS 124094; 55C5; WPC P16837, P19594; WAC13201; ICMP 19454	MG865546	KX250776	Contig MH136939 FJ237508	MZ736508
Pmultivesi	<i>P. multivesiculata</i> (T)	CBS 545.96; 29E3; WPC P10410; CPHST BL 50G; MG 33-6; AR 239; PD 95/8679	MH620118	EU080066	Contig MH136937 MH620032	KX011295

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Pnemorosa	<i>P. nemorosa</i> (T)	CBS 114870; WPC P19600; 41C4; CPHST BL 27; ATCC MYA-2948	KF317082	KX250965	Contig KF317104 MH136941	DQ361211
Ppseudosyr	<i>P. pseudosyringae</i> (T)	CBS 111772; WPC P10437; 30A8; CPHST BL 51G; ATCC MYA-4222; p284; PSEU 6	KF317083	KX250979	MZ736504	MZ736509
alt_CBS121939	<i>P. alticola</i>	CBS 121939; WPC P16948 - P16052; CMW 34279 - 19425; 47G5	KF317084	KX251007	Contig HQ261245 KF317106	-
are_CBS127950	<i>P. arenaria</i> (T)	CBS 127950; WPC P19599; PD 825; 55C2; CPHST BL 78	HQ013219	KJ372289	Contig MH136848 MH620034	-
boo_CBS138637	<i>P. boodjera</i> (T)	CBS 138637; VHS 26806; CPHST BL 181; WPC 13637	KJ372244	KJ372283	Contig KJ396688 MH477743	-
cat_CP30	<i>P. cathayensis</i> (T)	CP30; CGMCC 19655	MN385741	MT063102	MN692211	-
het_317_A12	<i>Phytophthora heterospora</i>	317-A12; CBS 148036	MT232395	MZ782810	MZ782831	MZ782852
het_A1A	<i>P. heterospora</i>	A1A	MT232399	MZ782813	MZ782834	MZ782855
het_SC12	<i>P. heterospora</i>	DB2	MZ927100	MZ782816	MZ782837	MZ782858
het_FK1	<i>P. heterospora</i>	FK1	KM979514	KU870332	KU870322	KP050547
het_FK2	<i>P. heterospora</i>	FK2	KP050543	KU870333	KU870323	KP050548
het_PH054	<i>P. heterospora</i> (T)	PH054; TJ0238; CBS 148034	MT232393	MZ782807	MZ782828	MZ782849
het_PH211	<i>P. heterospora</i>	PH211	MT232394	MZ782809	MZ782830	MZ782851
lit_CBS10081	<i>P. litchii</i> (AS11)	CBS 100.81; WPC P15218; CPHST BL 48G; ATCC 34595; MG 33-3	MG865525	MH493966	MH136920	DQ361208
lit_SHS3	<i>P. litchii</i>	SHS3	-	(GS) PCFV01000014	(GS) PCFV01000263	(GS) PCFV01000263
meg_T1	<i>P. megakarya</i> (T)(A1)	IMI 182590; WPC 1664; CPHST BL 22	MG865533	-	Contig MH136928 AY564193	-
	<i>P. megakarya</i>	IMI 337098	-	AY564078	-	AY564020
meg_T2	<i>P. megakarya</i> (T)(A2)	CBS 238.83; 61J5; WPC P1672; CPHST BL 73; ATCC 42100; IMI 202077	MG865534	KX251035	Contig MH136929 MH620035	-

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			ITS	<i>Btub</i>	<i>cox1</i>	<i>nadh1</i>
	<i>P. megakarya</i>	zdho	-	-	-	(GS) NBNE01000504
pal_CBS17926	<i>P. palmivora</i>	CBS 179.26; IMI 198927; WPC P3548	MT232400	MZ782817	MZ782838	MZ782859
pal_phoen4	<i>P. palmivora</i>	Phoenix4	MT232403	MZ782819	MZ782840	MZ782861
pal_fusto	<i>P. palmivora</i>	PhoenixF	MT232402	MZ782818	MZ782839	MZ782860
pal_GRE1	<i>P. palmivora</i>	IMI 390579; GRE1	MT232404	MZ782820	MZ782841	MZ782862
pal_MD5	<i>P. palmivora</i>	IMI 503890; MD5	MT232406	MZ782821	MZ782842	MZ782863
pal_MD6	<i>P. palmivora</i>	IMI 503891; MD6	MT232407	MZ782822	MZ782843	MZ782864
pal_PH090	<i>P. taxon palmivora</i> -like	PH090	MT232401	MZ782824	MZ782845	MZ782866
pal_CBS30562	<i>P. palmivora</i> (ASI1)	CBS 305.62; WPC P0633; CPHST BL 105; IMI 062655; IMI 348384	MG865559	MH493992	MH136949	-
pal_P0255	<i>P. palmivora</i> (ASI2)	WPC P0255; CPHST BL 46; ATCC 26200	MG865560	MH493994	MH136950	-
pal_ZC01	<i>P. palmivora</i>	ZC01	(GS) VOQZ01000473	(GS) VOQZ0100	(GS) VOQZ01000950	(GS) VOQZ01000945
que_CBS121119	<i>P. quercetorum</i> (T)	CBS 121119; WPC P15555; ATCC MYA-4086; CPHST-BL 52G; MD 9/2	MG865577	EU080901	Contig MH136969 KX759520	-
Pcastaneae	<i>P. castaneae</i>	CBS 587.85; WPC 15598; 61J7; IMI 325914; ATCC 36818; ICMP 19450	MH620122	KX251098	(MGS) MN883602	(MGS) MN883602
Pheveae	<i>P. heveae</i> (T)	CBS 296.29; WPC P3428; 22J1; ATCC 58815; ICMP 19451; KACC 44943; IMI 180616; CPHST BL 67	MH620123	KX251112	(MGS) MN883604	(MGS) MN883604
Phumicola	<i>P. humicola</i> (T)	CBS 200.81; WPC P3826; 32F8; ATCC 52179, MYA-4080; IMI 302303; p198; CPHST BL 42G;	KF112855	KX251140	Contig KF112862 HQ708305	MZ736506
Pchlamydos	<i>P. chlamydospora</i>	P17-99	(GS) JAABLK010000522	(GS) JAABLK010000021	(MGS) CM022726	(MGS) CM022726
Ptyrrhenic	<i>P. tyrrhenica</i> (T)	CBS 142301; PH154; TJ1153	KU899188	KU899265	MZ736441	KU899507
Peuropaea	<i>P. europaea</i> (T)	CBS 109049; 62A2; WPC P10324; EUR 2; CPHST BL 37G	MH620138	KX251523	Contig KU681022 HQ261303	KU899469

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Psojae	<i>P. sojae</i>	28F9; P6497	KC733444	KX251770	(MGS) DQ832717	(MGS) DQ832717
Pcinnamomi	<i>P. cinnamomi</i> (T)	CBS 144.22; IMI 022938; 61J1; WPC P2110; ATCC 1407	KU899160	KX251812	Contig HQ708257 MH620070	KU899475
Psansomean	<i>P. sansomeana</i>	WPC P8051; 47H3; ATCC MYA-4455; CPHST BL 55	MH620155	KX251931	(MGS) MH936679	(MGS) MH936679
Plactucae	<i>P. lactucae</i> (T)	61F4; BPIC 1985; P19872; CPHST BL 113	MH620161	KX252043	Contig MH620085 KC478738	KF882714
Pramorum	<i>P. ramorum</i> (T)	CBS 101553; P1577; BBA9/95; Pr-164; CSL2266; WPC P10103; PR-05-012; CPHST BL 55G	MG865581	(GS) RYEP01000230	(MGS) EU427470	(MGS) EU427470
Pquininea	<i>P. quininea</i> (T)	CBS 407.48; 46C4; ATCC 46733; WPC P1089-P8488; CPHST BL 54G	MG865580	AY564085	Contig AY564200 HQ708386	AY564027
Pcaptiosa	<i>P. captiosa</i> (T)	CBS 119107; 46H7; CPHST BL 11; NZFS 310C; WPC P10719; ICMP 15576	DQ297402	-	-	-
	<i>P. captiosa</i>	46H8; NZFS 430; ICMP 17567	-	KX252555	(MGS) MN883606	(MGS) MN883606
Pboehmeria	<i>P. boehmeriae</i> (T)	CBS 291.29; WPC P6950; IMI 180614; MG 42-6; 45F9; CPHST BL 32G; ATCC 60238	HQ643149	EU080162	Contig HQ261251 KT183047	DQ361200
Pkernoviae	<i>P. kernoviae</i> (T)	WPC P19827; IMI 393170; CPHST BL 91; PCPCC P1571	(GS) VKKV01000063	(GS) VKKV01000263	(GS) VKKV01000418	(GS) VKKV01000418
Plilii	<i>P. lilii</i> (T)	CBS 135746; NBRC 32174; MAFF 237500; EL 8701; CPHST BL 123	MG865523	Contig MG493965 AB856782	MH136918	-
Pcastaneto	<i>P. castanetorum</i> (T)	CBS 142299; BD292	MF036182	MZ736453	MZ736427	MF036292
Pquercina	<i>P. quercina</i>	TJ292; PL7; P731	MF036194	MZ736504	MZ736505	MF036301
Ptubulina	<i>P. tubulina</i> (T)	CBS 141212; TJ271; TUB1; Hohenegg II/1; P736	MF036196	MZ736467	MZ736440	MF036303
Pcyperi	<i>P. cyperi</i>	11048	MK045313	-	-	-

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	<i>P. cyperi</i>	MVAP06098582	-	KY608800	MH445454	.
Blactucae	<i>Bremia lactucae</i>	SF5	(GS) SHOA01000013	(GS) SHOA01000026	(MGS) MH271689	(MGS) MH271689
Plhalstedii	<i>Plasmopara halstedii</i>	Plhal710	(GS) PDFJ01000023	(GS) PDFJ01000039	(GS) PDFJ01000150	(GS) PDFJ01000150
Plviticola	<i>Plasmopara viticola</i>	INRA-PV221	(GS) MBPM02000295	(GS) MBPM02000031	(MGS) MN105125	(MGS) MN105125
Peeffusa	<i>Peronospora effusa</i>	SPp3	MG793197	-	-	-
	<i>Peronospora effusa</i>	R14	-	(GS) QLLG01000479	(MGS) MH325167	(MGS) MH325167
Petabacina	<i>Peronospora tabacina</i>	968-S26	(GS) NBSG01000065	(GS) NBSG01000797	(MGS) KT893456	(MGS) KT893456
Pscubensis	<i>Pseudoperonospora cubensis</i>	MSU-1	(GS) AHJF01002487	(GS) AHJF01000065	(GS) AHJF01005719 AHJF01021320	(GS) AHJF01000547
Sgraminico	<i>Sclerospora graminicola</i>	UoM-SG	(GS) MIQA02020524	(GS) MIQA02005411	(GS) MIQA02016028	(GS) MIQA02022157
Harabidops	<i>Hyaloperonospora arabidopsidis</i>	Cala2	(GS) LKIA01008204	(GS) LKIA01000455	(GS) LKIA01003057	(GS) LKIA01001610
Hbrassicae	<i>Hyaloperonospora brassicae</i>	HV2163	EU049248	(GS) SZZJ01000824	(GS) SZZJ01002632	-

(T) Type;

(DMPH) Downy Mildews with Pyriform Haustoria;

(GDM) grass-infecting Graminicolous Downy Mildews;

(GS) Genome Sequence;

(ASI) Abad Selected isolate (from IDphy: molecular and morphological identification of *Phytophthora* based on the types, <https://idtools.org>).

(DMCC) Downy Mildews with Colored Conidia;

(BDM) Brassicolous Downy Mildews;

(MGS) Mitochondrial Genome Sequence;